Clinicians at work:
What can we learn from interactions in the consultation?

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ABSTRACT

Aims

The aim of the research was to explore decision-making processes in medical consultations.

Methods

Seventy-five consultations were video and audio-recorded involving seven GPs (58 consultations) and four surgeons (17 consultations). Qualitative analysis was undertaken by a multi-disciplinary team of researchers.

Results

Interesting facets of the consultation revealed by this data include the rapidity of what takes place, interactional dilemmas in the consultation, how decision-making is shared, and the complexity of consultations.

Conclusions

This form of data collection analysed by a multi-disciplinary team is both possible and insightful. It can contribute to debates such as the role of formal protocols in clinical work, the differential treatment of patients and the working life of practitioners.

Key words

Doctor-patient interaction, interactional dilemma, complexity.

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Introduction

The aim of this research was to explore decision-making processes in medical interactions by direct and detailed observation of the consultation. The research focused on a number of key questions. How do doctors determine access to elective surgery and other rationed services? How are such decisions managed in interactions between doctors and patients? How is a complex face-to-face interaction rationalised into clinical criteria?

This research followed on from previous research evaluating the implementation of clinical priority assessment criteria,[1-4] which found that clinicians talked about using scoring tools in variable ways, both in the score construction and the influence that the scores had on access to surgery. By looking at actual medical interactions, as opposed to ask-

ing clinicians and patients about the consultation, light can be shed on the ways in which these issues play out. A growing body of research has demonstrated that interviews inevitably elicit 'accounts' that are arguments as much as explanations.[5] Individuals cannot offer complete and objective rationales for their behaviour.

There are a number of reasons for focusing on actual conversation and interaction. Conversation is the primary way in which information is exchanged, treatment decisions are made, and the doctor-patient relationship is established and maintained. Consultations have rhetorical patterns which are not obvious until we 'slow the action down' and transcribe the interaction. We can then look in detail at the linguistic strategies doctors and patients use consciously and unconsciously and analyse their effects.

This paper outlines the research methods used and provides a preliminary overview of some major identifiable patterns in the data. It concludes by considering some of the ways in which data of this nature can inform health service delivery.

Method

The data for this paper was collected as part of a New Zealand Health Research Council funded project exploring clinical decision-making when rationing is explicit. Ethical approval was obtained from the Wellington Ethics Committee. For this research video recordings were made involving seven GPs in 58 consultations and four surgeons in 17 consultations. GPs were initially approached by telephone and the study explained to them, and then information sheets and consent forms were delivered. GPs were sampled on a purposive sampling basis, with attempts made to obtain a range of practice types and socio-economic populations. This sampling enables the researchers to identify different broad consulting contexts, though in this paper the focus is not on analysing the data according to practice type or population difference. Once a GP had agreed to participate, patients attending the clinic session would be approached where possible if they fulfilled the criteria. Those under 18 and acute cases were excluded. For consultations that were to be recorded a digital camera and audio device were turned on by either the research nurse or clinician. The research nurse was not in the room during the consultation. A similar process was followed to capture recordings of surgical consultations in four outpatient clinics.

Table 1. Summary of GP data set

Average duration of consultation*	13 minutes (Range: 5 min—29 min)
Specialist referral discussed	15
Specialist referral made	9 consultations
Other tests/scans ordered	17 consultations
Medication/prescription discussed	51 consultations
Prescription(s) given	27 consultations
Delayed prescription given	5 consultations
Side effects talk	32 consultations

* This refers to the recorded time, which may vary from the actual consultation time.

Table 2. Summary of surgeon data set

Average duration of consultation*	11 minutes (Range: 5 min—18 min)
Decision to operate	4 consultations
Decision to refer for diagnostic tests	6 consultations
Decision not to refer for tests or operation	3 consultations
Post-operation check up	1 consultation
No decision made	1 consultation

* This refers to the recorded time, which may vary from the actual consultation time.

All consultations collected were fully transcribed using a modified conversation analysis format, based on a set of widely-used conventions originally devised by Gail Jefferson.[6] The data were subjected to analysis from clinical, linguistic and broad social science perspectives and the perspectives aligned by repeated discussion by the multi-disciplinary research group. For the purposes of this paper, transcript is presented in a generic form.

This paper outlines patterns in the data, providing an overview of some of the main themes and issues in the data set.

Results

In the final data set there were seven GPs, four male and three female, with an age range of 31–52. Five of the GPs classified their ethnicity as New Zealand European, and one each as European and Irish. They worked in a variety of practice types, central city and suburban, and served distinctly different practice populations in terms of socioeconomic status and ethnic backgrounds. Of the 58 patients consulting the GPs, 32 were female and 26 were male. Thirty-nine self identified as New Zealand European, four as Maori, two as Samoan, three as Dutch, and the following self-identifications were made once: Chinese, Russian, Irish, American, Australian, Italian, Greek, Japanese, Scottish, Swiss, and Greek. Some patients identified as more than one ethnicity and some did not provide the in-

formation. The ages of patients ranged from 18 to 92, with a mean age of 52.9.

The final data set also included four surgeons, all male. The surgeons classified their ethnicity as New Zealand European or British; no ages were provided. Three surgeons were general surgeons and one was a vascular surgeon. Of the 17 patients consulting the surgeons eight were female and nine were male. Thirteen self-identified as New Zealand European, three as Maori and one as European. The ages of patients ranged from 26 to 80 with a mean age of 56.6.

Table 1 identifies some of the main features of the data set related to general practice consultation and Table 2 some of the main features of the surgeon consultations. Forty-seven per cent of GP consultations led to a prescription and 59% of surgeon consultations resulted in arrangements for further tests or surgery. In all surgical consultations with decisions to operate, surgeons described the procedure and such things as length of hospital stay and recovery time. Side effects talk in Table 1 refers to instances where GPs or patients raised the issue of side effects. There were 22 instances in 21 consultations where patients associated a medication with unwanted signs or symptoms, suggesting that this issue is an important concern for patients.

Qualitative analysis of the data reveals a number of features of the consultation, which are outlined here. These are not exhaustive but serve to illustrate lines of inquiry opened up by this research approach.

Things happen quickly

Just as there is a 'golden hour' of triage in trauma care, so there seems to be a 'golden 30 seconds' at the beginning of the consultation where the first few phrases between doctor and patient can determine the course of the whole consultation. This is particularly a feature of consultations where the patient is new to the clinician.

Box 1. Missed agenda

A patient is consulting a GP and mentions a 'little problem' where he has once or twice 'gone blind in one eye'. The GP focuses on arranging admittance to hospital, being concerned about a possible stroke. The patient on the other hand, raises a concern about his 'diminishing sexual prowess'. The GP does not respond to this, 'missing' the patient's social agenda in the process. In turn the patient 'misses' the GPs clinical agenda and does not immediately attend the hospital.

GP01-02

In the following exchange the patient in the first 30 seconds establishes herself as someone who is clear about the purpose of the visit, and has a knowledge of her own past history and different sorts of respiratory infection.

GP: *okay what can we do for you today*
PT: *um I've had a flu basically*
GP: *Right*
PT: *I've [very] low level off and on for quite a while um sinus*
GP: *[yep]*
PT: *I get quite a lot of sinus problems anyway*

In this instance the clinician not only appears to establish what the patient is attending for, but also their 'credibility' as an historian.

By comparison, a consultation that begins as the example below is likely to lead to a very different sort of relationship being established again based on the first few turns of conversation.

GP: *okay what can we do for you today*
P: *I'm not sure really um I thought essentially I was almost out of the system*
GP: *right*

Similarly, a brief apparently 'chance' remark from either doctor or patient may trigger an important new course of action (e.g. an unexpected diagnosis or referral) at any point during a consultation. Conversely, clinicians may 'miss' attempts by the patient to get issues of concern on the agenda, which can lead to situations where patients do not follow up on the expected course of action. Box 1 illustrates an example of the latter.

Box 2. Conflicting imperatives

A patient is consulting a GP in relation to on-going symptoms described as 'just basically generally cold symptoms' but she is worried by a burning in her chest when she lies on her side. After conducting an examination the GP presents his course of action:

GP: *good that's fine (good so) deep down in your chest sounds pretty good there's no infection deep down there um your nose is obviously all sort of really blocked up and the throat's sore look the awful thing is that I think most of what's going on for you is that you've had one virus after another virus after another virus the– and there are two reasons probably for that: one is that you're working so hard and studying till late not sleeping as much as you would like to so you're getting tired and that probably decreases your resistance decreases your immunity um so you're more likely to to get a virus if you're exposed to it and coupled with that has been the fact that we've had lots and lots of viruses in well within New Zealand for the last two or three months really now and so there have been lots of viruses for you to be exposed to at a time when you've been quite vulnerable to getting the infection so I think that's what's happened at– one after the other and so for example your current– the nose running that's caused by viruses and unfortunately there's nothing that I've got that will make much difference for that and even the cough, antibiotics may not make much difference to that either, however in your situation I– I'm more likely to suggest that it might be worthwhile having antibiotics.*

GP02-07

Interactional dilemmas

The talk in real consultations often seems messy and imprecise when we

Box 3. Multiple issues

A patient is consulting about a number of issues – starting with 'mucky eyes'.

30 seconds into the consultation the GP asks how he is getting on, the patient replies 'not too bad' then 'falling apart I suppose, blimmin eyes for a starter…this one here was infected' and then elaborates on eye infections.

4 minutes 30 seconds into the consultation the next item is discussed – a scaling of the skin that is starting to spread.

7 minutes 26 seconds into the consultation the GP asks if there is anything else, and the patient requests a 'general blood pressure check'.

10 minutes into the consultation the GP asks during an examination if he gets chest pain. The patient talks about getting puffed when walking.

12 minutes 40 seconds into the consultation the patient mentions getting a 'burning sensation'.

***PT:** when you walk quite a while y- you can be quiet but then all of a sudden you get a sort of burning sensa- that's what I get ( ) that what else do you call it heartburn but yeah*

***GP:** uh huh right, now just describe that to me what that– what is that like…*

This is followed by further history taking by the GP who then works hard (in an interaction sense) to convince the patient to have a gastroscopy

GP03-06

Box 4. Resistance

Patient resistance

A patient is consulting a GP about a rash on her leg; the GP suggests prednisone as a possible treatment:

***Pt:** ooh no no I don't want any of that stuff*

GP06-05

GP resistance

A patient is consulting a GP about various matters, and towards the end the issue of Lamisil for his nails is raised:

***GP:** I'd be very much against that yeah…I'm sorry (your gonna have) to live with that I guess.*

To which the patients responds by saying "I'm almost prepared to, you know, stick my neck out but you have the last word of course."

GP05-07

put it 'under the microscope'. This is a normal feature of all social interactions and we often do not talk in complete sentences. This apparent 'imprecision' increases when there is a difficult aspect to the interaction for some reason (e.g. giving health promotion advice or defining limits to lifestyle risk), and it may decrease in routine situations or where doctors are more confident (e.g. spelling out drug dosages). Box 2 provides an example that illustrates what could be termed an 'interactional dilemma' where the doctor is both working to maintain the social relationship and attempting to exert his clinical judgement and expert knowledge about antibiotics. Contradictory elements can be seen in the GP's talk, where on the one hand he says *'there's nothing that I've got that will make much difference'* but on the other that *'it might be worth while having antibiotics'* – which is suggestive of this dilemma. Despite the known modest benefits from antibiotic prescribing for URTI, patients and their doctors still often engage in complicated prescribing negotiation with each other, often aware of the other's sensibilities and each potentially bringing social factors to the prescribing equation. The use of hedges (such as 'I think', 'really', 'probably' etc.) and the large number of justifications used are also indicative of the dilemma.

Complexity of consultations

Doctors have to juggle multiple demands and goals (professional, institutional, relational, and practical) in a short space of time within a consultation. The skills involved in doing this are extremely sophisticated and complex. Medical interactions also have their own 'internal logic' and natural structure – this may make it difficult at times for doctors to implement external guidelines or strategies (e.g. in regard to rationing or health promotion). Box 3 illustrates the complexity of the consultation. We see here a complex array of issues raised by the patient but, more poignantly, it is nearly 13 minutes into the consultation before a symptom is finally 'uncovered', almost by chance, that the GP sees as a major concern; at that point he has to convince the patient to go for an invasive test that the patient is very resistant to. The full consultation lasts 20 minutes and 33 seconds.

As well as systematised history taking and examination within the consultation, specific technologies such as computers or use of structured guidelines may change the dynamic of the consultation. All the GPs made extensive use of computers during consultations, and used them in a variety ways. One can consider a continuum from GPs who used computers as a resource to continue conversation, information sharing and clarification to those who separate out data entry operations from interaction with the patient. In the surgical consultations there are no examples of a surgeon explicitly using clinical priority assessment criteria. One possible explanation for this is that due to the interactional work required in any consultation, such tools do not foster, but indeed perhaps hinder, the interaction and the doctor-patient relationship. So technologies can be successfully integrated into consultations, but it appears that some forms of technology (such as decision-making tools) continue to be challenging. In this set of consultations they were not obviously deployed by either GPs or surgeons.

Shared decision-making

Consultations are asymmetrical in terms of power. Doctors are the gatekeepers to services and the holders of expert knowledge and status, while

patients are seeking advice or treatment as laypersons. However the interaction is not one-way, although research suggests that patient-centred medicine, concordance and other related concepts should continue to be critiqued. Doctors and patients have choices in the consultations about when and how to persuade and resist persuasion. The data set provides many instances of this. At one end of the spectrum there is often a great deal of 'persuasion' talk from doctors in relation to the prescribing of antibiotics. There are examples in the data set, such as that illustrated in Box 2, of GPs spending some time explaining to patients why antibiotics are not appropriate for the particular condition the patient has been diagnosed as having, but then prescribing anyway. A variant on this pattern is delayed prescribing. By contrast, GPs can make absolute statements about what is required, and similarly patients can emphatically resist suggested courses of treatment. There is evidence of both parties responding to strategies of persuasion and resistance. As such, clinical decision-making cannot always be separated out from the effects of interactions between patients and doctors. The way issues are presented and responded to has important clinical consequences. Box 4 provides instances of patient resistance and GP resistance to suggestions.

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In contrast with GP consultations, surgeons often place less emphasis on social chat, but spend more time on gaining alignment from the patient for specific treatment plans. The data also suggests there may be a role in some cases for the GP to support surgeon decision-making and translate surgical practice for patients between first specialist assessment and surgery. Whether and how surgeons talk about actual operations and procedures is contingent upon the characteristics of the particular consultation.

Discussion

Although research of this nature is insightful and qualitatively 'rich', there are some potential limitations. One is the issue of how much the fact of being observed influences the interaction. We know that people's behaviour changes when they are being observed, the oft quoted 'Hawthorne effect'.[7] In response to this concern the research team piloted the data collection on a member of the research team and discussed this influence, and continued to look carefully at the data for signs of patient or practitioner sensitivity to the camera. It is clear that there is a high level of awareness of the camera at the start of data collection, but both the patient and the practitioner become so attentive to the work of the consultation that there is little attention paid to the camera. Indicators of this include patients talking about such sensitive topics as erectile dysfunction and patients starting to prepare for examinations before the video recorder is stopped. In addition constraining behaviour in the knowledge that it is being recorded and will be analysed can only be achieved in relation to conscious responses. It is the assumption of the research that a great many features of interaction that are of interest are not consciously performed. This is evident when clinicians look at their own interactions and are surprised at what they see.

Another potential limitation relates to how generalisable data of this type is. It is acknowledged that the present data set is drawn from a small number of GPs and surgeons in one city. However, the patterns discerned in the data are likely to be relevant to practitioners generally. For example, interactional dilemmas will be commonly experienced. On the other hand, it is not claimed that the analyses undertaken by the research team will uncover every interactional dilemma; there will be some that are specific to particular situations. In addition there is a large body of research on medical interactions internationally that this work builds on and can be compared with.[8,9]

This data demonstrates the many ways in which the work of the doctors is much more than the routine application of clinical history taking and examination, or adherence to treatment guidelines. For the medical profession this has important consequences – the fluid nature of consultations cannot be systematised and therefore the complexity of clinical work is affirmed. For the patient this also has important consequences. The presentation of 'self' by the patient influences the unfolding of the consultation and its outcomes. It is clear from the data, and from research looking at interactions in other fields, that it is a core aspect of all social interaction to classify and categorise other people. Doctors have to do this to manage their work, and often make rapid assessments about the sort of person they are dealing with. This suggests that doctors, like anyone else in any social situation, treat people differently. Rather than seeing this as a problem that needs to be overcome with the introduction of strict protocols, treating people differently needs to be seen not only as a fact of life but also as a resource that can be worked with. Any attempt to reduce doctors' work solely to the application of clinical decision support tools or guidelines will only ever be partially successful at best. The point is not to treat everyone the same, but to work to treat everyone better. Treating people differently should not mean treating people unjustly. It is hoped that further analysis of this data set and ongoing research look-

ing at a connected sequence of health services encounters by the same patient will provide more clues as to why some groups of patients get different health service outcomes from others. We may be able to reveal patterns of interaction that have unintended consequences in terms of clinical outcomes and, if so, offer these as points of reflection for the clinical community and the general public.

Doctors and patients have choices in the consultations about when and how to persuade and resist persuasion

For clinicians these findings, which affirm the complexity of interactions within the clinical consultation, will not be surprising. However, what the research does show is something of the 'working life' of the clinician. In terms of contemporary representations of professional practice it is important for the public and state agencies to gain a better understanding of this 'working life' so that attempts to improve practice can better take into consideration the complex nature of consultation interactions. Further, research of this nature can question assumptions about what is going on in the consultation.

This is resource-intensive social science research, but to date we have demonstrated that data of this type can be collected, that there is willingness from both clinicians and patients to participate, and that ethical issues need to be considered carefully but do not provide an obstacle to research of this nature. In conclusion, this type of research can provide useful information for clinical practice, medical education and policy development.

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Competing interests

None declared.

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Norovirus infection

'The biologic, physicochemical, and epidemiologic features of noroviruses present a serious challenge for infection control. Noroviruses are extremely infectious, and as few as 10 to 100 particles may be needed to cause infection. These viruses also are highly resistant to inactivation by freezing, heating to 60°C, exposure to chlorine in concentrations of 0.5 to 1.0 mg per liter, pH levels of 2.7, and treatment with ether, ethanol, or detergent-based cleaners. Thus, steaming or depuration of shellfish does not entirely eliminate the risk of transmission. Effective surface decontamination can be accomplished with solutions containing hypochlorite at 5000 ppm.

The primary control measures for norovirus outbreaks are environmental decontamination, prevention of contamination of water and food supplies (including restriction of the activity of sick food handlers), and possibly cohorting of infected patients in health care facilities or on cruise ships.

No specific therapy is available. Most cases are self-limited, though supportive therapy, particularly hydration and electrolyte replacement, may be required for severe illness.'

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