QUESTION DESIGN IN VETERINARY CONSULTATIONS: QUESTION FORMS AND CLIENT RESPONSES IN ACCOMPLISHING PROBLEM PRESENTATION IN A MALAYSIAN CONTEXT

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Abstract

Question design by medical practitioners has been shown to have important consequences on how patients present their problems in clinical consultations. Linguistic structure of questions as part of question design implements different communicative and pragmatic functions, and hence, affects patients' response in different ways. This study examined types of questions asked by veterinarians in the problem presentation phase of the clinical consultation in relation to their linguistic forms and functions. Veterinary illness consultations were video-recorded and veterinarians' question types, their linguistic forms and clients' response in the interaction were identified and examined. The results show that the general inquiry question implemented using the open-ended *wh*-question structure and the closed-ended declarative interrogative are the preferred forms used by veterinarians to solicit patients' presenting problems from clients. Also, alignment of the linguistic form of questions with their pragmatic functions and the discourse goal of problem presentation affects clients' ascription of veterinarians' actions. The findings from the study can inform veterinarian communication training for more effective veterinarian-client communication to accomplish problem presentation in clinical consultations.

Keywords

clinical consultation interaction, problem presentation, question forms, veterinarians' questions, client response, veterinarian-client communication, question design

1 Introduction

Questioning by doctors in clinical consultations, particularly in the problem presentation phase[1] is an important element of doctor-patient communication. Question design by doctors has been shown to affect how freely (or otherwise) patients present their problem and related information to doctors (Marvel et al. 1999, Heritage & Robinson 2006, Robinson et al. 2016), and how satisfied patients are about communication with their doctors (Robinson & Heritage 2006, Robinson et al. 2016, Solomon et al. 2016). Giving patients the floor to provide information and express their concerns about their medical condition in their own way in the problem presentation phase is said to result in better diagnoses

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and care for patients, as more complete information about the patients' concerns is revealed. This would include patients' psychological concerns apart from the biomedical aspects of the medical problem (see Heritage & Robinson 2006). As the clinical consultation is led and controlled by doctors through questioning, the manner in which questions are designed and deployed by doctors inevitably determines the expanse and level of detail of the medical problem that patients convey to their doctors (Marvel et al. 1999, Heritage & Robinson 2006, McArthur & Fitzgerald 2013). Hence, as an institutional discourse practice, questioning and how it is managed by doctors have important consequences to the successful accomplishment of problem presentation as a communicative event in the clinical consultation.

Research on questioning in medical communication, specifically in doctor-patient communication has revealed various findings about doctors' questions, including insights into: doctors' use of questions to display understanding (Deppermann & Spranz-Fogasy 2011); use of questions to indicate epistemic stance and leading to preferred patient response (Boyd & Heritage 2006); typology of questions based on doctors' display of their knowledge status and patient response, and subsequently, association between question type and length of consultation (Heritage & Robinson 2006); association between doctors' questions and patient satisfaction (Robinson & Heritage 2006, Robinson et al. 2016); and doctors' redirection of patients' talk and its negative effect on patients' expression of their concerns (Marvel et al. 1999). In research focusing on the linguistic form of questions in clinical consultations, Robinson et al. (2016) found that the linguistic format of questions is connected to patients' expression of additional concerns during the clinical visit, and Heritage (2013) observed that patients rely more on their judgement of doctors' epistemic status than the linguistic form of the question in ascribing the action intended by the doctor.

Studies on questions in the veterinary context, however, are relatively under-explored. Communication in the veterinary context is unique in that it requires the veterinarian to obtain information from the client who speaks on behalf of the animal-patient. The communication situation entails information to be solicited from a conversation partner about a non-human third party (the animal-patient), who is within the participation structure of the discourse but is not a speaker. Compared to communication research between doctors and human patients, less attention has been given to communication in the veterinary context.

1.1 Past research on veterinary communication

MacMartin et al.'s (2015) study on veterinarian questioning about the animal-patient's nutritional history found that questions on nutrition mostly comprise a

single open-ended *wh*-question as an initial question, followed by request for clarification on the food mentioned by the client. Typically, no questions are asked on nutrition items not mentioned by the client in the first instance; this demonstrates how communication in the consultations is constrained due to veterinarians' questioning pattern. Bard et al. (2017) examined veterinarian communication in relation to obtaining behaviour change in clients. From analysing role-play interactions between cattle veterinarians in the UK and an actress familiar with veterinarian communication posing as a client, they found that veterinarians tend to adopt a directive communication style that does not encourage relationship-centred communication, and hence, may not motivate successful client behaviour change. Of particular interest is the finding that the veterinarians' communication lacks solicitation of client's opinion as a feature. On patient-centredness in veterinarian-client communication, Borden et al. (2010) found that veterinarians do not fully explore clients' concerns in euthanasia decision-making and this contributed to their lower scores on a patient-centred communication measure. McArthur and Fitzgerald's (2013) work on veterinarians' clinical communication skills found that clients were generally satisfied with veterinarians' communication but were more satisfied when veterinarians' expressions of empathy were directed at them. On the type of questions asked by veterinarians, they found that 10 per cent of the veterinarians did not use any open-ended questions. Finally, Shaw et al. (2004) using the RIAS (Roter Interaction Analysis System) found that information-gathering from the client was chiefly accomplished through closed-ended questioning. Findings from these studies on veterinarian-client communication point to a style of veterinarian communication that generally does not optimise the elicitation of clients' concerns, opinions and evaluations.

To examine question design by veterinarians in eliciting problem presentation from clients, attention needs to be paid not only to the types of questions asked but also the communicative functions of questions, and the questioner's choice of linguistic forms that execute particular functions in the veterinary context. As language functions at the communicative and discursive levels can be implemented by a variety of linguistic forms, investigation on linguistic forms, functions and types of questions used by veterinarians when carrying out their professional work in clinical consultations can provide insight into veterinarians' preferences in using linguistic resources to design questions to accomplish their purpose in interaction with clients. Further, as interpretation of the intended meaning of speakers by hearers is dependent upon hearers' understanding of the communicative functions of questions in specific discourse contexts, an examination of questions and clients' response may contribute to a better

understanding of veterinarian-client communication and would be useful for further research in veterinary communication and education.

1.2 Elicitation of problem presentation

Clients'/patients' expression of their concerns, opinions and evaluations are mainly impacted by the way clinicians manage and structure their questioning during the clinical consultation, particularly during the phase known as the problem presentation phase of the consultation. Heritage and Robinson (2006) have shown that doctors' opening questions are crucial in determining the extent to which patients feel free to talk about their problems and hence, express their concerns more comprehensively. They identified five types of opening questions in the medical consultation that doctors commonly use, and described how each type of question indexes varying degrees of the doctor's knowledge of the patient's condition and thereby plays a role in determining the expanse and detail of the patient's response in presenting their problem. While some types of questions encourage and invite patients' extended narrative of their medical problem, some other types serve to constrain patients to narrow answer slots determined by the doctor.

Through a detailed analysis of epistemics in interaction, the ways in which doctors claim or display knowledge about the patient's condition through their questions at the initial meeting point in a medical consultation, Heritage and Robinson (2006) identified five question types that are commonly put to patients. Type 1 is the general-inquiry question (e.g. *"What can I do for you today?"*, ibid.: 89) which is used to formulate a stance that makes no prior assumption about the precise nature of the patients' medical business. It opens the space for patients to talk about their illness or concerns on their own terms, as the question indicates the doctor's lack of knowledge of the patient's problem. Type 2 is the gloss for confirmation question (e.g. *"So you are sick today, huh?"*, ibid.: 93), whereby the doctor uses a gloss that indicates his having some knowledge of the nature of the patient's medical business and requires the patient to elaborate on the problem with more details. This is despite the fact that the immediate response appropriate to the *yes-no* question is a confirmation by the patient. The primary aim of the Type 2 question is the subsequent description of the problem and not the confirmation of the gloss per se. Type 3 is the symptom confirmatory question (e.g. *"Alright. so having headache, and sore throat_·hh and cough with phlegm for five days?"*, ibid.: 95) in which the doctor cites specific symptoms and constrains the patient's answer to either confirming or disconfirming the symptoms. Type 3 questions indicate that the doctor already possesses knowledge of the patients' symptoms (for example, if they are written

in the patient's record). As an opening question, Type 3 question can be regarded as an implicit invitation to patients to launch into problem presentation after their initial confirmatory answer to the question. Type 4 is the *"How are you"* question (e.g. *"So how are you feeling?"*, ibid.: 97), when posed at the problem presentation phase, requires the patient to give an evaluation of their state as the immediate appropriate response. However, like the Type 3 question, the question may be seen as a prelude for patients to present their problem, and hence, is a question inviting patients to enlighten the doctor about the business of their visit. Type 5 is the history-taking question (e.g. "*How long is that been going on for?*", ibid.: 98) where the doctor assumes having sufficient knowledge of the patient's problem that brought them in for the consultation visit and hence, proceeds to ask for specific history details. In this situation, patients will have little chance to voice out their concerns as the problem presentation phase has been bypassed.

According to Heritage and Robinson (2006), the relative freedom with which patients present their medical problem to the doctor is attributed directly to the indexing of different levels of the doctor's knowledge about the patient's medical condition. This leads the patient to either expand or reduce the amount of information they communicate to the doctor in order not to give information that is already known, an act that would constitute a transgression of norms in social conversation.

It is acknowledged, however, that except for the general inquiry question which directly solicits broad-based information from patients about their presenting concerns, the other question types are indirect requests which require the patient to derive the intended meaning of the speaker beyond the literal meaning conveyed through the surface linguistic form. For example, for a patient to understand the doctor's "*how are you*" question as a solicitation of presenting concerns would require the patient to have knowledge about the goal of the different phases of the clinical visit, its discursive conventions and the various manners in which doctors signal the beginning and the end of the problem presentation phase. Lack of familiarity of the discourse context and its conventions can result in the patient's failure to recognise the indirect request. Hence, apart from epistemic stance, linguistic form and pragmatic functions of questions may play a role in influencing patients' response.

1.3 Linguistic forms and functions of questions

The linguistic forms of questions are grammatical forms that represent interrogatives in the language system. To perform actions in discourse, a speaker has to select from a range of available linguistic resources. Specific communicative actions in text and talk may take conventionalised forms,

sometimes through preferred linguistic means to execute particular functions. So, too, we may expect that language in the clinical consultation may exhibit preferred forms in getting the interactional work done.

Questions can be examined at various levels. At the level of grammatical construction, questions can be described based on their formal linguistic markers (e.g. morphosyntactic structures) that deal with meaning at the clausal level. Common grammatical forms of questions in English include *wh*-questions, *yes-no* questions, question tags, declarative questions, and so forth (see Quirk et al. 1985, Gunlogson 2002, Freed & Ehrlich 2010, Heritage 2013). Question forms mark specific grammatical functions; for example, *wh*-questions (questions with a question-word) are typically used to enquire about specific entities, time, quality or manner, and require an open-ended type of answer. *Yes-no* questions are polar questions that require a confirmation or a negation, making it a closed-ended question. Other closed-ended question types include the declarative question, which is a question formed with a declarative sentence usually coupled with a question particle or interrogative intonation, tag questions as well as alternative (either or) questions that also require a confirmatory answer. A note is made here about the declarative as a question. In interaction, not all declarative questions require a rising intonation or a question particle to be recognised as a question. Declarative statements without these may be interpreted as interrogatives when the speaker relinquishes the floor to the hearer, and expects an answer, as part of the turn-taking procedure in conversation. Speakers of a language possess an intuitive understanding of the communicative functions carried by these grammatical forms, as this knowledge is part of the linguistic competence of speakers.

Doctors' question design through linguistic choice to solicit information from patients/clients has been described to some extent. Robinson et al. (2016) described how particular types of questions serve to elicit additional concerns from patients. In a clinical consultation, doctors typically employ a funnel approach to information-gathering, commencing the interview with open-ended questions and moving to more specific, closed-ended questions to obtain the details (Silverman et al. 2005). This is because opening the visit with closed-ended questions restrains the field of the inquiry and could lead to reduced accuracy in information-gathering (Dysart et al. 2011, Robinson et al. 2016). However, while *wh*-questions are thought to be efficient in acquiring informative answers, they may not be the best option, as shown by MacMartin et al. (2015) in their study on veterinarians soliciting information from clients about their animal-patients' eating habits. They found that the *wh*-prefaced open-ended

structure such as "*What kind of food…*" captured significantly less information than the "*Tell me…*" request structure (ibid.: 469).

Use of language is dictated not only by one's understanding of the linguistic system of a language; speakers and hearers have to navigate between meanings conveyed through grammatical forms, meaning of words, as well as meanings afforded by the communicative situation and the specific discourse context in which the language is used. This is particularly true of indirect speech acts where the intended meaning of the utterance does not match the literal or conventional meaning of the sentence (Searle 1975, Morgan 1978). Where the linguistic structure of an utterance provides insufficient cue for the hearer to derive the speech act the speaker is performing, the act is regarded as indirect. On hearers' comprehension of indirect speech acts compared with direct speech acts, there is evidence that a hearer follows the conversational rule of constructing the literal meaning of the utterance before deriving the indirect meaning after checking the context for plausibility (Clark & Lucy 1975). Hence, additional processing is required of hearers to construct meaning of indirect speech acts such as indirect requests in questions.

Knowledge about the discourse context influences how utterances are deployed and interpreted by hearers. The more indirect the speech act, the more contextual knowledge is required for the hearer to process and derive the speakers' intended meaning or action, a process in which both linguistic and contextual meanings play a part.

Tsui (1992) described five functions of questions to which a verbal response is required, under the broad action of 'elicitation'. They are eliciting information, eliciting confirmation, eliciting agreement, eliciting commitment, eliciting repetition, and eliciting clarification. To identify the function of a question, the context of the utterance has to be closely considered. For example, consider Examples (1) and (2) (ibid.: 102, 108):

(1) *E: D'you have an O.U.P. here, or you haven't got it?*
F: No, ah I asked them, they haven't got it, so I got it from New York.
E: You have to get it from New York huh?
F: Yeah just write, just write them a letter, they'll probably send it by air mail too, for free.

In Example (1), the question "*You have to get it from New York huh?*", which is a declarative with a question particle, is commonly interpreted as one eliciting confirmation. However, as explained by Tsui (1992), this is unlikely to be the intended function because the information that F obtained the item from New York had just been provided in F's previous response. Hence, E's question is

aimed at obtaining further information about the manner in which F obtained the item from New York. This makes the question an information-eliciting rather than a confirmation-eliciting question.

In Example (2), the question "*Can I ask you a question?*", although taking the form of a *yes-no* question, is not one eliciting confirmation. The answer expected by A is not for B to confirm A's assumption, nor to give permission to A to ask a question. What is expected is for B to give a commitment for further interaction with A. Hence, it would be improper if A were to keep silent after B's response. The function of A's question can, therefore, be interpreted as eliciting commitment.

(2) *A: Can I ask you a question?*
B: Sure.
A: Ø

In the problem presentation phase of the clinical consultation, the primary aim of questions is to elicit information from the patient. Further, the form of the information desired is broad-based and holistic, without undue influence from the doctor in directing its course. However, a typical question such as "*So you are sick today, huh?*" (Heritage & Robinson 2006: 93) would require a confirmation or disconfirmation as immediate response based on the linguistic structure of the question, and there is a lack of linguistic cues to indicate that the doctor is attempting to elicit a problem presentation. The questions posed by doctors that employ a closed-ended question form in particular are largely indirect in their pragmatic meaning as a request for problem presentation, and for the patient to unravel this indirect meaning would require familiarity with the specific professional procedures that govern clinical interactions.

In this study, questions employed by veterinarians in the problem presentation phase of veterinary consultation were analysed in a set of 25 veterinarian-client interactions conducted in English at a veterinary hospital in Malaysia. Types of questions (Heritage & Robinson 2006) used to elicit clients' concerns about the animal-patient's medical condition were examined in relation to their linguistic forms and functions. This paper addresses the following questions: 1) What question types and linguistic forms are preferred by veterinarians in eliciting problem presentation from clients in the clinical consultation? 2) How do clients ascribe veterinarians' actions as can be inferred through their responses to veterinarians' open-ended and closed-ended question forms?

2 Method

Twenty-five veterinarian-client outpatient clinical consultations in a veterinary hospital in Malaysia were video-recorded. A total of twelve veterinarians working as full-time practitioners in the clinic were recruited for the study. Twenty-five clients were recruited through convenience sampling as the clients came with their pets for their clinical appointments (see Table 1 for details of participants' age and gender). The clients were approached while waiting for their turns and informed about the research. Those who gave their consent to participate in the research had their consultations recorded. Ethical approval for the research was obtained from the university ethics review committee.

The consultations were conducted in English and most of the participants (veterinarians and clients) spoke English as a second language. The animal-patients brought to the clinic were small pet animals. Table 2 shows the types of animal-patients in the consultations.

	Gender		Age
	Male	Female	
Veterinarians	5	7	24-30 years old
Clients	10	15	not available

Table 1: Age and gender of veterinarians and clients

Animal-patient	Number
Cat	11
Dog	12
Rabbit	1
Hedgehog	1

Table 2: Animal-patients in the consultations

Eleven veterinarians were recorded for two consultations and one was recorded for three consultations, bringing the total number of consultations recorded to 25. The duration of 21 consultations was shorter than 30 minutes, and four lasted more than 30 minutes. The recordings were transcribed in conventional English spelling for ease of reading. Disfluencies, speech fragments, repetitions and non-standard speech forms which are common occurrences in spoken data were retained in the transcriptions, as they reflect naturally occurring conversations.

As this study focused on the problem presentation phase of the consultation, the problem presentation phase sections in the transcription were marked off for analysis. The problem presentation phase is typically the initial part of a clinical

consultation, after any greetings and talk related to administrative matters. It is characterised by the veterinarian getting the client to provide information about the medical reason that brought the patient in to the clinic. While it is common that problem presentation would be the first part of the consultation, it is also possible for problem presentation to re-occur later in a consultation, when the client brings up another medical problem which had not been discussed earlier. This is when the question from the veterinarian would loop back into an opening question type for eliciting the client's concerns, such as "*So, what happened? Tell me about it*". The problem presentation phase typically ends when the restrictive history-taking questions commence.

Veterinarians' questions in the relevant sections of the transcription were identified and coded based on question types for problem elicitation in medical consultations (Heritage & Robinson 2006), linguistic forms (Quirk et al. 1985, Gunlogson 2002, Freed & Ehrlich 2010, Heritage 2013) and elicitation functions (Tsui 1992). A total of 71 questions were identified. Two raters coded the questions independently, and the inter-rater agreement was 91 per cent. Cases of disagreement were resolved through discussion between the raters.

Proportions of question types, forms and functions of questions in the data are presented, followed by an examination of client responses in relation to the types of questions. The aim is not for generalisation of the findings but to seek understanding of the patterns of question and answer in the sequences that represent veterinarian-client interaction in the specific context of communication.

3 Results and discussion

3.1 Veterinarians' questions and their linguistic forms

Out of the five types of question in the problem presentation phase, Type 2 (gloss for confirmation) questions were used the most often (47.9%), followed by Type 1 (general inquiry) questions (28.2%) (see Table 3). The three other types of question (symptom confirmation, "*How are you*" question, and history-taking) were used infrequently. Notably, Type 1 and 2 questions represent about 75 per cent of questions asked. This shows that the veterinarians, in the main, posed questions that are said to be facilitative towards eliciting problem presentation from clients (Heritage & Robinson 2006), as in Examples (3) and (4) from the data:

(3) *Yes, uh, how can I help you today?*

(4) *What's the problem with the …?*

On the other hand, the veterinarians used less frequently questions of Type 3 (symptom confirmation) and Type 4 ("*How are you*" question), which could seem ambivalent to clients about whether or not they are indirect invitations to provide a narrative of the animal-patients' condition. It is noted that for the Type 4 question, instead of "*How are you*", the equivalent form in veterinary consultation takes the third person reference, such as "*How is he/she/name of animal-patient today?*" Examples (5) and (6) show Types 3 and 4 questions from the data:

(5) *Okay, so the dog has mouth inflammation since last week?* [directly after reading the patient chart]

(6) *How is Mei Mei doing?*

History-taking questions appeared only six times in the data, accounting for only 8.5 percent. As history-taking questions posed at the beginning phase of a consultation essentially cuts off the problem presentation opportunity of the client, it is not regarded as ideal for soliciting clients' concerns. In Example (7), although a Type 3 (symptom confirmation) question was posed ("*The cat isn't eating since one week?*"), it was immediately followed by a Type 5 (history-taking) question ("*Any vomiting?*"), which ends the opportunity for the client to present their account of the patient's medical problem.

(7) [Reading the medical record] *The cat isn't eating since one week? Any vomiting?*

On the linguistic forms of questions, overall, closed-ended questions (63.4%) represent the larger proportion of veterinarians' questions compared to open-ended ones (36.6%). Type 1 (general inquiry) questions were asked exclusively using the *wh*-question form (see Table 3). No closed-ended question forms were used for this purpose. For Type 2 (gloss for confirmation) questions, the preferred form was the declarative question form, although the *yes-no* direct, tag question and reduced-shortened forms were also used to a lesser extent.

Question Type*	Linguistic Forms of Questions						
	WH-questions (Open-ended)	Closed-ended					
		Declarative	*Yes/No* direct	Reduced-shortened	Alternative (X or Y)	Tag	**Total**
Type 1	20	0	0	0	0	0	20 (28.2%)
Type 2	1	18	7	1	0	7	34 (47.9%)
Type 3	0	6	0	0	0	1	7 (9.8%)
Type 4	2	2	0	0	0	0	4 (5.6%)
Type 5	3	0	1	1	1	0	6 (8.5%)
Total	26 (36.6%)	26 (36.6%)	8 (11.3%)	2 (2.8,%)	1 (1.4%)	8 (11.3%)	71 (100%)
	26 (36.6%)	**45 (63.4%)**					

*Note: Heritage and Robinson's (2006) types of opening questions in medical consultations

Table 3: Linguistic forms of veterinarians' questions

For Type 3 (symptom confirmation) questions, only the declarative and tag question forms were used, with the declarative question occurring more frequently. For Type 4 ("*How are you?*") questions, only *wh*- and declarative questions were used, in a limited number. Type 5 (history-taking) questions were also present in various forms such as *wh*-question, *yes-no* direct and alternative questions.

While a strong preference for the *wh*-question as a problem-eliciting question form is expected, the results show that closed-ended questions are also strongly represented in veterinarians' questions, particularly the declarative question form. However, contrary to the assumption that closed-ended questions are less ideal for good veterinarian-client communication (see Shaw 2004, Kanji et al. 2012, McArthur & Fitzgerald 2013), the results show that closed-endedness in question forms does not preclude the intended problem-eliciting discourse function of the questions in veterinary consultations.

The results show that the declarative question form is the preferred form among the closed-ended question forms in problem elicitation, particularly for implementing Type 2 (gloss for confirmation) and Type 3 (symptom confirmation) questions. As explained by Gunlogson (2002: 125), one of the functions of declarative questions is conveying a bias, an assumption that the addressee is committed to the proposition expressed. Hence, there is a tendency towards positive polarity and the client in the clinical consultation is expected to confirm or agree with the proposition, as a matter of fact. However, when the declarative question is posed in the problem presentation phase of the consultation, the client is expected to infer the discursive force of the question as an invitation to provide

an account of the patient's medical problem following the initial response to the declarative question. That the proportions of the declarative question and the *wh*-question used by the veterinarians in eliciting problem presentation are almost equal points to the veterinarians' interpretation of the declarative question as pragmatically relevant in performing the problem elicitation function.

On the other hand, the *wh*-question, although open-ended in its grammatical classification, do not necessarily facilitate problem presentation. This is particularly true if the question is a Type 5 (history-taking) question aimed at obtaining answers to fit specific slots (see MacMartin et al. 2015). In the study, three of the *wh*-questions posed by the veterinarians in the problem presentation phase were history-taking questions that did not contribute to eliciting problem presentation. Only where the *wh*-questions take the function of Type 1 (general inquiry), problem presentation by the client is made possible. Examples (3) and (4) provided above are examples of general inquiry *wh*-questions. Examples of history-taking *wh*-questions are shown in Examples (8) and (9):

(8) *Before, what is his weight?*

(9) *When did the eye problem start?*

The findings indicate that veterinarians in the study employed predominantly question Type 1 (general inquiry) and Type 2 (gloss for confirmation) to elicit problem presentation from clients, and that the open-ended *wh*-question and the closed-ended declarative forms were the preferred linguistic choices. That the Type 1 (general enquiry) questions which are implemented entirely through the *wh*-prefaced question form is the preferred question design comes as no surprise. The open-ended linguistic form triggers an unambiguous request for information, displaying the enquirer's unknowing epistemic status about the client's reason for the visit. A question such as "*What is the problem with ...*" or "*What brings you here today?*" is neither indirect nor ambiguous as a request for problem presentation.

While this manner of questioning may seem ideal in eliciting problem presentation, within the discourse practice of the clinical consultation, it is not always possible to use it. Social interactions are constrained by rules that govern how people should interact with one another. An unspoken rule is that one may provide information to an interlocutor only if it is known that the said interlocutor lacks the particular piece of information, that is, they hold an unknowing status (Goodwin 1979, Heritage 2012, 2013). In a clinical consultation, particularly if the doctor is already in possession of some record of the patient, patients expect doctors to have some knowledge of their medical condition, and doctors must

display having this knowledge. The Type 2 (gloss for confirmation) question design allows doctors to negotiate their epistemic status. Type 2 questions allow doctors to take a "knowing" stance, and yet, provide the space for the patient to fill in the information gaps. However, whether the indirect question type is successful in its purpose largely depends on whether clients interpret the pragmatic and discourse functions of the question as intended by the doctor. The next section focuses on clients' response to veterinarians' questions as a means of deriving clients' ascription of veterinarians' actions.

3.2 Veterinarians' questions and clients' responses

Question types were examined in terms of the pragmatic functions to which clients responded. The majority of Types 1 and 2 questions asked by veterinarians were interpreted as information-eliciting (63.4%) and confirmation-eliciting (31%) (see Table 4).

Question type*	Elicit: information	Elicit: confirmation	Elicit: clarification	Total
Type 1	16	0	4	20 (28.2%)
Type 2	18	16	0	34 (47.9%)
Type 3	3	4	0	7 (9.8%)
Type 4	4	0	0	4 (5.6%)
Type 5	4	2	0	6 (8.5%)
Total	**45 (63.4%)**	**22 (31%)**	**4 (5.6%)**	**71 (100%)**

*Note: Heritage and Robinson's (2006) types of opening questions in medical consultations

Table 4: Question types and clients' action ascription of veterinarians' questions

Questions eliciting information are highly relevant to the interactional goal of the problem presentation phase of the veterinary consultation, and are incidentally the questions most frequently asked by veterinarians. Where the surface linguistic structure of the questions does not match that of the intended action (a request for problem presentation), clients' interpretation of the questions as indirect invitations to present the patient's medical problem would be derived at from their knowledge of the discourse context of the clinical consultation.

However, there is also a strong representation of questions interpreted as confirmation-eliciting (31%). These are questions that were interpreted by clients as requiring only a (dis)confirmation of the veterinarians' assumptions as posed in the questions. These questions failed to trigger problem presentation from clients, who had relied on the linguistic form of the questions and complied with the literal meaning without inferring the indirect meaning of the questions.

In the following sections, extracts of veterinarian-client interactions from the data are discussed to illustrate the unfolding of the problem presentation phase of the clinical consultation with regard to veterinarian questions. Due to space constraints, only extracts that most clearly exemplify the categories described are selected for illustration.

3.2.1 Information-eliciting *wh*-prefaced open-ended questions

General inquiry questions are typically implemented with an open-ended *wh*-question form, and provide the widest opportunity for the client to narrate the patient's medical problem in their own space and time. In Excerpts 1 and 2 below, the clients understood the question as a clear invitation to present the medical problem that brought the patient in for the visit. This would include the freedom to voice out their concerns, suspicions and so forth. This the clients did right after the opening questions were asked. In Excerpt 3 (line 4), the client appears to be knowledgeable about the patient's symptoms and confidently described it using the medical term, *hematoma*. In all three excerpts, the veterinarian accepted the clients' responses as adequate answers to the questions and proceeded to the history-taking phase. What is clear in these examples is the lack of ambiguity about the intent of the questions from the clients' perspective, as the question form and discourse function (*wh*-question, general inquiry) are aligned in the discourse context in executing a request for problem presentation.

Excerpt 1

Dog – fractured leg

1 V: → **What happened?**
2 C: → Yesterday night we just heard a sound outside, and when we arrived we saw he couldn't move, I think because of car accident.
3 V: ohh, is it your own dog?
4 C: Yeah
5 V: Do you keep the dog outdoor?
6 C: No but sometimes goes out
7 V: He cannot even move?
8 C: When we touch, he feels pain
9 V: We need to take x-ray first to see if there is there any fracture, ok?

Excerpt 2
Rabbit – broken leg
1 V: → **How can I help you today?**
2 C: → So, I don't know sometimes the thing like rotate like that rotate like that whether .. [referring to the rabbit's broken leg]
3 V: There is impact for (inaudible word) la.

Excerpt 3
Dog – ear, hematoma
1 V: Okay. Dino is it?
2 C: Yeah yeah yeah
3 V: → Yes, **what happened**?
4 C: → He has hematoma ah? The ears.
5 V: Since when that happened?
6 C: About a week ago.

However, for clients who are not quite familiar with the discourse conventions of the clinical consultation, a general inquiry may not trigger problem presentation and the veterinarian may need to use a more specific question. In Excerpt 4, the client's response to the general inquiry question was to state the name of the patient, and to gloss the patient's condition as "sick" (lines 2 and 4). The veterinarian regarded the client's response as inadequate in fulfilling the purpose of problem presentation, and proceeded to ask a Type 2 question (line 7), which succeeded in getting the problem presented by the client (line 8).

Excerpt 4
Hedgehog – appetite problem
1 V: → Yes, uh, **how can I help you today**?
2 C: → It's this Turtle, okay.
3 V: Three-year-old, hedgehog. So, you came for general check-up, is it?
4 C: → Yup, supposedly, last week. She's been sick.
5 V: Ahh, okay. So, it's not a general check-up ah? (Laughs)
6 C: Hahaha.
7 V: → Uh what sick, **when you say sick how sick she was**?
8 C: → She doesn't want to eat.

The same may be said about the "*How are you*" question, which could be interpreted by clients as requiring an evaluation of the patient's general condition rather than a request for problem presentation. In Excerpt 5, in response to the veterinarian's question in line 7, the client provided an evaluation of the patient's current emotional state instead of presenting the medical problem (line 8).

Excerpt 5
Dog – Back pain; soft tissue injury
1 V: Right. Come! MEI MEI! Come take Mei Mei's weight
2 C: Take take take (talking to the dog (inaudible)
3 V: You can place her on the weighing scale, on her own
4 C: Sixteen zero five
5 V: Sixteen-oh-five. Okay.
6 C: [says something in Mandarin]
7 V: → Sixteen-oh-five. **How is Mei Mei doing?**
8 C: → You see, she is so upset.

3.2.2 Confirmation-eliciting closed-ended questions

In the following examples, attention is paid to the questions utilising the closed-ended question forms. In Excerpt 6, the tag question form was posed to the client to begin the problem presentation phase. However, the client interpreted the closed-ended question as a confirmation-eliciting question and failed to present the patient's problem (line 2). The veterinarian then followed with a general inquiry *wh*-question (line 4) which successfully elicited problem presentation. In Excerpt 7, the declarative question implementing the gloss (skin problem) confirmation question (line 1) elicited a confirmation from the client, and which did not proceed to problem presentation. Only in line 7 when the gloss confirmation question was repeated using the *yes-no* direct question form, did the client present the patient's problem, after giving the answer "no" as a direct response to the polar question. This example shows the ambiguity of gloss confirmation as a means of eliciting problem presentation from the point of view of the client. Both questions in line 1 and line 7 are attempts by the veterinarian to trigger problem presentation from the client using the Type 2 (gloss confirmation) question, but only in line 7 was the request successful.

Excerpt 6
Dog – appetite problem
1 V: → Okay, **so the dog isn't feeling ok today, isn't it**?
2 C: → Yes.
3 V: → **What happened?**
4 C: Ohhh, he is not eating good and sleeping a lot.

Excerpt 7
Dog – skin problem
[The veterinarian reviews the medical record]
1 V: → **Before this you came here before for the skin problem?**
2 C: Yes.
3 V: Yeah, So uhh, the last visit... Uhh, the last one was in June?

4 C: Yes.
5 V: Hmm, four months ago?
6 C: Yes.
7 V: → **And is it still the same problem?**
8 C: No, that one recovers but now again uhhh, the most part is that the area around
9 his mouth. This one you see, he just scratches everywhere.

In Excerpt 8, the veterinarian began the session with a gloss confirmation question (mouth inflammation) (line 3) after reviewing the patient's record. This elicited a confirmatory response congruent with the closed-ended structure of the question from the client (line 4), which did not proceed to problem presentation. The interaction continued with the veterinarian implementing history-taking with no evidence of problem presentation taking place in the consultation.

Excerpt 8
Dog – mouth inflammation
1 V: Hello
2 C: Hello
[The veterinarian reviews the medical record]
3 V: →Okay, **so the dog has mouth inflammation since last week?**
4 C: yeah
5 V: This is good okay; this is your only dog?
6 C: Yeah
7 V: Do you keep your dog indoor or outdoor?
8 C: Completely indoor
9 V: How is the dog eating?
10 C: Not eating well

In Excerpt 9, the symptom confirmation question in the declarative form was immediately followed by a history-taking question, which was also a closed-ended question form (line 1). The response from the client was to reply to the more recent question, which was the history-taking question. The problem presentation opportunity potentially presented through the initial question asked by the veterinarian was lost when the veterinarian did not give the client the floor to respond. By asking the history-taking question in the opening line, the close of the problem presentation phase was signalled before it could begin.

Excerpt 9
Cat – appetite problem
[Reading the medical record]
1 V → **The cat isn't eating since one week? Any vomiting?**
2 C: No.

3.2.3 Open-ended history-taking *wh*-question

Finally, Excerpt 10 illustrates the situation when a *wh*-question does not serve the purpose of eliciting problem presentation despite its open-ended linguistic structure. This is because the question implements a request for a narrow-range piece of information and does not allow space for the client to narrate the patient's problem. This is the history-taking question labelled as the Type 5 opening question by Heritage and Robinson (2006). In a clinical consultation, the deployment of a history-taking question signals the conclusion of the problem presentation phase, as the veterinarian proceeds to asking detailed history information from the client in a directed and controlled manner. This type of questioning, whether in the form of closed-ended *yes-no* or open-ended *wh*-format, allows the client a slot for a narrow range answer, where no expansion is anticipated. In Excerpt 10, the veterinarian began the session with a history-taking question (line 1). This often happens when the veterinarian has obtained information of the patient's condition from the patient's record, and feels that the information is sufficient for history-taking to begin, and hence, skips over problem presentation from the client.

Excerpt 10
Cat – eye problem
[The veterinarian reviews the medical record]
1 V: → **When did the eye problem start?**
2 C: Last two weeks
3 V: Has it been on any medication before?
4 C: No.

From the examples in the data, clients respond to declarative questions with a confirmation or disconfirmation, in line with the closed-ended function of the question form. However, of the Type 2 (gloss confirmation) questions being asked, approximately only half of the instances resulted in responses that proceeded further into problem presentation as their final outcome. Certainly, not in all instances did clients interpret the closed-ended questions as solicitation of patients' presenting concerns. This shows that clients' understanding of the closed-ended question as requiring more than just a *yes-no* answer is dependent on the individual's understanding of the discourse structure of the consultation interaction, and especially the discourse expectations in accomplishing the interactional goal of the consultation visit. Active inference on the clients' part is required to achieve the goal of the interaction when the linguistic form of the question signals a communicative function that is incongruent with the intended pragmatic function. That the clients' closed-ended answers are deemed

inadequate in fulfilling the veterinarians' question is demonstrated when the veterinarians follow up with further questions to elicit the required response from clients, as illustrated in Excerpts 6 and 7. Hence, it may be argued that clients need to be aware that veterinarians asking a closed-ended question at the initial phase of the clinical consultation represents a common institutional or professional 'procedure' by which they elicit problem presentation from clients. Otherwise, the implicit meaning of the question may be missed all together.

The general assumption that open-ended questions allow expanded responses and closed-ended questions limit the scope of responses may not be entirely accurate with regard to elicitation of problem presentation. *Wh*-questions that target narrow-range information, such as a history-taking question asking about what food was given to a patient (MacMartin et al. 2015), do not provide space for an extended response. The veterinarian's intention to elicit problem presentation by asking the general inquiry and "*How are you?*" questions may also be lost on certain clients, especially if they are not familiar with how veterinarians conduct their business in a consultation.

4 Conclusion

Heritage and Robinson (2006) mapped out question types used by doctors in clinical consultations to solicit patients' presenting concerns, based on how the different types of questions are designed to display the knowledge status of the enquirer. Patients' understanding of the discourse context allows them to volunteer as much or as little information about their medical problem as appropriate, following the rule of social conversation of not giving information that is already known to conversation partners. However, whether patients interpret the questions posed by doctors as invitations to problem presentation depends on their understanding of the discourse context, such as familiarity with the discourse conventions of a medical consultation where the initial phase requires the doctor to invite patients to state their business and provide an account of their medical problem without interruption or redirection from the doctor. This is because the linguistic forms of the questions may not explicitly signal a request for problem presentation, but in fact may lead the hearer to infer a different action. Many of the questions take the grammatical form of the closed-ended question format that may be ascribed a confirmation-eliciting rather than information-eliciting function. Patients who are unaware of the doctor's intended action may provide a confirmatory answer without volunteering further information.

In this study, we have attempted to show how linguistic forms used to design the questions intersect with the question types to provide insight into the way actions are ascribed to veterinarians' questions by clients through an examination

of clients' responses in the veterinary consultation. The findings show that veterinarians prefer to use the open-ended *wh*-question and the closed-ended declarative question to solicit patients' presenting concerns from clients. The *wh*-question form when employed as the general inquiry question type such as "What happened?", is the most effective in triggering problem presentation from clients. The open-ended question form converges with its information-eliciting function to perform an unambiguous request to the client to provide all pertinent information about the patient's medical business. Little effort is required of the clients to infer the intended meaning of the question from the discourse context. In all the instances of the general inquiry question posed in the *wh*-question format, the clients inevitably provided a description of the patient's problem.

Closed-ended question forms showed a slightly different result. The declarative as a linguistic form could be interpreted as a comment/statement or a question depending on how it is uttered. To use the declarative form as a question, speakers usually make clear the interrogative function through appropriate intonation or use of question particles, and with the hearer discerning these signals as such. Heritage (2013) proposed that participants may distinguish a declarative form as an information-request through their shared understanding of the relative epistemic status of enquirer and hearer. If the domain of enquiry is within the knowledge domain of the hearer but not the enquirer, the declarative is interpreted as a question and not a statement. Additionally, as we see in the current data, when the speaker pauses expectantly, the hearer infers the declarative statement as an interrogative that requires an answer. Conversely, when no turn is allocated to the hearer, it becomes unclear whether information is being requested from the hearer, that is to say, whether the questioner relinquishes the floor to the hearer in actual interaction becomes an important consideration for the hearer to distinguish a statement from a question in declaratives.

In the Malaysian veterinary context, veterinarians' most effective question type to elicit problem presentation is the general enquiry question utilising the *wh*-question form. This is consistent with Heritage and Robinson's (2006) finding on the use of the general inquiry question type in medical consultations. Closed-ended question forms, particularly the declarative form are also used, but less successfully. A large number of clients provide only the immediately relevant response to the closed-ended question type which is to give a confirmation or disconfirmation. Where the veterinarians do not pursue problem presentation after the client's response, the problem presentation phase is bypassed and the consultation moves on to the history-taking phase. This represents a missed opportunity that may render the clinical consultation less effective, as the client's observations and concerns may not have the chance to be fully expressed (Dysart

et al. 2011). Hence, consistent with Robinson and Heritage's (2006) observations on doctors' opening questions, it might be more effective for veterinarians to opt for the less ambiguous general inquiry question that indexes the unknowing epistemic status (Heritage 2013) of the enquirer in the open-ended structure to explicitly solicit patients' presenting concerns from clients.

An important finding to note is that while epistemic status may take precedence over linguistic form for hearers in ascribing the speaker's action, for example, whether a declarative is an assertion or a request (Heritage 2012, 2013), evidence from the current study suggests that the linguistic form of the question is significant in its role in limiting the range of possible actions to those congruent with the linguistic form of the question itself. Specifically in the clinical consultation, closed-ended questions are regarded as requests for confirmation in most instances. To infer a closed-ended question as a request for problem presentation would require knowledge at the institutional discourse level which many patients or clients may not possess.

This study brings another level of analysis into clinicians' question design and clients' response in the problem presentation communicative event by considering participants' linguistic and discourse competence. The findings may differ, however, among participants in different socio-cultural environments. Insights from the study have important implications for both veterinarian communication training and client management. On the one hand, veterinarians' awareness of their own question design preferences and clients' ascription of their actions can help them understand why and how problem presentation fails to be implemented or otherwise. How veterinarians should pursue problem presentation from clients with appropriate questioning strategies incorporating a clear understanding of the effects of language is a key aspect of carrying out their professional duties. On the other hand, it is apparent that clients' familiarity with the discourse context of the consultation interaction plays a major role in determining how they ascribe the veterinarian's actions. Attending a clinical consultation is a rare communication event for most people, compared to dining in a restaurant, for example. Hence, it is understandable that the discourse script of the clinical consultation event is not clearly developed for most people. Not knowing the procedure of how veterinarians try to elicit problem presentation, sometimes by asking questions using linguistic forms that appear incongruent with their communicative purposes may result in inaccurate interpretation of the discourse situation. As a final point, there is also the issue of clients' rights, that is, the right of clients to express their concerns unimpeded by the clinician. For this to take place, education for clients about what to expect and how to navigate the clinical consultation should be given due attention.

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Notes

[1] Some researchers (e.g. Heritage & Robinson 2006) regard the problem presentation stage as preceding history-taking. However, in medical schools, history-taking is broadly defined as gathering information about the patient's condition through the patient interview (see Keifenheim et al. 2015) and, hence, the problem presentation stage as part of history-taking.

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