

THESIS

Lina Euler

2019

University of Veterinary Medicine, Budapest

Department of Physiology and Biochemistry

Division Physiology

**Communication Skills in Veterinary Education
in Comparison to Medical Communication Training**

by

Lina Euler

Supervisor:

Dr Tóth, István

Senior Lecturer

Budapest, Hungary

2019

TABLE OF CONTENT

1. INTRODUCTION AND AIM	1
2. REVIEW OF LITERATURE.....	2
2.1 Basic communication skills of effective communication.....	2
2.2 Importance of communication skill education	3
2.2.1 Similarities in physician-patient and veterinarian-client communication	3
2.2.2 Distinction in the veterinarian-client relationship	6
2.3 Learning communication.....	7
2.3.1 Calgary-Cambridge-Referenced Observation Guide to the medical interview	8
2.3.2 Communication model in veterinary medicine	9
2.3.3 Reasons for the adaption of medical communication content to veterinary medicine	11
2.3.4 Methods of observation and feedback.....	12
2.3.5 Roter Interactive Analysis System in medicine	13
2.3.6 RIAS adaption in veterinary medicine	14
2.3.7 Simulated patients and clients in teaching and learning communication.....	15
2.4 Investigation of communication skills use in real-life consultations	16
2.4.1 Content structure in veterinary consultations	16
2.4.2 Deficiencies in veterinary communication.....	18
2.5 Development of communication skill education in human medicine	20
2.6 Development of communication skills education in veterinary medicine	22
2.7 Communication skills assessment in student licensing examinations.....	26
2.8 Accreditation policy of communication skills education	28
3. CONCLUSION	31
3.1 Findings on the importance of communication skills in the veterinarian-client relationship	31
3.2 Conversion of medical communication content to veterinary medicine	32
3.3 Status of communication skills in medical and veterinary education	33
4. SUMMARY	35
5. BIBLIOGRAPHY	36
6. ACKNOWLEDGEMENTS	40

LIST OF ABBREVIATIONS:

CS = Communication skills

CCG = Calgary Cambridge Guide to the medical interview

RIAS = Roter Interactive Analysis Software

SP = Simulated patients

SC = Simulated clients

1. INTRODUCTION AND AIM

In the veterinary profession the relationship between veterinarian-client and animal is a unique one. Obviously, in comparison to the physician-patient interview animals can not directly tell the veterinarian their health complaints, therefore the client operates as the chain-link in the basic interaction among veterinarians and their patients, critically to the health of animals.

The definition of communication in an English dictionary “The imparting or exchanging of information by speaking, writing, or using some other medium and the successful conveying or sharing of ideas and feelings” shows the complexity of communication, by adding the element of success (*Lexico Online Dictionary*). Consequently, thinking about the concept of miscommunication, it is worth questioning how to differentiate between poor and good communication.

Besides the contrast between physician-patient and veterinarian-patient communication, however, it seems valuable to compare both professions. Therefore, my goal will be to revise, what kind of knowledge is transferable to the veterinary field and how the communication process can be broken down and implemented in the training of communication skills, which are essential in the consultation process.

What should be examined in addition, are methods used to assess and evaluate communication competencies of physicians as well as veterinarians. Furthermore, a topic of the investigation shall be the development of communication skills education in human medicine in comparison to the development and current status in the veterinary profession.

In this paper, I will argue that veterinary education of communication skills has greatly benefited from research results and communication skills training programs in the medical profession. Further, it reached the same level of acknowledged significance and has a positive impact on the veterinarian-client- relationship and therefore on the outcome of health care.

2. REVIEW OF LITERATURE

2.1 BASIC COMMUNICATION SKILLS OF EFFECTIVE COMMUNICATION

In veterinary communication literature social skills are defined as learnable, consisting of verbal and nonverbal behaviour, bound to response, are situation-dependent and include positive outcomes form others. These characteristics are transferred to the definition of CS. Effective CS includes verbal and nonverbal elements. The recognition, understanding and appropriate utilization of both in combination are important. Because nonverbal communication can change, either supplement or contradict the verbal message (*Gray & Moffett, 2010*).

Listening, in general, shall be differentiated from hearing. Listening contains elements of receiving and understanding what is being said, in the form of a cognitive process. Reflective listening is a valuable method for communicating effectively. It means to mirror in own words what is said by dialogue partner, entailing also emotional aspects. Therefore, to gain a complete understanding of the message and also to reflect this understanding back to the sender of the message. Hence, it includes reassuring the understanding of the patient's or client's motivation for the visit. Also, it enhances the active participation of the patient or client within the consultation (*Gray & Moffett, 2010*).

Questions are fundamental during medical interviews. They can be differentiated in open-ended- and closed-ended questions, dependent on the expected answer from the receiver of the question. Closed-ended questions are those where a one-word answer follows, like yes or no. Open-ended questions give the possibility of an extended statement, including the personal view and shaping of its content. The literature in human medicine as well as in the veterinary profession, recommends a "funnel approach" in questions (*McArthur & Fitzgerald, 2013*). Hence, starting at the beginning of the interview with dominantly open-ended and passing over to more frequently closed-ended questions (*Shaw et al., 2004a; McArthur & Fitzgerald, 2013*). Nevertheless, the use of different types of questions needs to be situation-specific and dependent. The advantageous of open-ended questions are to reveal the client's perspective, to avoid leaving out any supplementary clients concerns regarding the visit, and to enhance the client's participation (*Gray & Moffett, 2010*).

According to the research literature in human medicine, roughly it can be said, that the major part of communication is nonverbal. It is estimated, that almost 80% of communication is nonverbal, whereas only 20% is based on verbal communication content (*Shaw, 2006*). Nonverbal communication includes the most commonly known body language. Hence mimic, gesture, interpersonal space and use of touch between the dialogue partners is fundamental. Equally the tone, rhythm and volume of the voice is part of our nonverbal language repertoire. Even so important for the recognition and understanding of underlying emotions, are involuntary responses, like sweating, blushing and breathing rhythm. Nonverbal communication is quite complex but most important for effective communication is the knowledge of each element and their correlation with each other. Then recognition and response in an appropriate way are possible, especially regarding expressed emotions. Therefore, empathy statements in the form of spoken language have to be combined with and adapted to nonverbal aspects, like the tone of voice, touch, interpersonal proximity (*Gray & Moffett, 2010*).

2.2 IMPORTANCE OF COMMUNICATION SKILL EDUCATION

Reasons for CS education in veterinary medicine can be based on reviewing research content in human medicine. Because the correlation between effective communication in health care and its positive outcome are already well empirical researched and recorded. Therefore, is the leading theme in embedding communication to teaching programs (*Adams & Kurtz, 2006*).

2.2.1 SIMILARITIES IN PHYSICIAN-PATIENT AND VETERINARIAN-CLIENT COMMUNICATION

The use of efficient communication within the physician-patient interview can be examined in five main aspects in similarity to the client-veterinarian situation:

1. “Patients health,
2. Patients satisfaction,
3. Patients compliance,
4. Physician satisfaction,
5. Reducing the risk of malpractice” (*Shaw et al., 2004a*).

1) In studies on “patient’s health” it becomes evident, that communication impacts physiological and psychological aspects, like blood pressure, pain perception and symptoms in acute and chronic diseases. If the patients had the chance to express their own perspective, received empathy statements, adequate education and counselling from the physician and the interview is aimed towards collaborative decisions, the best outcome of health is expectable. Based on this, the hypothesis is, that in the same way non-functional communication with the client is detrimental to the health of the animal, e.g. in areas of wound management, diet-and-exercise recommendations, or correct administration of drugs, however, it includes a lack of empirical evidence in veterinary medicine (*Shaw et al., 2004a; Shaw et al., 2008; Shaw, 2019*).

2) “Patient satisfaction” is investigated most common in the human medicine. Results suggesting that expression of positiveness, non-verbal empathic communication, behaviour reducing professional distance and increasing “humanness” from the physician towards the patient, have a significant impact. Overall, the “patient-centred” approach is highlighted and aimed in this context. Matching this with client satisfaction in veterinary medicine, not meeting the client’s expectations has a negative impact on practice economics (*Shaw et al., 2004a*).

McArthur and Fitzgerald (2013) evaluated the difference between expressing empathy statements directly towards client versus towards the animal, in regards to the client’s satisfaction. The results prove, that empathy statements towards the clients are fundamental in client satisfaction and positive correlation between those two could be drawn.

Likewise, client satisfaction is associated with a collaborative relationship, involving the client’s perspective and aiming for a shared decision. Besides, clients are more satisfied with the visit if the veterinarian takes adequate time for counselling and education and uses “reflective listening” as an ideal approach (*Shaw et al., 2004a; Shaw, 2019*).

3) An optimal “patient’s compliance” is in the same correlation as patient satisfaction connected to competencies of the physician. Such competencies include empathy and supportive assistance, collaborative work, adequate education and counselling, but as a difference, emotional support is even more important compared to the educating and counselling aspect. Also, client compliance has been researched, with the suggestion that a healthy veterinarian-client-relationship based on trust is the main component in increasing compliance with clients (*Shaw et al., 2004a; Shaw et al., 2008; Shaw, 2019*).

4) “Physicians satisfaction” can be described as mirroring the patient satisfaction. Hence, the professional fulfilment is dependent on the underlying relationship with the patients and to their compliance. It is also related to the possibilities of appropriate time management and to the diagnostic accuracy. In this context, the same is valid for the veterinarian client relationship (*Shaw et al., 2004a; Shaw et al., 2008*). Veterinarians are more satisfied if they express positive talk towards the client, especially in the situation of ‘preventive care visits’ as *Shaw (2019)* cites. Even so, consultations due to a current health problem of the animal are more satisfying for the veterinarian, if rapport building with clients is integrated and talk is also expressed towards the pet (*Shaw, 2019*).

This last element of satisfaction is especially important in veterinary medicine. Because disproportional high burnout-, mental issue- and suicide rates among veterinarians, are still current problems within the profession. Therefore, appropriate educational communication training in a university setting might provide help to a graduating veterinarian’s self-perception and self-esteem. Especially new graduates are facing challenging situations, be it regarding unfamiliar medical cases, or difficult client encounters which are unique in veterinary medicine. Because of that, communication skills training in veterinary medicine and the influence on mental health problems among veterinarians might be a topic for future discussions.

5) Investigations of malpractice risk in medical research underlines, that patients’ complaints are linked directly to miscommunication and in detail, such communication problems are based on a lack of explanation of the treatment and the diagnosis process. Also not integrating the patient’s perspective and a lack of education and counselling towards the patient results frequently in patients’ complaints (*Shaw et al., 2004a*). *Shaw et al. (2004a)* cites, that in veterinary medicine similar studies confirm, that ‘80 % of claims contained an element of communication breakdown’.

2.2.2 DISTINCTION IN THE VETERINARIAN-CLIENT RELATIONSHIP

As in many aspects described so far, the similarity between physician-patient and veterinarian-client communication is proven. However, worth to examine is also the distinction in the veterinarian client relationship, as it provides prove for an even elevated importance of CS in veterinary medicine in comparison to the medical profession:

It is important to consider, that there are changes within the veterinary profession, influencing the veterinarian-client-patient relationship. Those are based on the elevated importance of pet animals in the life of their owners to the level of a relative-relationship. In other words the veterinarian-client-relationship is influenced by closeness of the “human-animal bond” (*Shaw, 2006*). In addition, a difference to human medicine can be seen in the requirement of mirroring this bond back to the client’s health, and therefore it is of one-health importance, increasing the public veterinarian’s responsibilities to a new level (*Shaw et al., 2004a*).

Besides the established human-animal bond, furthermore important is the point of recognizing the animal’s and client’s physical comfort during the consultation. Also, relating directly to the animal can be utilized for building the rapport with the client (*Radford et al., 2006*).

Another development in the profession is, that the average client might be more prepared and informed during health issue visits or preventative care-appointments. With the help of the internet, substantial information is easily accessible, and consequently, the veterinarian has to be more competent in client education and counselling to meet the client’s broader expectations (*Shaw, 2006*).

In the veterinary profession unique challenging situations can occur. On one hand the aspect of addressing euthanasia as especially precarious one, therefore demanding a skillset from the veterinarian, including empathy and emotional support. On the other hand, a distinction can be made in discussing financial, and economic issues regarding treatment (*Shaw et al., 2004a*).

In the distinction to human medicine also not to underestimate, is to reflect the broad variety of different kinds of clients and patients in veterinary medicine and its specificity. In this context e.g. the different purposes of a running greyhound versus a breeding cat (*Gray & Moffett, 2010*).

Besides the variety of patients in companion animal medicine, there is a further distinction to recognize, regarding farm animal and herd management medicine. Especially in the latter appropriate communication competence is required. The veterinarian has to portray the role of an advisor, reflecting the economic interest of the farmer. Adding even more to this complexity is the issue of food safety in contradiction to a systematic herd level therapy. CS competence, therefore, is inevitably linked with adequate counsel of the farmer (*Kleen & Rehage, 2008*).

Therefore, adequate CS utilization and education in veterinary medicine is of fundamental importance to cope with the unique challenges in the veterinary profession.

2.3 LEARNING COMMUNICATION

To understand the complexity of learning communication, it is important to mention that the process of learning can be broken down into several steps. First, learning any skill starts with a systematic delineation and definition of the skill or skill sets (*Adams & Kurtz, 2006; Shaw et al., 2008; Adams & Kurtz, 2012; Shaw, 2019*).

Similar to gaining the theoretical knowledge base, which is needed to progress in any other clinical skill. In this context, we need to gain knowledge about which skills are characterizing effective communication and to what format they can be broken down.

In its essence, a model breaks down the process of communication into smaller subdivision, to create a logic chronology in it and to avoid the mistake of emitting and leaving out any substantial step. Beneficial as well is, that delineation makes learning more efficient by decreasing the complexity of a task (*Gray & Moffett, 2010*).

2.3.1 CALGARY-CAMBRIDGE-REFERENCED OBSERVATION GUIDE TO THE MEDICAL INTERVIEW

The CCG is the model developed at the University of Calgary located in Canada in 1998. It provides a framework for defining and teaching communication within the physician-patient dialogue. It is built to identify and organize skills for effective communication. The model is based on communication literature as well as on evidence-based studies regarding the outcome of health care. It results in the identification of a skill-set, including 73 CS, which are enhancing communication between physicians and patients. Even so, it aimed to include communication training into the curriculum of medical undergraduate studies (Kurtz, *et al.*, 1996). The revised and extended version from 2003 (Fig. 1) combines the previously divided CCG 1 “Interviewing the Patient” and CCG 2 “Explanation and Planning with the Patient”. Also, it enhances graphically and overall improves its concept regarding the teaching of CS, by placing it into a clinical context. Moreover, to underline is a change regarding the basic approach to the medical interview, to a patient-centred care in comparison to a more traditional system. In the traditional approach biomedical content dominated over integrating patient’s perspective (Kurtz *et al.*, 2003).

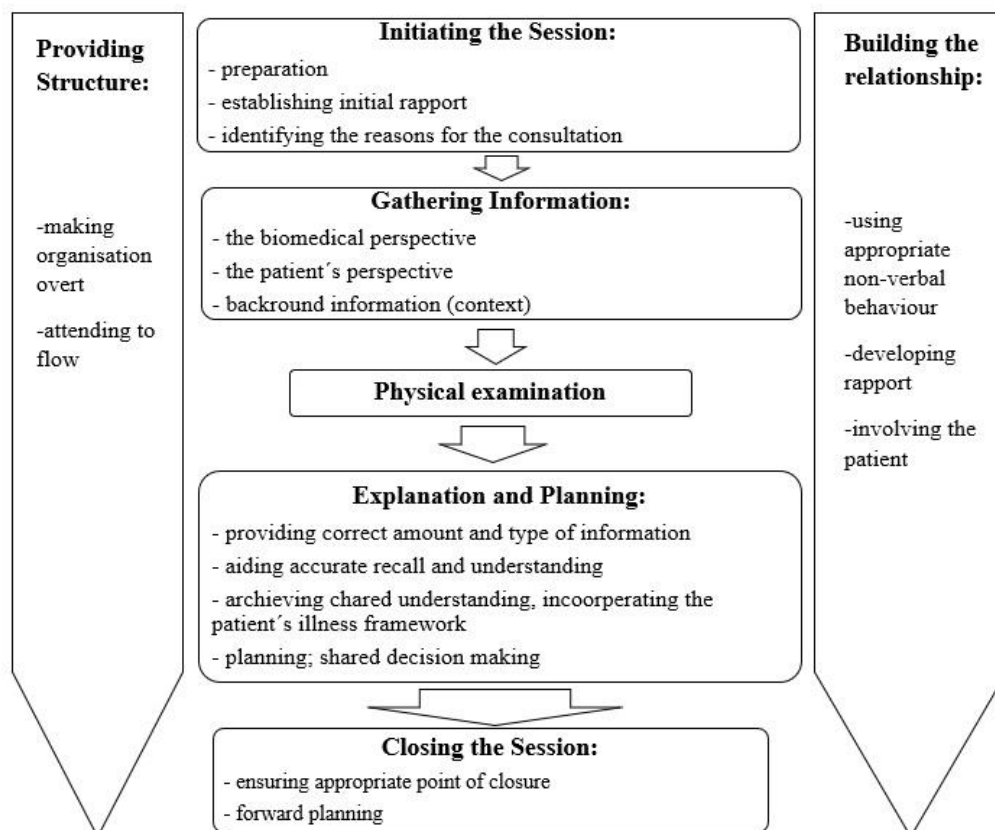


Figure 1 The extended Calgary-Cambridge Framework

Based on: https://www.gp-training.net/training/communication_skills/calgary/framwork/framework.htm

2.3.2 COMMUNICATION MODEL IN VETERINARY MEDICINE

As previously described, the model for effective communication in the medical field is CCG, on which *Radford et al. (2006)* based the adapted version for the veterinarian consultation: The adapted versions framework is constructed around five main phases, which are identical to the CCG of the medical interview (Fig.1):

1. “Initiating the consultation,
2. Gathering information,
3. Physical examination,
4. Explanation and planning,
5. Closing the consultation.”

These five elements usually following each other in a chronological sequence, whereas two additional structural elements can be found in any consultation:

6. “Building the relationship,
7. Providing structure to the interview” (*Radford et al., 2006*).

A further segmentation of each main element consists of an explanation of the underlying goal, which is to be obtained in each phase of the communication process (Fig.1) (*Adams & Kurtz, 2006*).

In the distinction to the medical model, the adapted version for the veterinary interview is extended for one more core element, beginning before the start of the consultation with a “Preparation” step. Here, the underlying objectives to be archived are, “to establish context and creating a professional, safe and effective environment” (*Radford et al., 2006*).

The basic aim regarding this initial opening element of “the Preparation”, can be described from the client’s perspective, to feel individually addressed and taken seriously in their concerns. “To establish context” means gaining knowledge about the client’s and patients’ history, as well as understanding the reason for the consultation. “Creating a professional, safe and effective environment”, means to optimize the situation for effective communication. For example, give treats for dogs after the physical examination as a reward and to provide sitting possibilities for a face to face conversation with the client. Also, to cancel background noise and remove any barrier which prevents good communication, e.g. odour, microclimate, professional appearance etc (*Gray & Moffett, 2010*).

Equivalent with the CCG (Fig.1), the following main element “Initiating the Consultation” means to discover the reason for the consultation explained by the client itself. The underlying objective to “Establish initial rapport with clients and patients” shall include removing the barrier of stress and discomfort, which are detrimental to effective communication (*Radford et al., 2006*).

The next “Gathering Information” step shall include four objectives:

- a) “Exploration of the clients presenting complaints,
- b) The clinical perspective (disease-short term history),
- c) The client’s perspective (including the animal’s purpose),
- d) Essential background information (long term history)” (*Radford et al., 2006*).

The main aim at this point, is to use professional knowledge to close the history taking and gaining adequate, correct and full data in the process of developing a diagnosis (*Gray & Moffett, 2010*).

Chronological following is the skilled physical examination of the patient. Afterwards, a substantial communication component is the phase of “Explanation and Planning”. Here, the appropriate amount of information is dependent on the client’s knowledge base. Additionally, the aim is to provide complex medical information to the client in such a way, that he fully understands it, e.g. by breaking down the content into smaller subdivisions. Furthermore, included is “In-cooperating the client’s perspective”, hence making a shared decision with a relationship-centred approach. Lastly, “Closing the consultation” is identical to the CCG model (Fig.1), made up out of summarizing and forward planning. It means to sum up the consultation as a whole and discuss the next steps, e.g. clarify follow up visits and further treatment elements. The aspect of “Providing structure” within the consultation consists of short summaries after each step before moving forward, as well as keeping chronological order. More important regarding communication is the key aspect of “Building a relationship with the client”, including basic communication skills of verbal and nonverbal language, as well as any behaviour activating the client and involving the animal (*Radford et al., 2006*).

2.3.3 REASONS FOR THE ADAPTION OF MEDICAL COMMUNICATION CONTENT TO VETERINARY MEDICINE

Reasons for the adaption of medical communication education to the veterinary profession can be displayed in several aspects: Veterinary communication experts related the medical interview to the veterinarian consultations, as both being health care providers and service suppliers, where medical success “is dependent on human-human interactions”. Also, the “content and structure” of the interview, and even so adequate assessment methods of effective communication, are comparable in both professions (*Shaw et al., 2004a*).

The content of studies on medical communication education was evaluated as broadly valuable in veterinary medicine and better in comparison to an approach starting from point zero. Besides, the veterinary profession lacked own empirical studies (*Shaw, 2006*).

Main reasons for utilizing existing knowledge in medical communication field was named by *Adams and Kurtz (2006)* as ‘substance and efficiency’.

The adaption of the CCG model to the veterinary interview makes sense, since the included abilities and competencies are profoundly conveyable to every sphere of veterinary communication (*Adams & Kurtz, 2006; (Radford et al., 2006)*).

Beyond this, an analysis of the structural elements of the veterinary interview in comparison with the physician-patient dialogue shows great the similarity in its main elements of “Initiating the session, gathering information, building the relationship, explanation and planning and closing the session” (Fig.1) (*Shaw et al., 2008*). Furthermore, it seems advantageous that the subdivisions are organized according to the structure of a real-life consultation, regarding coherency and memorability (*Kurtz, 2006*). Most important for the adaption of a theoretical model is, that it entails a universal validity because it can be used different types of veterinary consultations. Therefore, for small animal-, for equine- and for herd management type of consultation (*Gray & Moffett, 2010*).

In a recent examination of the different communication programs used in each of the thirty veterinary medical schools within the United States and Canada, it becomes evident, that 85% of the institutions rely on the CCG model. However, some schools made changes, like mixing the CCG framework with other models or electing subdivisions among the 73 CS, according to the perceived importance of specific CS (*Shaw, 2019*).

Also, all veterinary schools in the United Kingdom use the CCG in their communication skills module (*Mossop et al., 2015*).

Therefore, it proves the successful adaption of medical communication education content to the veterinary field.

2.3.4 METHODS OF OBSERVATION AND FEEDBACK

As previously suggested in chapter 2.3, the initial step of learning any skill, is first a systematic delineation and definition of the skills, by using described models. The view to the medical literature and its extrapolation to veterinary medicine reveals, this is followed secondly, by learning through observation, receiving reflective feedback and rehearsal of skills. Learning includes, therefore, shifting from the theoretical background to the competence of utilization in practice (*Kurtz, 2006*).

Agreeing with that is also *Shaw (2019)*, characterizing the steps above as “best practices in communication teaching and learning (...)”.

Hence, we need to gain an understanding of methods to observe communication in an educational context, and how communication skills can be assessed in practice and teaching environment. In the next chapters (2.3.5; 2.3.6; 2.3.7) methods of observation and assessment of CS and feedback provision will be described, divided in direct and indirect methods.

2.3.5 ROTER INTERACTION ANALYSIS SYSTEM IN MEDICINE

The most commonly used tool for an objective observing and assessing communication patterns in the medical interview is the Roter Interaction Analysis System (RIAS). The observation and assessment of CS with RIAS can be described as an indirect method. It is a software analysis system, able to evaluate through recorded audio or videotapes, spoken statements within interviews. The evaluation of the spoken statements takes place by the software program. Background of the software is a coding scheme, which is characterizing every spoken statement, according to the four main functions of the medical interview: Data gathering, patient education and counselling, building rapport and patient integration and activation. Even so, it is differentiating between two main content groups, which are of biomedical versus socio-economic matters. Also, the RIAS software differentiates between open- and closed-ended questions, counselling and education and other non-clinical social tasks of effective communication. The RIAS combines the audio or videotapes of interviews with coding and editing software. Hence, software functions can be adjusted, according to the specific context and situation in which it is used. RIAS is used in different medical research areas, e.g. it in the field of general practitioners or in specialties like oncology, geriatrics, paediatrics, and emergency medicine. Also, the connection between communication patterns and risks of malpractice, patient satisfaction and compliance, patient adherence and emotional distress issues, could be analysed. Consequently, fundamental knowledge in human medical communication in the context of the outcome of care and further could be gained. Beyond the medical interview, it proved its applicability in other professions, like nursery, dentistry and to highlight, even so in veterinary medicine. Besides this use in research, to point out is also the common utilization in the communication training programs of undergraduates and physicians (*Roter & Larson, 2002*).

2.3.6 RIAS ADAPTION IN VETERINARY MEDICINE

The use of RIAS cannot be compared in its quantitative dimension to the medical interview, but recent studies of real-life communication pattern with RIAS in companion animal and herd medicine have been published (see chapter 2.4).

Besides assessing veterinarian-client interaction, it is also utilized to measure the outcome of communication training in veterinary practitioners. Results of RIAS analysis could prove the significance of CS training because the veterinarians CS improved with adequate training. Besides, RIAS is used as an indirect method for observation and evaluation of CS in students, as the investigation of North American veterinary schools CS programs shows (*Shaw, 2019*).

In the veterinary adaption, the software setting of RIAS is also divided into the main four tasks of the consultation dialogue: Data collection, relationship building, counselling and education of the client, and in activation and partnership building. Nevertheless, adjustments due to contextual differences had to be made:

First, since the veterinary consultation involves communication between veterinarian and client, client and veterinarian and veterinarian and animal, it is characterized by a triangle nature and a three-way direction of communication to be evaluated by the system. Secondly, adjustments in the coding due to different content areas. Thirdly, adaptations due to the not uncommon fact, that client consultation common consist of more than one person, accompanying the animal to the visit (*Shaw et al., 2004b*).

Conclusive it can be said, that RIAS is a method for observation and objective assessment of communication be it in the human medical field or the veterinarian counterpart, however in the area of CS training in veterinary schools other less technical methods and more direct observation and assessment methods are available.

2.3.7 SIMULATED PATIENTS AND CLIENTS IN TEACHING AND LEARNING COMMUNICATION

In human medicine the concept of simulated patients (SP) is researched, evaluated and used as a powerful tool in communication education. Especially in a university setting and from the teaching viewpoint, it is proven to be an indispensable method and far more effective compared to the “didactic approach” via lectures. In contrast to RIAS (chapter 2.3.5), it is a direct method of observation and assessment of CS. It includes the possibility of providing direct feedback to the learner. Further, it can be combined with video and or audiotaping, and used for example in interschool collaboration (see chapter 2.6).

The term SP means, that real-life persons are employed to act as patients in a physician or student-patient interview, representing chase examples of patient’s diseases, concern and emotional aspects. Through a provided written script, SP’s are coached and educated to portray different medical chases in a standardized way. The benefits are such are, that it allows the teacher or “communication coach” to control the learning process. This is achieved by continuous evaluation in the process, possible interruptions and feedback provision, and definition of the challenge level or learning aim, in each student-SP interaction. Even so useful is, besides resembling real-life chases, SP’s can be adjusted to provide a problem-oriented recitation practice of specific CS. Positive from the learner’s perspective is, that it provides the possibility to focus on the aspect of communication alone, using learned theoretical knowledge and transfer it to human-human interaction, without the fear of detrimental health outcomes in a real-life practice setting. Therefore, SP’s are evaluated as a valid and reliable tool, including low risk, controllability, and availability.

Recognizing the significance of this tool were also facilitators of the first veterinarian communication programs, hence researching the transferability of the concept to veterinarian-patient interactions. They came to the conclusion of satisfying perception of students taking part in such communication training, as well as communication teachers in the form of faculty members and practitioner facilitators. In summary, the results can be described as being transferable to the veterinary medical field, therefore the term standardized clients (SC) and patients (SP) is a useful tool in teaching and learning effective CS (*Adams & Ladner, 2004*).

Meanwhile, the overall recognition as best learning and teaching approach in veterinary medicine has become evident, as *Shaw (2019)* cites ‘experiential methods, such as simulation, are more likely to change behaviour by providing trainees opportunities to practice alternative communication approaches and receive constructive feedback and coaching’.

2.4 INVESTIGATION OF COMMUNICATION SKILLS USE IN REAL-LIFE CONSULTATIONS

Comparing the theoretical CS of effective communication in veterinarian-client interaction, with the real-life communication patterns used by veterinarians, provides knowledge about the necessary training content. Furthermore, it proves the successful adaption of medical communication assessment methods to the veterinary field. Because for the research of the communication patterns the RIAS method was used. Up to today, still, a limited amount of studies can be evaluated in the field of veterinary medicine, obtaining observations mainly in Canada and Australia, in the companion animal setting. One pilot study in a farm animal setting located in Canada could be evaluated.

2.4.1 CONTENT STRUCTURE IN VETERINARY CONSULTATIONS

A categorization of the content communicated by the veterinarian towards the client, in a companion animal setting in Australia, reveals the largest amount in “client education and counselling, with a biomedical focus”. Secondly, it consisted of “relationship building”, followed by a much lesser amount devoted to “client activation and partnership”. It includes the reassurance of the understanding by the client regarding the information provided. The least proportion of talk was made up of data gathering (Fig2.) (*McArthur & Fitzgerald, 2013*).

A previous study by *Shaw et al., (2004b)* displays results that are in accordance with the study by *McArthur and Fitzgerald (2013)*. Here, veterinarian`s communication patterns in small animal practices located Canada were evaluated. The content is categorized in the same way as previously discussed (Fig2).

In comparison to that, one study in the setting of farm visits, including farm animals and herd health and production management, can be evaluated: In the dairy veterinary consultations, the greatest spoken content towards the farmer is devoted to relationship building and maintaining, with 41% of the whole conversation. This portrays a difference in comparison to the companion animal consultations. Secondly placed, with 37 % in the overall talking, is education and counselling of the client. In accordance with findings in the companion animal field is the least content group, made up of data gathering (Fig2). However, due to the small sample size, the significance of its conclusions should be questionable and are only of descriptive nature here (*Ritter et al., 2017*).

Nevertheless, the study proves, that RIAS can be used in a farm visit environment. Because of that, it displays a field for future research, which is suggested to carry out. Possible research topics could be to detect more differences in the communication skills required between companion and farm animal veterinary medicine. Therefore, more specific CS training content could be developed if necessary.

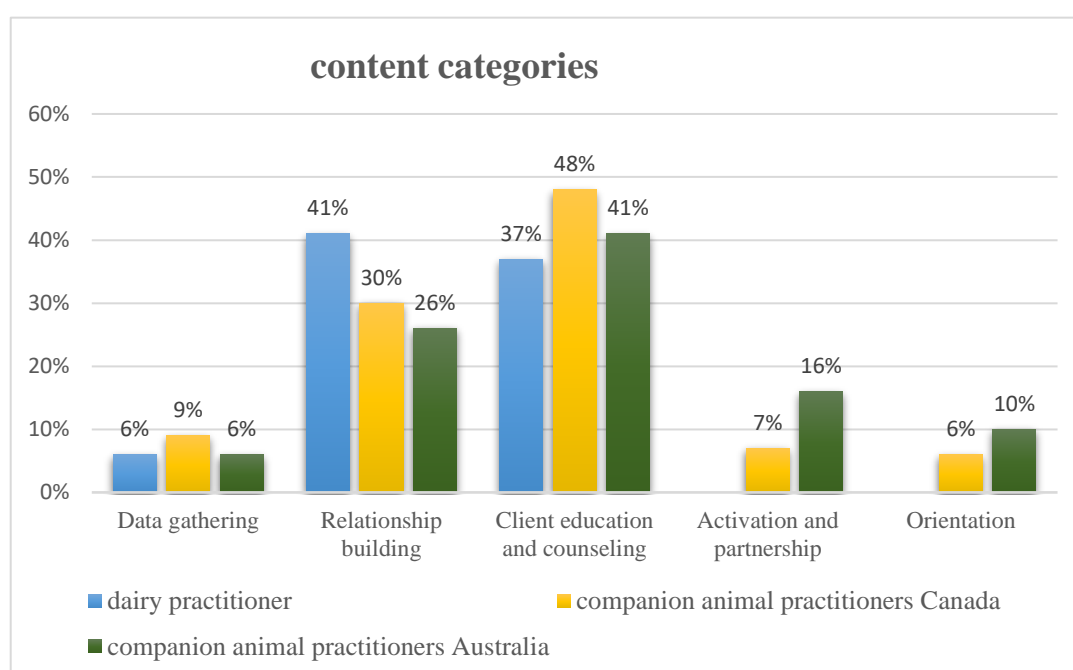


Figure 2 Content categories of veterinarians talk aimed towards the client in companion animal- and farm animal consultations

2.4.2 DEFICIENCIES IN VETERINARY COMMUNICATION

Results regarding the dominance of talking shows, that 61% of the dialogue is stemmed by the veterinarian. The client's contribution accounted for 39% of the entire conversation according to *McArthur and Fitzgerald (2013)* (Fig. 3 and Fig. 4). Such results are in accordance with the study of *Shaw et al. (2004b)* (Fig. 3 and Fig. 4). Consequently, one conversation partner being more dominant reveals an unbalance. Hence, possible detrimental outcomes, e.g. on client-adherence with veterinarians' recommendations are expectable. Furthermore, it shows a deviation from the as optimal established relationship-centred approach. The negative effects of such are previously described in chapter 2.2.1.

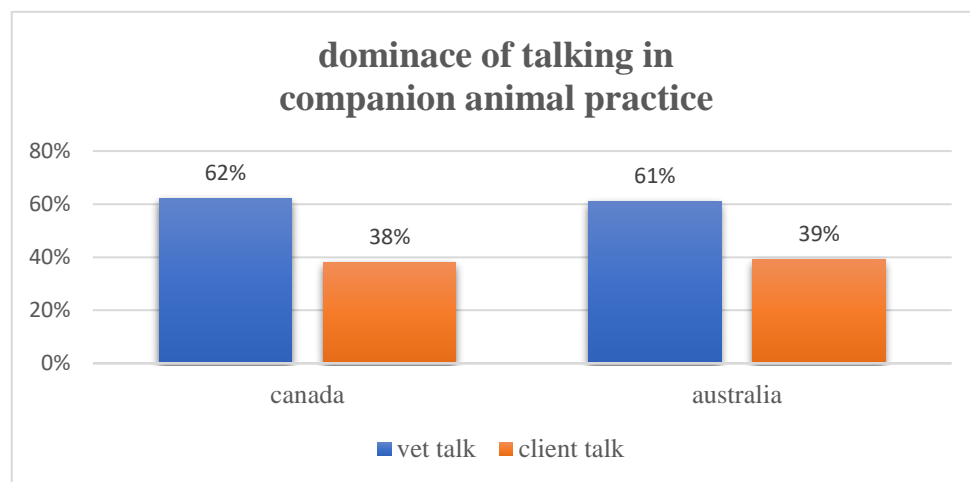


Figure 3 Division of talking between veterinarian and client in companion animal consultations, located in Canada and Australia

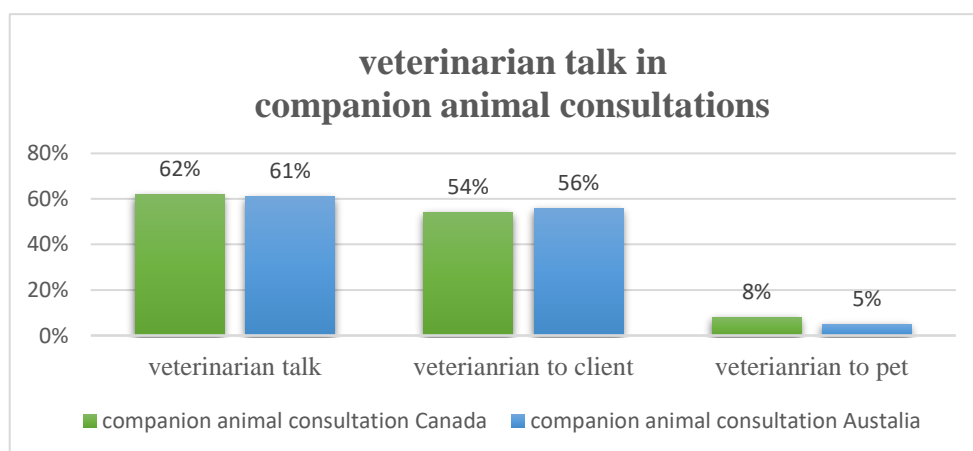


Figure 4 Division of veterinarians talk aimed towards the client versus towards the animal

The greatest content category of education and counselling, included a “biomedical focus” (Shaw *et al.*, 2004b; McArthur & Fitzgerald, 2013). Therefore, it resembles a deviation from the discussed theoretical knowledge in CS education, because social elements are neglected. Conclusively it isn’t ideal for initiating rapport and building a connection with the client (McArthur & Fitzgerald, 2013). The same results are displayed by Shawn *et al.* (2004b). As a conclusion, Shaw *et al.* (2004b) cites medical literature, by suggesting an ‘interactive, (...) chunk and check approach’ in providing information to the client. It means, that information shall be provided in small amounts to the client, while frequently asking for the client’s understanding (Shaw *et al.*, 2004b).

Regarding empathy statements towards the client, both studies in companion animal setting agree on an underutilisation of empathy expressions (Shaw *et al.*, 2004b; McArthur & Fitzgerald, 2013). Therefore, negative effects on the client’s compliance- and satisfaction, and on the overall outcome of health care for the animal is expectable, as described in chapter 2.2.1. Consequently, to highlight is the need to express this skillset and the understanding of its effect on relationship with the client. Furthermore, it is important in difficult client encounters, like discussion of financial aspects, euthanasia or dealing with grief, as discussed in chapter 2.2.2.

The use of open-ended questions cites McArthur and Fitzgerald (2013) as unsatisfactory, despite ‘being more effective in identifying the client’s perspective’. As a consequence, this has a negative effect on the client’s adherence (McArthur & Fitzgerald, 2013). Agreeing with the lack of open-ended question in veterinarian communication, the conclusion of Shawn *et al.* (2004b) is, that it is detrimental to “the accuracy of data gathering”. Open-ended questions could be evaluated in the farm animal practice setting, as less often used in comparison with closed-ended questions (Ritter *et al.*, 2017). Consequently, the same outcome as described in companion animals can be extrapolated to the farm animal consultations.

As the veterinary communication education lacks in empirical studies and is built mainly on human medical knowledge, the research is evaluated as a positive development. The results of the RIAS based studies reveal first of all, that RIAS assessment can also be used in herd management and production medicine. Therefore, further research in this context is possible and suggested.

Secondly, it reveals, that common patterns used by the veterinarians have deficiencies in comparison with theoretical knowledge on effective communication. Such deficiencies are: the unbalance in the proportion of talk between veterinarian and client, rarely used open-ended questions, a lack of empathy statements, and insufficient client integration. Hence, the conclusion is to strengthen these aspects of communication skills programs. However, not all veterinarians participating in the studies took part in communication skills training before. So, another suggestion is to provide training possibilities and re-assess the use of CS of participants after completion of specific training.

2.5 DEVELOPEMENT OF COMMUNICATION SKILL EDUCATION IN HUMAN MEDICINE

To prove, that the importance of communication skills training within the veterinary profession is to the same degree acknowledged, as in the medical profession, I will compare the development, the status of curricula integrations, graduate licensing examinations and statutory body accreditation programs between both professions. Because such are key elements for portraying the standard requirements and norms within higher education.

The CS education in human medicine developed over the last 40 years. Nowadays, CS are acknowledged as a clinical core competency. Before the 1980s CS were seen as “soft skills” with no need for education in any form, since its development was expected to happen through the professional career and experience gaining. Then research on the effect of CS training and the CS abilities of practitioners proved otherwise, by re-assessing them years after graduation. The change in the perspective on CS was facilitated additionally, by to broad research in the field of communication and evidence-based results regarding the outcome of care (see chapter 2.2) (*Englar et al., 2016*).

After that, the shift from traditional curricula, neglecting communication skill education, to competency-based curricula integrating communication, was based on consensus conferences, located in the United States and Europe:

- the Toronto Consensus statement
- the Consensus of the Canadian Medical Association
- the General Medical Council of the United Kingdom
- the Kalamazoo Consensus statement in North America (*Englar et al., 2016*).

Participants in such conferences were medical universities, licensing boards, national authorities, and relevant stakeholders. The general aim of these consensus approaches was to set standards and norms in communication education in the form of mutual agreements (*Englar et al., 2016*).

The Toronto consensus conference in 1991 proved first the understanding of CS as a core clinical competency. The main objective of this consensus was to reject traditional beliefs and discover the need for the replacement of the knowledge. It indicates that traditional curricula were not sufficient, available education lacks uniformity and quality. Therefore, it suggests to identify CS for effective communication and beyond that, methods of assessing effective communication. Further, it emphasises on the use of video and audio recorded consultations, role-play and SP's in communication teaching. In addition, it includes the requirement for adequate training of faculty members itself (*Simpson et al., 1991*).

The Canadian Medical Association (CMA) and its consensus in 1992, represents the first acknowledgment in the change on communication skills education by a national authority. The CMA likewise recommended methods for adequate assessment of CS. Especially the use of SC in teaching and learning communication is suggested. This example portrays a global trend for the recognition of CS education by national authorities (*Englar et al., 2016*).

Similar could be observed in the United Kingdom, where the (GMC) in 1993 first published skill expectations of new medical graduates in the edition of "Tomorrow's Doctors". The GMC of the United Kingdom is a statutory body, which is setting standards for national medical schools. It portrays a major impact on undergraduate medical education in the UK, as it provides a guide for curricula changes. Further, it emphasises patient-centeredness as an ideal approach. Since 1993 revised editions of content in "Tomorrow's Doctors" have been published. Highlighted in it are essential CS and the form of such skill assessment by supervisors (*Rubin & Franchi-Christopher, 2002; Englar et al., 2016*).

Worldwide the next milestone in the development of communication as core clinical skill, could be observed in North America, by the “Bayer-Fetzer Conference” on doctor-patient communication (*Englar et al., 2016*).

In May 1999 a conference was held in Michigan, Kalamazoo, including representants of leading medical universities and national authorities from the United States and North America. The common goal of the conference was to delineate the essential aspects of doctor-patient communication. Also, to define norms in medical communication education, based on mutual agreement of communication expertise knowledge. Furthermore, to facilitate the development of “communication-oriented curricula”. The results of the conference were named in the “Kalamazoo-Consensus statement”. The report provides first a list of core elements of effective communication, based on five theoretical models, available at that time. To underline here is that the CCG Guide was included. As the final outcome, seven core elements were identified: Building the relationship between physician and patient, gathering information, open the discussion, understanding and integrating the patient’s perspective, share information via patient education and counselling, reaching an agreement and lastly provide closure of the interview with orientation and future planning. Additionally, methods for communication assessment were presented (*Makoul, 2001*). The importance of the Kalamazoo Consensus statement in medical communication education is proven, since several studies evaluated its content regarding the named assessment methods. The outcome of such studies implements the conclusion “for the validity and reliability of the Kalamazoo Essential Elements Communication checklists, as a measure of physician communication skills” (*Joyce et al., 2010*)

2.6 DEVELOPEMENT OF COMMUNICATION SKILLS EDUCATION IN VETERINARY MEDICINE

In contrast to the medical profession, the veterinary development on communication skill education is a more recent one. Nevertheless, the speed of it was much faster, since it is facilitated and build on in large dimension on the knowledge of medical CS education (see chapter 2.3.2, chapter 2.3.6, chapter 2.3.7). Besides, major influence in the development was economic and market research, discovering the gap between student’s and veterinarian’s abilities in contrast to the ones required for success.

In general, the same paradigm shift as previously described in human medicine is visible: Veterinary medicine “initially assumed that communication skills did not need to be taught, and that effective communication would develop after, if not during clinical rotations” (*Englar et al., 2016*). Even so, non-technical skills were received as non-teachable, as they were part of the individual’s inherent personality traits (*Hodgson et al., 2013*).

Regarding the influence of economic market research, the “Brakke management and behaviour study” and the “KPMG study” can be named. Between 1998 and 2000 those studies evaluated the economic market situation within the veterinary profession (*Adams, 2006*).

The “Brakke management and behaviour study” conducted by the American Veterinary Medical Association (AVMA), reported on the economic stagnation of veterinary practitioners in the previous decade. Further, they were linking specific behaviour of practitioners to economic practice and career success (*Cron et al., 2000*). The “KPMG study report” from 1999, similarly comes to the conclusion, that some non-scientific skills and behavioural attitudes in veterinarian practitioners and students are lacking for market success, without further specification (*Brown & Silverman, 1999*).

As an outcome of these studies, research was carried out by subdivisions of the National Council on Veterinary Economics Report. It resulted in the establishment of CS as a requirement to become a successful veterinarian, besides clinical knowledge and traditional competencies (*Shaw et al., 2004a*).

Reasons for the adaption and the building on the medical communication education in the veterinary profession was previously discussed in chapter 2.3.3. Because of it, veterinary universities began shortly afterward with the implementation of the medical knowledge into curricula and the development of own veterinary medicine adapted versions:

A specific communication module within a veterinary curriculum was described first at the Ontario Veterinary College (OVC) in Canada, where the program started in the year 2000. It was built on medical communication knowledge, since the program was based on the Australian medical University of Calgary’s curriculum. The University of Calgary can be described as being in a pioneer position in medical communication education, as they developed and established the CCG (*Adams & Kurtz, 2006*).

With the presentation of the specific communication module at the OVC, the main concept was to support the further shift of communication skills as core clinical skills. Hence, reacting to the urgent need of curricula adaption and to set an example in how to provide fundamental communication training to students. Such training nevertheless shall be continued in the post-graduation setting.

In detail, the OVCs new curriculum used a “helical-approach” of communication education within the first three years of the DVM program. Further, CS are taught in the form of standardized patients and written case studies, reflecting large and companion animal topics. In the final year, enrolled student’s communication training includes human-human interaction with real clients and patients, in the form of clinical rotations. Besides, part of the program is a so-called “communication team”, which is contributing to the standardized client’s method in teaching. The communication team included communication coaches as facilitators, assembled from veterinary practitioners and faculty members. Therefore, the program also empathizes the adequate education of the instructors or supervisors itself (*Adams & Kurtz, 2006*).

Similar in Europe CS training integration in veterinary schools began in the early 2000s, well described in the United Kingdom and Ireland. There, a major influence in the harmonisation of the different approaches to communication teaching was provided by a national body, called National Unit for Advancement of Veterinary Communication Skills (NUVACS), which began its tasks in the year 2003. By providing lectureship to faculty members and sharing teaching expertise and research among the schools, NUVACS resembles a support unit, aiming in-between school cooperation and encouragement of curricula adaption. Schools involved in the NUVACS program were each of the seven veterinary schools existing in the UK and Ireland at that time (*Gray et al., 2006*).

Recently in 2015, a comparison was made between the different veterinary schools in the UK, focusing on content, method of delivery and assessment of communication skills within the different school's curricula. To underline is, that as in the United States described (see 2.5.5), all the schools rely on the adapted version of the CCG as a guide for providing a framework in teaching utilizing the medical knowledge. Also, all schools are using experimental methods for the delivery of training content, hence turning away from the traditional didactic approach via lectures. This includes the utilization of SC's and patients, furthermore videotaping of such workshops and sharing its content among the schools.

In addition, a helical approach in the student's education can be observed, since most schools program includes CS training within each year of undergraduate education. Usually, in the beginning, basic knowledge is provided, like the ability to differentiate between poor and effective communication, then consultations structure follows, and in the higher years, the focus lays on difficult client encounters. E.g. emotional client situations, giving a bad prognosis, and end of life discussions. The education of faculty members and communication coaches itself is provided by the NUVACS support organisation (*Mossop et al., 2015*).

Therefore, the view to the veterinary university curricula reveals, that communication skills are integrated and furthermore, such programs are in accordance best practice recommendations on teaching and learning communication (see chapter. 2.3.2; chapter 2.3.6; chapter 2.3.7).

Positive in addition is the interschool collaboration. This can be seen by the NUVACS example and its effect within the European Union as a whole. E.g. video- or audiotaped SC encounters from the University of Liverpool in The United Kingdom is used to educate students at the University of Veterinary Medicine Hannover in Germany (*Tiho Hannover, 2019*).

The aim of the harmonisation of CS education is also evident by recent studies, that are comparing and evaluating different curricula programs among veterinary schools (*Mossop et al., 2015; Shaw, 2019*).

2.7 COMMUNICATION SKILLS ASSESSMENT IN STUDENT LICENSING EXAMINATIONS

The current status of medical CS education reveals as a final step in successful curricula integrations, the assessment of students within graduating licensing examinations. Such examinations are exemplary described in the United States and Canada:

Students enrolled in accredited medical schools in the United States and Canada need to pass the United States Medical Licensing Examinations (USMLE), in order to get licensed with a medical degree. In a three-part examination, students are evaluated according to USMLE listed physician competencies, which needs to be utilized appropriately. Results of the USMLE examinations are reported to the national licensing authorities, granting the initial license in order to practice medicine (*USMLE Announcements, 2014*). According to the comprehensive review of USMLE the list of components included in the USMLE 2 examinations are seven major competencies, one of them is communication and interpersonal skills (*Comprehensive Review of USMLE, 2019*). The form of the USMLE examinations evaluation and scoring of the examinee is described by the bulletin information: Communication skills are tested with SP's encounters, whereas the performance of the examinee, is recorded by the SP's via checklists. The checklists are based on the observable behaviour of the examinee (*USMLE Bulletin Information, 2019*).

In summary, it can be said, that the formative evaluation of the licensing examinations in human medicine reflect literature and experts' opinions, as a standardised and valid method for the assessment of communication abilities.

In the veterinary profession, the view to licensing examinations reveals, that United States of America and Canada reached the point of implementing communication in veterinary graduate licensing examinations. Therefore, it proves furthermore, the same level of acknowledgment of CS education as in human medicine.

Veterinary graduates have to complete the North American veterinarian licensing examinations (NAVLE) in order to practice veterinary medicine, in the form of a written test. This multiple-choice test is containing 360 multiple-choice questions (*ICVA NAVLE competency domains, 2019*).

Regarding the content of NAVLE examinations, competencies are listed in appendix B of the NAVLE Practice Analysis report from 2017, including communication as a competency domain. It is divided into two parts of communication with clients and communication within the veterinary health care team and other professionals (*2017 NAVLE practice analysis report, Appendix B*).

The content is described in detail by the International Council for Veterinary Assessment (ICVA) NAVLE competency domains 2019. To emphasize is the point that students shall utilize the most effective communication techniques, for example, open-ended questions and empathy statements (*ICVA NAVLE competency domains, 2019*).

However, ICVA criticises the form of the assessment of communication competencies. The form of the assessment is a written multiple-choice question test. The IVCA says that “it is generally recognized that communication (..) skills are not adequately assessed with multiple-choice items” (*2017 NAVLE practice analysis report, Appendix B*) and therefore reduces the proportion of test questions in this domain to a minimum.

In contrast to the medical licensing examinations, here the form of the assessment of student’s abilities is not conform with the literature and expert’s opinion. It displays, that the fast development of the acknowledgment of communication skills within the profession is not fully completed yet. Hence it represents an element for future development. However, I do not doubt, that the development will continue, and lead finally to an assessment method including standardised clients, to create a fair and standardised method of testing students’ abilities. Because the successful transfer of medical CS concepts is proven in all other aspects involved in communication education (see chapter 2.3.2; chapter 2.3.3; chapter 2.3.6; chapter 2.3.7).

2.8 ACCREDITATION POLICY OF COMMUNICATION SKILLS EDUCATION

Evidence for reaching the highest level on CS acknowledgment can be seen by the implementation of communication as an evaluation criterion within an accreditation process. This can be seen in the medical profession, as well as in veterinary medical education.

According to the U.S. Department of Education, the accreditation in The United States includes non-government bodies, as well as state approval accreditors. Such accreditors evaluate according to specific accreditation norms the educational institution- or postgraduation programs, according to their compliance with standards and norms, defined by the accreditor. The process of accreditation includes the application for the evaluation and the accreditor's judgment (*U.S. Department of Education*).

In the human medicine the responsible body for the accreditation in The United States is the Accreditation Council of Graduate Medical Education (ACGME). The ACGME lists main competencies as evaluation criteria for post-graduate education. Included in the competencies are communication skills since 1999. Moreover, to highlight is the fact, that within the list of main competencies, communication is also mentioned in the cross-specialty approach. This means, that these competencies are required independently from the specific specialty the residents are participating in. Hence, communication competency has an increased significance compared to other competencies (*Batalden et al., 2002*).

In comparison to medical education, the veterinary profession includes similarly CS as accreditation criteria for veterinary school teaching programs. This can be seen in the United States, Canada, Australia as well as in Europe, therefore it portrays a general trend. It proves once more the acknowledgment of CS education within the veterinary profession:

The American Veterinary Medical Council on Education (AVMA COE) is responsible for veterinary college program accreditation within America. According to chapter 12.9 of Accreditation Policies and Procedures of the AVMA COE 2018, veterinary schools must provide a teaching environment, where students learn how to communicate efficiently. Effective communication shall be applied for the veterinarian-client consultations and the communication with colleagues (*Accreditation Policies and Procedures of the AVMA COE chapter 12.9, 2018*).

The requirements of the AVMA COE to integrate communication in the school's curricula reflect the high level of acknowledgment on the significance of communication skill teaching.

The statement "Linking outcomes for the (..) competencies with accreditation could serve to strengthen their inclusion in curricula" (*Hodgson et al., 2013*), is in accordance with my suggestion.

In the European Union, the Royal College of Veterinary Surgeons (RCVS) the accrediting organisation for the United Kingdom's veterinary schools. It represents a statutory body. Therefore, it responsible for setting education standards and norms. At the moment, seven out of the eight existing veterinary schools, are accredited by the RCVS. Consequently, they are evaluated as in compliance with the defined standards and norms of the RCVS on communication skill education (*RCVS Accreditation Status of UK Veterinary Schools, 2019*).

According to chapter 1 of the RCVS standards and procedures for the accreditation of veterinary degrees 2017, it is bound on the national Veterinarian Surgeons Act from 1966, but besides has to comply with the minimum standards on veterinary education throughout the European Union, regulated by the EU Directives (*RCVS standards and procedures for accreditation of veterinary degrees, chapter 1, 2017*).

The significance of the competences is evident because those are in agreement with recommendations of major organisations within the European Union. E.g. the OIE recommendations on graduating vets, standards of European Association for Quality Assurance in Higher Education (ENQA) and lastly EAEVE and the Federation of Veterinarians of Europe (*EAVE Day One Competences, 2019*).

Therefore, the RCVS policy represents a general example of the requirements on veterinary training programs within the European Union.

Agreeing with my statement is *Cake (2016)* declaring, that RVCS contributed as a major influencer in Europe's veterinary institutions shift towards competency-based curricula. Day One competencies were first developed and published by the RVCS itself and later "adopted by other accrediting bodies including the European Association of Establishment for Veterinary Education (EAVE), and the Australian Veterinary Boards Council" (*Cake, 2016*).

According to the RCVS Day One Competences 2014, competences are defined as the minimum standard required of a veterinary graduate, entering the professional world. It means the graduate is able to perform basic tasks independently and appropriately, relying on the educational background provided by the school's training program. It includes the efficient communication of graduates with clients and within the veterinary health care team, e.g. colleagues and, reference laboratories. Furthermore, communication with the public and official authorities are mentioned. To highlight is, that the element of adequate empathy use is required, e.g. in euthanasia discussions (*RCVS Day One Competences 2014*)

3. CONCLUSION

In this thesis, I proved the successful conversion and adaption of medical educational content on communication skills to the veterinary profession. Further, I demonstrated the positive effects of adequate communication skills on the veterinarian-client relationship and the outcome of care. Lastly, I revealed, that the importance of communication skills training by veterinary licensing- and accreditation organisations, and veterinary schools is to the same degree acknowledged as in human medicine.

3.1 FINDINGS ON THE IMPORTANCE OF COMMUNICATION SKILLS IN THE VETERERINARIAN-CLIENT-RELATIONSHIP

The value of medical research results and the importance of efficient communication is evident, as the physician-patient interview and the veterinary-client consultation can be displayed in accordance with each other:

First, the use of effective communication and the positive effect on the outcome of health care, be it human patient or animal is established. Secondly, patient and client's satisfaction are both influenced by the veterinarians and physician's competence of effective communication. The third aspect, where the medical interview and veterinary counterpart can be compared in accordance with each other, is compliance. Another beneficial effect of appropriate communication skills use, can be seen also in a decrease in malpractice risk. The last element, where the correlation between both professions and effective communication is established, is the satisfaction of veterinarians and medical practitioners. Here, satisfaction is dependent on three main aspects. The overall outcome of health care, the possibilities of diagnostic accuracy and appropriate time for the interview and consultation process.

In the distinction of the veterinary-client-relationships from the physician-patient-relationship, I continue my statement of a strong significance of communication skill education in veterinary medicine. The distinction elements are: The human-animal bond and so the three-part nature of the consultation, the broader expectation of clients towards veterinarian's knowledge and competence on education and counselling, the variety in the profession on small-animal, farm-animal or equine medicine patients and clients and lastly, unique consultation topics.

3.2 CONVERISON OF MEDICAL COMMUNICATION CONTENT TO VETERINARY MEDICINE

The successful transfer of medical communication education to the veterinary profession is proven, because of the adaption of theoretical models for effective communication. Besides, the methods for observation, assessment of communication skills and feedback provision are identical in veterinary and human medicine.

The process of learning effective communication includes three steps:

- The definition of effective communication skills
- The observation of the learner's abilities and the evaluation via assessment methods
- The repetition of communication skill training with evaluation of the improvement via feedback

The definition of the CS, that are enhancing the interview and consultation process is carried out by the theoretical models. The model for the medical interview is the Calgary-Cambridge Referenced Observation Guide. This model has proven its success in medical communication training. The veterinary CS education adapted the version successfully.

The second step of learning CS includes observation of the learner's abilities. At the same time, it is linking CS learning, to CS teaching. Observation and assessment methods can be divided into indirect and direct methods. The indirect objective method, that is used in human medicine, is a computer analysis software program, called Roter Interactive Analysis Software (RIAS). RIAS has displayed its functionality in research on communication of physicians and it has proven the importance of CS education in the medical field.

In veterinary medicine, even so, RIAS software was converted successfully. Recently, is used in the research of communication patters used by practitioners in real-life consultations. In contrast to the indirect RIAS method, a direct method is provided by the concept of simulated patients (SP) in human medicine and simulated clients (SC) in the veterinary profession. It underlines once more, the successful transfer of a medical communication education concept to the veterinary degree.

3.3 STATUS OF COMMUNICATION SKILLS IN MEDICAL AND VETERINARY EDUCATION

The CS education in human medicine developed over the last 40 years. CS are acknowledged as a core clinical competency, integrated into medical school curricula are part of licensing examinations of graduating students and further implemented into postgraduation residency- and specialty education. Furthermore, statutory bodies acknowledge communication as an evaluation criterion for accreditation of medical schools on the level of higher education.

In contrast to that, the development of CS education in the veterinary profession is a more recent one. Nevertheless, the speed of it was much faster, so that now the level of acknowledgement and educational integration is comparable with the medical counterpart.

In human medicine, the development was facilitated by communication literature expert's opinions and research of physician's use of effective communication on the outcome of health care. In addition, the shift from traditional curricula, neglecting communication skill education, to competency-based curricula were greatly based on consensus conferences. Such development was observed within the United States and Canada, as well as in Europe, hence portraying a general trend.

In veterinary medicine's CS development, major influence was economic market research and the evaluation of a gap in student's and veterinarian's abilities, in contrast to the ones required for success. Besides, it was facilitated and build on in large dimension on medical communication skill education knowledge. Furthermore, beneficial is the observable interschool collaboration.

The current status of medical CS education shows, that they are required in medical students licensing examinations, e.g. the United State Medical Licensing Examinations (USMLE 2). Therefore, CS are acknowledged as important as any other clinical skill. Besides, they are evaluated by national statutory bodies as necessary for graduation from a medical school. The form of such examinations needs to be highlighted. The assessment of the communication competencies of graduating students here are carried out in the form of standardized, simulated patients (SP's). Because of that, it agrees and reflects literature and expert's opinion, as a standardised, and valid method for the assessment of communication abilities.

The veterinary profession reached also the point of integrating communication in licensing examinations, observable e.g. in the North American Veterinarian Licensing Examinations (NAVLE). Nevertheless, the form of the assessment of the veterinary student's CS is questionable. The examination here is carried out in the form of a written multiple-choice test, which is inadequate for the assessment of student's communication abilities. It shows, that the very fast development of CS education in the veterinary profession is not without effect and not completed yet. Hence, the successful transfer of medical CS concepts is to continue, e.g. in official licensing examinations, to create a fair, standardized evaluation of veterinary medical students' competencies.

Lastly, in human medicine CS competence is integrated as accreditation criteria for veterinary medical institutions, portraying standards in the requirement on the level of higher education. In accordance with that, the same is displayed in the veterinary profession. In veterinary medicine, the harmonization on accreditation criteria, visible in the United States as well as in Europe outlines a general trend. Therefore, it proves the acknowledgement of CS education importance, has developed to the same level as in human medicine.

I suggest, for the future development in veterinary medicine on communication skill education to investigate and include possible differences between companion animal and herd level medicine in the context of communication. Besides, to investigate the effects of CS training in the long term on postgraduate's satisfaction and possible prevention of mental issues, like burnout and depression. Further topics of research, can be named by research on CS education within the health care team, e.g. colleagues, reference laboratories etc.

4. SUMMARY

The question of this work is, in which elements of effective communication the medical profession is comparable with the veterinary counterpart. The view of similarities and distinction of the veterinarian-client relationship versus the physician-patient relationship answers this question, and proves furthermore, the importance of communication skill education in veterinary medicine.

The investigation of adaption and conversion of medical communication education content to the veterinary profession, underlines this statement. The theoretical models of effective communication and the methods of observation, assessment and feedback provision are successfully transferred and integrated into veterinary communication skills training.

In addition, the question of the acknowledgment of the importance of communication skills is answered, via examination of medical and veterinary communication skills development, the view to the integration of communication in graduate licensing examinations, and furthermore by the integration of communication in accreditation criteria within the level of higher education.

Since the implementation of communication skills is carried out in veterinary education to the same degree as in human medicine, overall the same level of acknowledgment in both professions can be concluded.

5. BIBLIOGRAPHY

Adams, C.L. & Kurtz, S.M. (2006) *Building on Existing Models from Human Medical Education to develop a communication Curriculum in Veterinary Medicine*, JVME, Vol. 33, No.1, pp. 28-37, doi: 10.3138/jvme.33.1.28

Adams, C.L. & Kurtz S. (2012) *Coaching and Feedback: Enhancing Communication Teaching and Learning in Veterinary Practice Settings*. JVME, Vol. 39, No.3, doi: 10.3138/jvme.0512-038R

Adams, C.L., Ladner, L. (2004) *Implementing a Simulated Client Program: Bridging the Gap between Theory and Practice* JVME, Vol. 31, Issue 2, pp. 138-145, doi: 10.3138/jvme.31.2.138

Batalden, P., Leach, D., Swing, S., et al. (2002) *General competencies and accreditation in graduate medical education*. Health Affairs, Vol. 21, No. 5, pp. 103-11, doi: 10.1377/hlthaff.21.5.103

Brown, J.P., Silverman, J.D. (1999) *The current and future market for veterinarians and veterinary medical services in the United States*. JAVMA, Vol. 215, No.2, pp. 161-183

Cake, M.A., Bell, M.A., Williams, J.C., Brown, F.J.L, Dozier, M., Rhind, S.M., Baillie, S. (2016) *Which professional competencies are most important to the success of graduate veterinarians? A Best Evidence Medical Education (BEME) systematic review: BEME Guide No. 38*, Medical Teacher, doi: 10.3109/0142159X.2016.1173662

Cron, W.L., Slocum, J.V., Goodnight, D.B., Volk, J.O., (2000) *Executive summary of the Brakke management and behaviour study*. JAVMA, Vol. 217, No. 3, pp. 332-338, doi: 10.2460/javma.2000.217.332

Englar, R.E., Williams, M., Weingand, K. (2016) *Applicability of the Calgary-Cambridge Guide to Dog and Cat Owners for Teaching Veterinary Clinical Communications*, JVME, Vol. 43, Issue 2, pp.143-169 , doi: 10.3138/jvme.0715-117R1

Gray, C., Blaxter, A., Johnston, P., Latham, C., May, S., Phillips, C., Turnbull, N. & Yamagishi, B. (2006), *'Communication Education in Veterinary Education in the United Kingdom and Ireland: The NUVACS Project Coupled to Progressive Individual School Endeavours'*, JVME, Vol. 33, pp. 85 – 92 doi: 10.3138/jvme.33.1.85

Hodgson, L., Pelzer, J.M., Inzana K.D. (2013) *Beyond NAVMEC: Competency-Based Veterinary Education and Assessment of the Professional Competencies*, JVME, Vol. 40, Issue 2, pp. 102-118, doi: 10.3138/jvme.1012-092R

Joyce, B.L., Steenbergh, T., Scher, E. (2010) *Use of the Kalamazoo Essential Elements Communication Checklist (Adapted) in an Institutional Interpersonal and Communication Skills Curriculum*. Journal of Graduate Medical Education, Vol. 2, No. 2, pp 165-169, doi: 10.4300/JGME-D-10-00024.1

Kleen, J.L., Rehage, J. (2008) *Kommunikationskompetenz in der tierärztlichen Praxis*, Tierärztl. Prax, Vol.36 (G), pp. 293-297

- Kurtz, S.M. (2006) *Teaching and Learning Communication in Veterinary Medicine*, JVME, Vol. 33, No.1 pp. 11-19, doi: 10.3138/jvme.33.1.11
- Kurtz, S.M & Silvermann, J.D. (1996) *The Calgary-Cambridge Referenced Observation Guides: an aid to defining the curriculum and organizing the teaching in communication training programmes*, Medical Education Vol. 30, No. 2, pp. 83-89 doi: 10.1111/j.1365-2923.1996.tb00724.x
- Kurtz, S.M., Silverman, J., Benson, J., Draper, J. (2003) *Marrying Content and Process in Clinical Method Teaching*. Academic Medicine, 78(8), pp. 802-809, doi: 10.1097/00001888-200308000-00011
- Makoul, G. (2001) *Essential elements of communication in medical encounters: the Kalamazoo consensus statement*, Acad Med, Vol. 76, Issue 4, pp. 290-393, doi: 10.1097/00001888-200104000-00021
- McArthur & Fitzgerald (2013) *Companion animal veterinarians use of clinical communication skills*, AustVetJ, Vol. 91, No. 9, pp. 374-38, doi: 10.1111/avj.12083
- Mossop, L., Gray, C., Blaxter, A., Gardiner, A., MacEachern, K., Watson, P., Whittlestone, K., Robbe, I. (2015) *Communication skills training: what the vet schools are doing* Veterinary Record, Vol. 176, pp. 114-117, doi: 10.1136/vr.h425
- Radford, A., Stockley, P., Silverman, J., Taylor, I., Turner, R., Gray, C., et al. (2006) *Development, Teaching, and Evaluation of a Consultation Structure Model for Use in Veterinary Education*, JVME, Vol. 33, No. 1, doi:10.3138/jvme.33.1.38
- Ritter, C., Barkema H. W., Adams, C.L., (2017) *Action cameras and the Roter interaction analysis system to assess veterinarian-producer interactions in a dairy setting*, Veterinary Record, doi:10.1136/vr.104423
- Roter, D. and Larson S. (2002) *Patient Education and Counselling*, Vol. 46, No.4, pp 243-251, doi: 10.1016/S0738-3991(02)00012-5
- Rubin, P., Franchi-Christopher, D. (2002) *New edition of Tomorrow's Doctors*, Medical Teacher, Vol.24, No.4, pp. 368-369, doi:10.1080/0142159021000000816
- Shaw, J.R. (2006) *Four Core Communication Skills of Highly Effective Practitioners*, Vet Clin Small Anim Vol 36, Issue 2, pp. 385-396, doi: 10.1016/j.cvsm.2005.10.009
- Shaw, J.R., (2019) *Evaluation of communication skill training programmes at North American veterinary medical training institutions* JAVMA, Vol.255, No. 6, pp. 722-733 doi: 10.2460/javma.255.6.722
- Shaw, J.R., Adams, C.L., Bonnett, B.N. (2004a) *What can veterinarians learn from studies of physician-patient communication about veterinarian-client-patient communication?* JAVMA, Vol 224, No. 5, pp. 676-684 doi: 10.2460/javma.2004.224.676
- Shaw, J.R., Adams, C.L., Bonnett, B.N., Larson, S., Roter, D.L. (2004b) *Use of the Roter interaction analysis system to analyse veterinarian-client-communication in companion animal practice*. JAVMA, Vol. 225, No.2, pp.222-229, doi: 10.2460/javma.2004.225.222

Shaw, J. R., Adams, C. L., Bonnett, B. N., Larson, S., & Roter, D. L. (2008). *Veterinarian-client-patient communication during wellness appointments versus appointments related to a health problem in companion animal practice*. JAVMA, Vol. 233. No.10, pp. 1576–1586. doi: 10.2460/javma.233.10.1576

Simpson, M., Buckman, R., Stewart, M., Maguire, P., Lipkin, M., Novack, D., Till, J. (1991) *Doctor-patient communication: The Toronto consensus statement*. BMJ, Vol. 303, pp.1385-1387, doi: 10.1136/bmj.303.6814.1385

INTERNET SOURCES:

Accreditation Policies and Procedures of the AVMA COE chapter 12.9 (2018) URL: https://www.avma.org/ProfessionalDevelopment/Education/Accreditation/Colleges/Documents/coe_pp.pdf Accessed: 1.October 2019

Comprehensive Review of the USMLE on functions and subfunctions assessed in the CIS component of Step 2 CS, URL: <https://www.usmle.org/pdfs/cru/CISFunctionsandSubfunctions.pdf> Accessed: 15. Sept 2019

EAVE Day One Competences: List of subjects and Day one Competences as approved by ECCVT (2019) URL: https://www.eave.org/fileadmin/downloads/eccvt/List_of_subjects_and_Day_One_Competences_approved_on_17_January_2019.pdf Accessed: 18.October 2019

ICVA NAVLE competency domains 2019, URL: https://www.icva.net/image/cache/NAVLE_Competencies_FINAL.pdf Accessed: 10. October 2019

Lexico Online Dictionary: Collaboration between Dictionary.com and Oxford University Press (OUP) URL: <https://www.lexico.com/en/definition/communication> Accessed: 15.8.2019

NAVLE Practice Analysis Report 2017 (Appendix B), URL: https://www.icva.net/image/cache/ICVA_NAVLE_Practice_Analysis_Final_Report_2017.pdf Accessed: 10.October 2019

RCVS Accreditation Status of UK Veterinary Schools (August 2019), URL: <https://www.rcvs.org.uk/document-library/accreditation-status-of-uk-veterinary-schools/> Accessed: 18. October 2019

RCVS standards and procedures for the accreditation of veterinary degrees 2017 (chapter 1) URL: <https://www.rcvs.org.uk/document-library/rcvs-accreditation-standards/> Accessed: 18. October 2019

RCVS Day One Competences 2014 on standard requirements of graduating veterinary students URL: <https://www.rcvs.org.uk/document-library/day-one-competences/> Accessed: 18. October 2019

Tiho Hannover on clinical Skills Lab URL: <https://www.tiho-hannover.de/studium-lehre/clinical-skills-lab/service-materialien/> Accessed: 1.October 2019

U.S. Department of Education on Accreditation in the United States, URL: <https://www2.ed.gov/admins/finaid/accred/accreditation.html#Overview> Accessed: 16. October 2019

USMLE Announcements (2014) on Physician Tasks/Competencies, URL: <https://www.usmle.org/announcements/default.aspx?ContentId=137> Accessed: 15. Sept 2019

USMLE Bulletin Information on USMLE Step 2 Clinical Skills, URL: <https://www.usmle.org/bulletin/overview/#TestFormat> Accessed: 15. September 2019

BOOKS:

Gray, C., Moffett, J. (Eds) (2010): *Handbook of veterinary communication skills*, United Kindgdom, Blackwell Publishing Ltd, p. 198, ISBN 978-1-4051-5817-6

PICTURE REFERENCES:

Figure 1: The extended Calgary-Cambridge Framework according to Kurtz, S.M., Silverman, J.D., Benson, J. and Draper, J. (2003) Marrying Content and Process in Clinical Method Teaching: Enhancing the Calgary-Cambridge Guides, *Academic Medicine* 78(8):802-809 URL: https://www.gp-training.net/training/communication_skills/calgary/framwork/framework.htm Accessed: 28.8.2019

6. ACKNOWLEDGEMENTS

I would like to express my appreciation to Dr Istvan Toth, my supervisor, for his flexibility regarding the Thesis topic and his professional support and advice.

My gratitude is devoted to my father and my grandparents for the opportunity they provided me in studying abroad, and their endless care and love.

HuVetA - SZIA

ELECTRONIC LICENSE AGREEMENT AND COPYRIGHT DECLARATION*

Name: Euler, Lina
Contact information (e-mail): lina.euler@web.de
Title of document (to be uploaded):
Communication Skills in Veterinary Education
in Comparison to Medical Communication Training
Publication data of document: 14.11.2019
Number of files submitted: 1

By accepting the present agreement the author or copyright owner grants non-exclusive license to HuVetA and SZIA over the above mentioned document (including its abstract) to be converted to copy protected PDF format without changing its content, in order to archive, reproduce, and make accessible under the conditions specified below.

The author agrees that HuVetA and SZIA may store more than one copy (accessible only to HuVetA and SZIA administrators) of the licensed document exclusively for purposes of secure storage and backup, if necessary.

You state that the submission is your original work, and that you have the right to grant the rights contained in this license. You also state that your submission does not, to the best of your knowledge, infringe upon anyone's copyright. If the document has parts which you are not the copyright owner of, you have to indicate that you have obtained unrestricted permission from the copyright owner to grant the rights required by this Agreement, and that any such third-party owned material is clearly identified and acknowledged within the text of the licensed document.

The copyright owner defines the scope of access to the document stored in HuVetA/SZIA as follows (mark the appropriate box with an X):

- ☒ I grant unlimited online access,
- ☐ I grant access only through the intranet (IP range) of the Szent István University,
- ☐ I grant access only on one dedicated computer at the Veterinary Science Library,
- ☐ I grant unlimited online access only to the bibliographic data and abstract of the document.

* The present declaration is based on Ordinance no. 5/2011 of the Rector concerning the scholarly database of institution (i.e. Szent Istvan University) affiliated publications.

Please, define the **in-house accessibility of the document** by marking the below box with an X:



I grant in-house access (namely, reading the hard copy version of the document) at the Library.

If the preparation of the document to be uploaded was supported or sponsored by a firm or an organization, you also declare that you are entitled to sign the present Agreement concerning the document.

The operators of HuVetA/SZIA do not assume any legal liability or responsibility towards the author/copyright holder/organizations in case somebody uses the material legally uploaded to HuVetA/SZIA in a way that is unlawful.

Date: Budapest, 14...day11...month..2019.year

Author/copyright owner
signature

Yina Euler

HuVetA Magyar Állatorvos-tudományi Archívum – Hungarian Veterinary Archive is an online veterinary repository operated by the Veterinary Science Library, Archives and Museum. It is an electronic knowledge base which aims to collect, organize, store documents regarding Hungarian veterinary science and history, and make them searchable and accessible in line with current legal requirements and regulations.

HuVetA relies on the latest technology in order to provide easy searchability (by search engines, as well) and access to the full text document, whenever possible.

Based on the above, HuVetA aims to:

- *increase awareness of Hungarian veterinary science not only in Hungary, but also internationally;*
- *increase citation numbers of publications authored by Hungarian veterinarians, thus improve the impact factor of Hungarian veterinary journals;*
- *present the knowledge base of the Faculty of Veterinary Science, Szent István University and its partners in a focussed way in order to improve the prestige of the Hungarian veterinary profession, and the competitiveness of the organizations in question;*
- *facilitate professional relations and collaboration;*
- *support open access.*

SZIA Szent István Archive is the online repository of scholarly publications affiliated with the Szent István University.