




Do you have any questions? An analysis of question asking patterns in surgical outpatient consultations

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Introduction

The outpatient consultation is an opportunity for patients to learn about and address any concerns they have about their health. Outpatient consultations can be intimidating to the patient and can be stressful, with the anticipation of bad news and discussion of sensitive topics.¹ Patients are expected to remember information resulting from discourse with the surgeon¹ in order to make informed decisions. Thus, surgeons should practice patient-centred communication to alleviate the negative affectivity associated with the consultation.

Abstract

Background: Patient centred communication ensures patients are well informed and educated, which is vital to providing the best care possible. By asking questions, patients can better understand their disease and make informed decisions regarding their health journey. We aimed to investigate factors that affect question asking behaviours in surgical outpatient consultations and to determine the typical question-asking by doctors, patients, and their companions.

Methods: This is an observational cross-sectional study, where 182 video recordings of surgical consultations in the surgical outpatient setting at The Queen Elizabeth Hospital, Adelaide, South Australia were reviewed.

Results: A total of 3472 questions were asked. Most questions were asked by the surgeon, followed by the patient, and if present, their companion. Pre-surgical consultations resulted in the most questions asked by the patients, compared to post-surgical or follow-up consultations. When companions were present, patients asked more questions in consultants regarding malignant conditions. Interruptions increased the number of questions asked by the patient and their companion. Questions were commonly asked to clarify information given by the surgeon and often regarded the cause of the illness and the timing of the next step in disease management.

Conclusion: Patients are generally interested in their health and ask questions during consultations. Companions have a positive effect on patient question asking behaviour and their presence in surgical consultations should be encouraged. Surgeons should develop strategies to encourage question asking and could review their own behaviours via surgical coaching and video review.

Shared decision making is an approach where clinicians and patients make decisions (using best available evidence) as a collective.² Models of communication in clinical settings are moving toward a shared decision-making framework, and consultants are taking a patient-centred approach which enables an equal share of power and discourse between consultant and patient. This approach focuses on evidence, patient particulars and patient preference,³ and requires surgeons to practice excellent non-technical skills.

While definitions vary, patient-centred communication enables patients to be heard and understood, and for decisions to be made

based on a patient's specific situation. A mutual learning experience for both patient and consultant can be achieved by the consultant asking more open-ended questions, whereby they retrieve information from the patient, whilst trying to simultaneously prompt patients' opinions and understanding.⁴ Non-verbal communication, such as eye-contact, conveys interest and emotion during the interaction and can help patient engagement.⁵⁻⁷

Research has found patient-centred communication to be a strong predictor in active patient participation, satisfaction and health outcomes.^{4,8} Despite these models, consultants often demonstrate controlling behaviours through failure to answer patient questions and topic changes.⁹

Social support from a companion can improve information retention, communication, engagement, and patient satisfaction.^{10,11}

Our aim was to determine the factors that may affect question asking behaviour in surgical outpatient consultations and to determine the typical question-asking by doctors, patients and their companions.

Methods

This was a single-centre observational cross-sectional study, where audio-visual recordings of surgical outpatient consultations to improve surgeons' non-technical skill were recorded between October 2018 and February 2019 at The Queen Elizabeth Hospital (TQEH), South Australia.¹² Data were reported according to the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) guidelines and with approval by the Central Adelaide Local Health Network (CAHLN) Ethics Committee (HREC/17/TQEH/284).

Surgeons of TQEH were given information about the study and were invited to participate at unit meetings. Patients scheduled to see a participating surgeon were recruited in the outpatient waiting room. The initial focus of the study was to examine and improve non-technical skills of surgeons. Only surgeons and patients who gave informed consent prior to the outpatient consultation were included in the study. Exclusion criteria included non-consenting surgeons or patients, and non-English speaking patients. The surgeons consisted of two general surgeons, four breast and endocrine surgeons, one upper gastrointestinal and hepatopancreatobiliary surgeon, one hepatopancreatobiliary surgeon, two colorectal surgeons and two urological surgeons.

Prior to data-collection, a roundtable discussion was held between authors to determine a list of 10 questions that may be of greatest interest to patients for their understanding, care, and decision making. The rates of these 10 questions asked by the patient or the companion in a consultation was recorded (Table 3).

All recordings were reviewed, and the data collected into a pre-populated data-collection sheet. In teams, data was collected at least twice. Due to the dynamic nature of consultation, data regarding timing and the number of questions asked were all collected repeatedly in a blinded manner until an error margin of 20% was achieved, where the first value to occur in the 20%

error margin was used. Nominal data was checked through, and errors rectified.

The consultation began when the patient entered the room and ceased when they exited. Physical examinations occurred off camera and no data were collected during this period. An interruption was defined as an unplanned external disruption to the natural consultation out of control of the consultant, patient or companion. Consultations regarding malignancies were defined as consultations that were pertaining a confirmed or probable malignancy from the information discussed. A pre-surgical consultation was a consultation that was had prior to the patient's surgical procedure. A post-surgical consultation was a consultation that was had immediately post-surgery (<8 weeks). A follow-up consultation was a consultation that was had to check the wellbeing of the patient post-surgery (>8 weeks). Time was measured using a stopwatch. Mutual eye gaze time was the total time that the consultant shared eye contact with the patient or their companion. Due to the nature of study and data-collection, there were no missing data for analysis.

Statistical analysis was carried out initially using univariate linear mixed-effects models to compare factors that may affect question asking behaviour. Clustering on consultant was adjusted for in each model by including consultants as a random effect. The interaction between presence of companion and type of consultation was then included in linear mixed-effects models for several outcomes. Post-hoc comparisons were carried out, resulting in mean differences, 95% confidence intervals (CI), and p-values. Assumptions of a linear model was found to be upheld in all models by inspection of histograms and scatter plots of residuals and predicted values. The statistical software used was SAS 9.4 (SAS Institute Inc., Cary, NC, USA). Statistical significance is achieved with a *p*-value ≤ 0.05 .

Results

One hundred and eighty-two surgical outpatient consultations by 12 surgeons were analysed. There was one female surgeon, and 105/182 patients were female. The mean consultation time was 12 min and 17 s (± 8 min 12 s). Remaining characteristics of the study have been previously reported.¹² A total of 3472 questions were asked. In consultations without companions (134/182), 1968/2407 questions were asked by the consultants (81.8%) compared to 439/2407 questions asked by patients (18.2%). In consultations where the patient was accompanied with a companion (48/182), consultants asked the most questions (776/1065; 72.9%), followed by the patients, (178/1065; 16.7%) and then the companions (111/1065; 10.4%). The mean number of questions asked by the consultant was 15, by patient, 3, and by companion, 2. There were no differences when sex of patient or surgeon was considered. The sex of the companion did not affect number of questions asked by the patient or companion. A summary of the findings can be found in Tables 1 and 2. In 74 consultations (40.7%) the consultant openly invited questions verbally by asking 'Do you have any questions?' or a similar prompting phrase, resulting in an increase in questions asked by patients by 1 (4 versus 3), this was not statistically

Table 1 Summary of results of number of questions asked by consultants, patients or companions compared to various factors

	Number of questions		Number of questions		Number of questions	
	Asked by patient	Asked by companion	Mean difference (95% CI) P-Value	Asked by patient	Asked by companion	Mean difference (95% CI) P-value
Companion absent versus companion present	4	4	-0.4 (-1.5, 0.7) $p = 0.50$	-	3	-
Benign consultation versus malignant consultation	4	4	-0.00 (-1.0, 0.9) $p = 0.94$	2	3	-0.8 (-2.6, 1.1) $p = 0.41$
Female patient versus male patient	3	4	-0.6 (-1.7, 0.5) $p = 0.30$	2	4	-2.3 (-4.1, -0.5) $p = 0.01$
No Interruptions versus interruptions present	3	4	-0.7 (-1.7, 0.4) $p = 0.23$	1	4	-2.5 (-4.5, -0.5) $p = 0.02$

Table 2 Summary of questions asked by consultants and patients in the presence of a companion and consultation type

	Type of consult	Presence of companion		Mean difference (95% CI)	P-value
		No	Yes		
Number of questions by patient	Benign	3	3	0.7 (-0.3, 2.3)	0.40
	Malignant	3	4	-1.4 (-2.7, -0.0)	0.05
Number of questions by consultant	Benign	16	26	-10.0 (-15.8, -4.3)	<0.001
	Malignant	12.8	12.1	0.7 (-4.1, 5.5)	0.77

Table 3 Number and percentages of consultations where the 10 most commonly asked questions were asked by patient (number of consultations = 182) or companion (number of consultations = 48)

Question	Patient (%)	Companion (%)
1.What caused this? For example, Is this related to my mum's cancer?	30 (16.5)	1 (2.1)
2.When will that test/surgery/next thing happen?	45 (24.7)	2 (4.2)
3.Can I go to the GP for that?	4 (2.2)	0 (0)
4.What are the other options?	21 (11.5)	4 (8.3)
5.Can this be keyhole?	5 (2.8)	0 (0)
6.Can you give me some more information, explain that? For example, So not cancer/should I worry/ what are the side effects/ what does that treatment do, how does it work/I'm worried about radiation from scans/ will that show up on a scan? (This would be prompted Questions)	82 (45.0)	11 (22.9)
7.When can I go back to work/how much time off?	14 (7.7)	2 (4.2)
8.Will I have chemotherapy?	6 (3.3)	0 (0)
9.What should I do now? For example, Should I see a specialist/ get a test	18 (9.9)	4 (8.3)
10.Can you sign my forms (travel, work cover, Centrelink etc.)	5 (2.8)	1 (2.1)

significant ($p = 0.09$). Indirect prompting such as pausing after giving information resulted in questions being asked by the patient and companion in 45% of the consultations.

When a companion was present, both consultant and patient asked one more question (16 versus 15 and 3 versus 2,

respectively), this was not statistically significant. When consultations were classified into benign or malignant conditions (107 versus 75), there was no difference in the number of questions asked by patients or companions. However, patients with malignant conditions asked significantly more questions when a companion was present (4 versus 3). Companions asked questions in 31/48 consultations.

The number of questions asked by patients was significantly affected by the nature of the consultation; patients asked more questions during pre-surgical consultations (four questions), compared to follow-up (three questions) or post-surgical consultations (three questions) ($p < 0.01$). When the consultation had an interruption, the number of questions asked by both the patient and consultant increased, but this was only statistically significant for the consults with a companion ($p = 0.02$).

Number of questions asked by patients increased significantly ($p < 0.01$) with total consultation time. There was a positive, significant correlation between number of questions asked by patient (and companion) and time spent in patient-consultant eye gaze ($p < 0.01$).

It was a common for patients to seek elaboration on a piece of information that had been given by the consultant, where in 82/182 (45.1%) consultations, it was asked at least once by the patient. This was followed by questions about timing or logistics (45/182; 24.7%), then questions about the pathogenesis of the disease (30/182; 16.5%). Companions were likely to ask for further elaboration as well (11/48; 22.9%), but they were more interested about seeking information regarding other options and what to do next (Table 3). A summary of informational needs for patients and companions according to the type of consultation are tabulated in Table 4.

Table 4 Percentages of consultations where the 10 questions were asked based on the consultation type (questions are listed in Table 3)

	Question									
	1	2	3	4	5	6	7	8	9	10
Patients										
Pre-surgery (<i>n</i> = 55)	7.3%	36.4%	1.8%	21.8%	7.3%	56.4%	14.6%	7.3%	9.1%	1.8%
Post-surgery (<i>n</i> = 20)	15.0%	30.0%	5.0%	10.0%	0.0%	30.0%	10.0%	0.0%	10.0%	5.0%
Pre-surgery & follow up (<i>n</i> = 20)	5.0%	15.0%	0.0%	5.0%	0.0%	60.0%	5.0%	5.0%	15.0%	5.0%
Follow up (<i>n</i> = 87)	25.3%	18.4%	2.3%	6.9%	1.2%	38.0%	3.5%	1.2%	9.2%	2.3%
Percentage out of 182 consultations	16.5%	24.7%	2.2%	11.5%	2.8%	45.1%	7.69%	3.3%	9.9%	2.8%
Companions										
Pre-surgery (<i>n</i> = 15)	0.0%	6.7%	0.0%	6.7%	0.0%	20.0%	6.7%	0.0%	6.7%	0.0%
Post-surgery (<i>n</i> = 5)	0.0%	0.0%	0.0%	0.0%	0.0%	40.0%	0.0%	0.0%	0.0%	0.0%
Pre-surgery & follow up (<i>n</i> = 7)	0.0%	0.0%	0.0%	14.3%	0.0%	42.9%	14.3%	0.0%	0.0%	0.0%
Follow up (<i>n</i> = 21)	4.8%	4.8%	0.0%	9.5%	0.0%	14.3%	0.0%	0.0%	14.3%	4.8%
Percentage out of 48 consultations	2.1%	4.2%	0.0%	8.3%	0.0%	22.9%	4.2%	0.0%	8.3%	2.1%

Discussion

Our results suggest that being accompanied by a companion during a surgical consultation increases patient question asking behaviour. We observed both direct and indirect prompts used by surgeons to encourage question-asking. Patients tend to ask questions about disease management, whilst companions tend to ask questions about decision making. The presence of a companion can help mitigate fears of being labelled ‘difficult’, prompt more questions, and provide emotional support that may lead to higher patient engagement.^{13,14}

Patient factors

Patient needs differ^{15,14} and without patient input it would be very unlikely that surgeons – no matter how experienced or skilled – are able to fully satisfy the individual needs of each patient. Patients often seek information regarding treatment options from external resources¹⁴ and often believe their consultation is too short for them to bring up external information or concerns regarding their diagnosis and treatment options.¹⁶ Patients fear question asking would threaten their relationship with their physician and subsequently their care.¹⁴ It is possible that physicians underestimate patients’ needs whilst overestimating the amount of information they are providing.¹⁷

A patient asking more questions would indicate that they are more engaged in the consultation.^{18,19} Questions asked by patients could be directly prompted by surgeons or indirectly prompted by presenting visual information such as blood results or pictures.²⁰ These prompts guide patients to ask meaningful questions, yet doctors often overlook this opportunity to prompt question asking.⁹

Influence of a companion

Patients may be compelled to bring a companion for support and to help them remain composed during the consultation, and this encourages question-asking as demonstrated by our results. The increase in questions asked by patients and their companions when interruption(s) occurred could be explained by the downtime, allowing them to appreciate information given and formulate questions to fill voids in knowledge. While there is evidence for having

two short consultations rather than a single long consultation,²¹ the utility of this ‘downtime’ in a singular consultation could be explored in the future.

Our results suggest that patients and companions who are more engaged during the consultation, as evidenced by the increased mutual eye gaze time between respective participant and the surgeon, ask more questions. Therefore, techniques to enhance patient engagement, such as by building good rapport, need to be refined and practiced so that patients are at ease to ask questions.

Surgeon/consultation factors

We observed surgeons employ both direct and indirect prompting techniques to encourage patients to ask questions. Previously reported rates for question-asking after direct prompting increase up to 90%.²² Opportunities for question asking by prompting patients, shows the willingness of surgeons to dedicate time and effort during the consultation to answer questions. This would reduce the incidence of questions thought, but not voiced, by patients.²³

Verbal endorsement of question-asking alone may not increase question asking by the patient,^{24–27} so other methods such as the introduction of Question Prompt Lists (QPLs) should be considered. QPLs are a list of prompting questions that may be relevant to the patient during their consultation,²⁸ and they are a favourable communication tool by both patients and doctors.^{28–30} QPLs increase the number of questions asked by the patient and have minimal impact on consultation time.³¹

Time-pressures perceived by patients through the surgeons’ conduct could prevent patients asking questions.^{14,25,28} This could be improved with appropriate allotment of consultation time (so patients do not feel rushed) and improvement of non-technical skills of surgeons. Patients also may be reluctant to ask questions for reasons such as viewing the physician as the ‘decision-maker’ or feelings of lower self-efficacy.^{23,32,33}

Ultimately, doctors should review their own behaviours and use techniques, such as coaching and video review, to foster an environment where question asking is welcomed. Asking questions allows patients to understand their disease from their own

perspective, giving them a greater sense of control over their health and in turn improve compliance.³⁴

Strength and limitations

Although this study included a reasonably large number of patients in surgical outpatient setting, it was performed in a single centre with a limited number of surgeons, hence, the results are to be interpreted with caution and may not be generalisable. Participation was voluntary and this could have led to recruitment bias. We ensured a vigorous data-collection process to allow for the most precise data to be reported however there may be small subjective errors due to the variability of these data. Patient related outcomes were not collected as part of this study but should be a focus of future work.

Conclusion

The presence of a companion encourages question-asking behaviour in surgical outpatient consultations. Explicit or implicit question-prompting while building a doctor-patient relationship should be an avenue for surgeons to improve upon. Question asking helps patients understand their disease, improve treatment compliance and satisfaction with the care provided.

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Author contributions

Ying Yang Ting: Conceptualization; data curation; formal analysis; investigation; methodology; visualization; writing – original draft; writing – review and editing. **Jessica Reid:** Conceptualization; data curation; formal analysis; investigation; methodology; visualization; writing – review and editing. **Ellie Treloar:** Data curation; methodology; visualization; writing – review and editing. **Wei Shan Bobby Lee:** Data curation; investigation; writing – review and editing. **Jeeng Yeeng Tee:** Data curation; investigation; writing – review and editing. **Wen Jing Phoebe Cong:** Data curation; investigation; writing – review and editing. **Dangyi Peng:** Data curation; investigation; writing – review and editing. **Suzanne Edwards:** Investigation; resources; software; writing – review and editing. **Jesse Ey:** Data curation; investigation; writing – review and editing. **Nicholas Edwardes:** Data curation; resources; writing – review and editing. **Nelson Granchi:** Data curation; resources; writing – review and editing. **Guy J Maddern:** Funding

acquisition; project administration; resources; supervision; writing – review and editing.

Conflict of interest

None declared.

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