Emergency communication: the discursive challenges facing emergency clinicians and patients in hospital emergency departments

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ABSTRACT Effective communication and interpersonal skills have long been recognized as fundamental to the delivery of quality health care. However, there is mounting evidence that the pressures of communication in high stress work areas such as hospital emergency departments (EDs) present particular challenges to the delivery of quality care. A recent report on incident management in the Australian health care system (NSW Health, 2005a) cites the main cause of critical incidents (that is, adverse events such as an incorrect procedure leading to patient harm), as being poor and inadequate communication between clinicians and patients. This article presents research that describes and analyses spoken interactions between health care practitioners and patients in one ED of a large, public teaching hospital in Sydney, Australia. The research aimed to address the challenges and critical incidents caused by breakdowns in communication that occur between health practitioners and patients and by refining and extending knowledge of discourse structures, to identify ways in which health care practitioners can enhance their communicative practices thereby improving the quality of the patient journey through the ED. The research used a qualitative ethnographic approach combined with discourse analysis of audio-recorded interactions. Some key findings from the analysis of data are outlined including how the absence of information about processes, the pressure of time within the ED, divergent goals of clinicians and patients, the delivery of diagnoses and professional roles impact on patient experiences. Finally, the article presents an in-depth linguistic analysis on interpersonal and experiential patterns in the discursive practices of patients, nurses and doctors.

KEY WORDS: *discourse, functional linguistics, health communication, hospital emergency departments, organizational studies, spoken interactions*

Introduction

Ineffective communication has been identified as the major cause of critical incidents in Australian public hospitals (NSW Health, 2005a). Critical incidents are adverse events leading to avoidable patient harm. Communication in hospital emergency departments (EDs) is particularly complex due to a number of factors. First, clinicians are now expected to work in multi-disciplinary teams and negotiate patient management plans with team members. Second, due to the drop in numbers of family doctors, emergency staff have faced a steep rise in patient presentations over the last decade. Third, emergency teams treat increasing numbers of culturally diverse patients, often requiring interpreters and other resources to ensure patients' linguistic and cultural background are respected. Fourth, increasing numbers of patients that present at EDs come with multiple symptoms and problems, complicating decisions about which medical specialty to contact. Finally, EDs are still rarely computerized, which means that patients will arrive without staff having access to their medical histories, allergies, and so forth. All these factors bear on the communication challenges that emergency clinicians face in the course of their everyday work.

To address the implications for frontline staff of this steep rise in communication challenges in EDs, the present article will report on a research project undertaken in five EDs in Australia. The primary focus of this article will be on a detailed description of the communication in one of the ED sites – a large, public metropolitan teaching hospital in Sydney – the focus of the project's pilot study. The pilot research aimed to describe, map and analyse the communication encounters that occur between health care practitioners and patients in hospital EDs in order to identify the features of both the successful and unsuccessful encounters, and to identify the cultural, linguistic and other demographic factors that contribute to both the breakdown and success of therapeutic communication.

Drawing on two complementary modes of analysis, qualitative ethnographic analysis of the social practices of ED health care, and discourse analysis of the talk between clinicians and patients, researchers were able to analyse how emergency talk is socially organized to structure health care practices, and to what extent these practices make sense for patients. In that sense, the present study is unique: its focus is on how emergency care unfolds for specific patients often over long stretches of time, and on how language and other factors impact on the effectiveness of communication.

Our article is structured as follows. We begin with some background about the problems affecting hospitals generally and EDs in particular. Following a description of the research site and the methodology of the study, we then move on to consider specific features of EDs which impact on patient experiences arising from the ethnographic observations. In the section following that, through in-depth linguistic analysis, we draw out the implications of our work for our thinking about communication in general, and for the role of communication in hospital care specifically. Our conclusion returns to the matter with which we

started: the central role of communication in ensuring expeditious patient flow, patient satisfaction and safety.

Background

The social scientific study of clinical practices and discourses has by and large focused on how doctors interact with their patients. Where some analysts favour the medical-sociological perspective that centres on the broader context of the institution and profession of medicine, others take the socio-linguistic perspective that focuses on the micro-features of the spoken exchanges between doctors and patients (Wodak, 2006). What these approaches have in common is that they privilege the profession of medicine at the expense of the role of other clinical professions in clinical communication and decision-making about the patients' care (Iedema, 2006, 2007a). Ethnographic work done in clinical settings, however, shows that medicine and doctors are in fact dependent on numerous other professional expertises and practices, including nursing, allied health, and management and administration, to achieve their clinical aims and outcomes (Iedema, 2007b). In the study, we have found that the strength, safety and success of each individual patient's trajectory, relies on a combined effort of between eight and 15 people. The chain of care goes through GPs, ambulance officers, relatives, carers, patients, managers/administrators, clerical staff (several), triage nurses, nurses (several), doctors (several), pathologists, medical, surgical or other specialists, nurse unit managers, bed managers, specialist surgical or medical teams, wardsmen, specialist aged-care nurses, social workers, radiographers, radiologists, sonographers and so on.

The other shortcoming of existing approaches to clinical communication research is that general practice (i.e. family doctors) is studied at the expense of hospital clinicians. While this is partly due to the difficulty with gaining access to hospital clinicians, it does not justify the fact that the findings produced by these literatures are regarded as definitive of clinical communication. Many more staff are employed in hospitals than in general practice, and much more money is spent on tertiary care than on primary care (Australian Institute of Health and Welfare, 2005a, 2005b, 2006). For those reasons alone it seems incongruous if not paradoxical that social science has focused on the family doctor and not the hospital clinician, and that this discipline has foregrounded medicine with little to no attention to the full range of clinical professions.

The omission becomes acute when we consider the findings of patient safety research and hospital incident reporting statistics, already referred to in our introduction. From these publications it is clear that while clinical professionals are expertly trained to execute their specific specialty roles, they do so in contexts where the organizational and communicative dimensions of clinical practice are rendered subservient to other dimensions of professional practice considered to harbour higher levels of cultural capital, such as technological and scientific specialization (Iedema, 2005). When it comes to ensuring patients' safety, however, the outcomes of such specialized practices will only be as good as the

organizational and communicative processes that support and facilitate them (Kohn et al., 1999).

Patient safety research has begun to illuminate the challenges faced by clinicians in hospital settings in communicating the dynamic complexities of bio-physiological healing and decline, and the diagnostic responses formulated to deal with these dynamics (Leonard et al., 2004). However, in modelling itself on the medical and clinical sciences, this research epidemiologizes clinical communication, and reduces the above-mentioned complexities to statistical descriptions of communicative stances and patterns on the one hand, and to proceduralized bureaucratic rules on the other hand (Iedema and Jorm, forthcoming). Concomitantly, there is a dearth of work that engages with clinical communication ethnographically, sociolinguistically, and discourse analytically. This constitutes a serious shortcoming on three fronts: patient safety research lacks the benefit of discursive analyses of in situ practices, discursive research misses the opportunity to inform policy-making in tertiary care, and the general public is not served with research that illuminates the complexities of hospital care in terms that connect with their lifeworld: patients' narratives, outsiders' lay observations, and non-clinicians' analyses of the organizational and communicative dynamics of emergency care.

Problems with communication underpin most patient complaints about health care in Australia (NHMRC, 2004; NSW Health, 2005b; Taylor et al., 2002). Equally, it is well documented that effective communication is a major contributor to patient satisfaction in general (O'Keefe, 2001; Salomon et al., 1999; Sitzia and Wood, 1997) and to EDs' patients' satisfaction levels in particular (Sun et al., 2000). There is also evidence that effective communication produces positive outcomes for patients in terms of their understanding about treatment (Donovan and Blake, 1992; Edwards and Elwyn, 2001) and their following of treatment plans (Haynes et al., 1996). Of great concern to the general public is the continuity of care (Cook et al., 2000). Continuity stands for well-organized, adequately planned and appropriately communicated care processes. A lack of continuity raises uncertainty for all involved: clinicians, patients and family members. This uncertainty can be mitigated with targeted communication, but, because of the complexities of emergency work, clinicians are challenged by having to organize their work into continuous care, and by having to communicate explanations to patients, family members and colleagues when discontinuities occur. As our analyses show below, this poses a double complication: emergency clinicians practise on the strength of inadequately articulated care plans, and, if a plan has been articulated, they communicate treatment discontinuities in tentative, haphazard and incomplete ways.

The study reported on here situates patient experiences and communication exchanges within the professional and institutional practices (Iedema, 2005; Kemmis, in press) of the ED. It uses specific and notable exchanges to understand the impact of the broader, systemic exigencies, roles and discoursal practices of health care professionals, managers and policy makers in and on EDs; and conversely, it looks at *these* to explain *why* certain types of language are being used. By focusing on the actual unfolding interactions among clinicians and patients, and by contextualizing these unfoldings with the pressures bearing

on emergency clinicians (Daly, 2006), we develop explanations for the *forms of talk* used by participants in the context of the medical institution. In that sense, the study reported on here at once extends discourse knowledge about in situ emergency communication and patient safety knowledge in the context of critical health care services in Australia.

Research site and participants

The pilot study was conducted in the ED of a large, metropolitan, teaching hospital in Sydney, NSW. The study is unique on a number of different levels: for the first time, patients were observed and recorded in conversation with health care practitioners and administration staff from the moment they entered the ED (at triage) until the moment a decision about treatment (disposition) or release from the ED was made; semi-structured interviews were held with both hospital staff and patients in order to capture their insights and impressions of the communication within the ED, and in-depth ethnographic data were gathered at the hospital site. In other words, findings were derived from multiple sources, collectively providing a powerful overview from which to untangle the dynamics of the communication process in emergency.[1]

The hospital involved in the pilot study has one of the busiest EDs in New South Wales; it is the trauma centre for a large Sydney catchment area with approximately 51,000 trauma presentations annually. A significant focus of the staff and the hospital is on the efficiency and timeliness of the patient journey through the ED. As most other EDs in Australia, this hospital uses the Australasian triage scale from 1 (most urgent) to 5 (less urgent). Triage aims to ensure that all patients who present to the ED are treated in the order of their clinical urgency and that their treatment is timely. It also allows for the allocation of patients to the most appropriate assessment and treatment area. The triage nurse is the first person to see a new patient and s/he allocates an appropriate code following assessment. This study was primarily concerned with patients in categories 3, 4 and 5, with those in categories 1 and 2 considered too critical to be recorded.

Research methods

Drawing on socially oriented functional approaches to discourse and language description, the overall frame for analysis used the theoretical perspectives of critical discourse analysis (Fairclough, 1995), sociolinguistics (Gumperz, 1982; Tannen, 1984) and systemic functional linguistics (Halliday, 1994; Halliday and Matthiessen, 2004). In addition, the study used qualitative ethnographic methods (Creswell, 1998; Gumperz and Hymes, 1972; Silverman, 2001), including both observation of the ED context and interviews with key personnel.

The phases and methods of the data collection were as follows.

ETHNOGRAPHIC DATA

- Participant-observation in the field – observations and impromptu interactions with clinicians while in the field in order to clarify meanings of observed practices.

- Semi-structured interviews with key informants (senior and junior doctors and nurses, administrative staff, ambulance officers and allied clinicians), selected for their knowledge of the context, prior to and following fieldwork.
- Review of patient ED health care records to ascertain clinical information that situates the patient's journey; and analysis of policies and procedures that affect communication in ED.

DISCOURSE DATA

- Audio-recording of a sample of patients, recording all their interactions with clinicians while in the ED. Field notes taken during spoken interactions to record non-verbal and other relevant information.
- Transcriptions of patient/practitioner data analysed for lexical, grammatical and discoursal features.

Data analysis

The combination of methods made it possible to analyse the relationship between the non-linguistic features of the ED and the nature of the spoken interactions between the patient and clinicians. The focus of our study is the exchange of meanings – of communication – between patients and health care practitioners within the context of the ED. The analysis targets patterns of wording (lexico-grammar) and patterns of meaning (semantics). We have analysed the discourses in our sample in terms of three different modes of meaning:

- ideational meaning – construing our experience of the world around us and inside us as meaning, using two complementary modes of construing experience, the logical and the experiential modes.
- interpersonal meaning – enacting our social roles and relations as meaning.
- textual meaning – transforming ideational and interpersonal meanings into a flow of information that is easy for listeners (readers) to process.

Here we will report on two strands of analysis – the analysis of *interpersonal* patterns in the exchange of information between patients and health care practitioners and the analysis of *experiential* patterns in this information; more specifically the construal of some key aspect of the experience of being a patient – the construal of the procedures associated with health care, the construal of time (as part of the practice of health care), the construal of the patient and the construal of disease and symptoms of disease such as pain and vertigo. These two strands of analysis were selected because they were considered to be critical to our examination of potential communication difficulties – the nature of the interaction between patient and health-care practitioner on the one hand (including constraints imposed on this interaction, e.g. in terms of who is in a position to initiate an exchange of information, and potentially divergent communicative goals) and the nature of the understanding of the (symptoms) of the disease on the other (including issues having to do with the line of expertise

between commonsense folk, understanding and uncommonsense, expert understanding – Halliday and Matthiessen, 2006).

ETHNOGRAPHIC AND DISCOURSE ANALYSES OF THE SOCIAL PRACTICES OF ED HEALTH CARE

The ethnographic data collection, through participant-observations and semi-structured interviews with key informants identified a number of persistent features of life within the ED, which have a bearing on the overall discursive practices that take place between clinicians and patients. Commentary on these is presented. This is followed by the in-depth linguistic analysis.

The patient as outsider

The patient remains an outsider to the institutionalized language and patterns of behaviour practised by ED staff. Patients' outsider status can result in anxiety, experiential incomprehension and/or interpersonal alienation. While patients are often given key information and explanations about the processes of the ED and their situation this is not always fully comprehended. Because of illnesses, anxiety and information presented in complex technical and institutional language, their understanding is often limited and fragmented. Hospital staff recognize that while it is a stated priority to provide clear information to patients, it is not easy to do so because of time and clinical pressures (and of course the medical and/or mental condition of the patient). The following exchange between a young female patient and a doctor illustrates the patient's lack of familiarity with hospital practices – language and/or procedures.

Extract 1

Doctor: Might even ( ) Um, I think given that you're having a scan, a CAT scan, um, at some stage today.

Patient: You're alright.

Doctor: But I'll keep you informed.

Patient: ( )

Doctor: Alright?

Patient: Did you get all that? (To the researcher).

(Recorded in a consultation room)

This patient later made the comment 'I heard what she said but I don't know what she said . . .' after the nurse told her what was about to happen.

In extract 1, the term *CAT scan* as well as the routine procedure of having one may be new to the patient. Soon after, the patient commented 'Everyone tells you a different thing' after being told she was being admitted to the hospital for follow-up procedures; her comment demonstrates confusion regarding the interactions she has been involved in.

Different understandings of time

Time plays a central role in the way the ED works, both as a resource and as a phenomenon experienced by patients and health-case practitioners. Elapsed

time (waiting) can have a significant impact on the overall patient experience. Recordings of consultations and our observations revealed that references to time, by doctors in particular, ranged from the abstract to the numerically specific, for example, 'I won't be long' to 'I'll be back in 10 minutes' (a specific time frame was often found to be unrealistic). Often patients did not have a clear understanding of how long a procedure would take, or how long an absence would be. Sometimes the patient quickly recognized the elasticity of time. For example, one patient said, 'When they say time [they will be away], I think it's a figure of speech for them', and later articulated a similar idea through the statement 'Meanwhile the doctor's gone to lunch' when the doctor was called away from the consultation room.

Additionally, consultations between patients and doctors are often interrupted. Sometimes the interruption lasts only for a few seconds as the doctor can be called away via his or her beeper. The following exchange between an elderly male patient and a male doctor occurred only a minute or two after the consultation had started:

Extract 2

Doctor:	I've been caught up in something else
Patient:	Yes?
Doctor:	I'll be with you though==
Patient:	That's all right
Doctor:	==in about 5–10 minutes
Patient:	Yeah, right-o

The doctor returned half an hour later. During the subsequent consultation, the same patient was interrupted a number of times when the doctor was called out to attend to another patient – a regular occurrence for senior doctors.

Notably, none of the participants (clinicians or patients) in the consultations that we recorded had any real control over their own time and the time taken for medical analyses. This produced very different behaviours on the part of clinicians and patients. Our observations showed that many clinicians and patients in the ED operated with competing time frames. While doctors moved quickly, frequently interrupting consultations to attend to other emergencies as required by the exigent nature of the ED, patients had little choice but to *wait*, and nurses attempted to mediate between the fast pace of medical attention and the stasis imposed on patients. Patients were obliged to wait in the waiting room, to wait on test results, wait on information, wait on diagnosis, wait on disposition and wait on bed placement with little explanation as to why this was happening, or when things would occur. Added to our observations, recorded comments by patients showed how the potential discord resulting from different perceptions of time could impact negatively on patients' overall experience in the ED. Attentive to the organizational implications of these competing goals, the nurse's priority is continuity of flow, even if it is rarely achieved: [My role is] 'primarily being patient flow . . . because obviously flow is very important . . . So it's very important

to try and, you know identify where there's potential for bottlenecks and fast tracking patients . . .' (Nursing Unit Manager).

Divergent goals of clinicians and patients

The following excerpt shows the divergent trajectories between one (inexperienced) doctor's line of questioning and the (LBOTE) patient's desire to foreground other information:

Extract 3

Doctor:	Have you been eating and drinking sort of reasonably normally?
Patient:	I drink but I haven't been eating.==
Family:	==She hasn't been eating well because she's just had a recent death in the family.==
Doctor:	OK==
Family:	== A couple of days ago.==
Doctor:	OK.==
Family:	==Which is her grandmamma.==
Doctor:	OK.
Family:	So she's been spending a lot of time at her mother's house and no she hasn't been eating well obviously distressed because of that.
Doctor:	OK. Sure but you've been keeping up your fluids and drinking and==?

During the consultation phase of the patient's ED journey, two trainee doctors and a senior doctor interviewed her. This is normal practice in EDs, particularly in a teaching hospital: the two trainee doctors were practising their history-taking techniques. The brief exchange above reveals the dominance of the doctor script in the consultation, a feature that was also revealed in other recorded consultations. The dominance of the doctor script reflects the medical and institutional priorities of the ED context, and also reflects normal practice: the bio-medical imperative of finding out in the quickest possible way what is wrong with the patient, is paramount.

However, during this consultation, other concerns of the patient were overlooked. The doctor's first turn above is a question that focuses on the patient's *eating and drinking* behaviour, a focus that also provides the (repeated) question at the end of this extract: '. . . Sure but you've been keeping up your fluids and drinking and'. The patient and the family member who is helping her weave in experiences that focus on a significant family event: a *recent death in the family.* The bio-medical language sits alongside the more psycho-socially oriented language, but it is only the former that the doctor 'hears'.

Further findings also demonstrated that doctors frequently did not 'pick up' on patients' concerns when they were not explicitly related to the pain, symptoms, or other aspects of the doctor's script. Nor did doctors, for the most part, ask patients what they thought about their own health problems, what they thought was wrong with them, or what they were worried about. This is further reflected in patients asking very few questions.

The delivery of diagnoses

The ED practitioners see patients as entering the ED with symptoms, behaviours, pains, and so on, as opposed to coming to the ED with a particular illness, condition or disease. Their job is to find out what is wrong with a patient and work out what the most effective follow-up treatment should be. Thus, diagnoses for all but very minor ailments are usually given to patients after a considerable number of ED activities that include several consultations between different clinicians and the patient, one or more physical examinations, tests such as blood tests, X-rays; consultations between junior and senior doctors and often telephone consultations to the patient's general practitioner and so on.

The delivery of diagnoses (or disposition) is the key moment of the clinician patient consultation and one that takes significant hospital, clinician and patient effort to reach safely, accurately and expeditiously. The point at which the diagnosis is delivered during a patient's journey through an ED is clearly an important one. It is what the patient has been waiting for, often very anxiously, and it is what the doctor assigned to the patient has been working towards. How diagnoses are delivered constitutes a key communicative event in the patient's journey through the ED. The interaction below is one example of how a junior doctor (from a LBOTE) delivers the *news* to an elderly male patient:

Extract 4

Doctor:	I give you good news or bad news?
Patient:	All right.
Doctor:	Which one?
Patient:	Bad one first.
Doctor:	Bad one first. OK we did a scan and we found some clots. Multiple. Several clots in the chest. Right that's the bad news. The good news, we found out why you have clots. It's not from the heart. The heart's not going to fail.
Patient:	OK.

The consultations leading up to this diagnosis delivery had continued for many hours while lengthy blood and X-ray tests were carried out. The doctor had been extremely busy all day with this patient and others, yet he wanted to finalize the consultation – that is, be the one to tell the patient the diagnosis – before he completed his shift.

In one reading of the exchange the doctor's language is somewhat inappropriate, without the level of sensitivity required to convey such critical news to an elderly patient. It could be he realizes that the normal, bio-medical language and interpersonal distance are not quite right in this situation. He picks up on the patient's own earlier use of the *good news, bad news* phrase. This may have been chosen as a deliberate strategy for establishing rapport with the patient, constructing some informality and/or familiarity.

Looking beyond the short diagnosis delivery extract to the larger context of professional practice, diagnoses are increasingly expected to link in to scientifically and technologically derived supporting information: 'doctors and nurses

will invariably refer to test results carried out by laboratory technicians when delivering a diagnosis' (Sarangi and Roberts, 1999: 24). The doctor, who was required to consult with other doctors, and wait on the results of tests before he could make a final diagnosis, was unable to provide this information to his patient until the end of a shift.

This example also illustrates how shiftwork, an institutional practice, is another factor in the ED workplace that impacts on the communicative event. Further, the exchange highlights the doctor's inexperience, because he was quite specific about the patient's condition, in contrast to more typical diagnostic discourse where, normally 'one searches in vain for simple instances of "decision-making". Indeed detailed attention to talking-acting throughout the modern clinic shows how relatively invisible [. . .] occasions of decision-making per se [are]' (Atkinson, 1999: 95).

Varied discoursal roles

Thus far we have considered emergency doctors' exchanges with patients, and found that doctors' discourse harbours an economy of investigative attention. As seen, this leads to disjunctions between the professional knowledge that is the main focus of the doctors' questions and the lifeworld concerns of the patient. In light of that, consider the extract below which is representative of nurse–patient exchanges recorded. The extract shows a nurse talking to a patient.

Extract 5

Nurse: You ***probably*** will be [admitted] with all the stuff that we're ***probably*** doing. It's ***just depending on*** what they find and what [rustling] antibiotics they want to start you on. I mean ***there's a chance*** they ***might*** keep you in overnight in the emergency medical unit but ***I think*** ( ) *little* easier than ( ) for a couple of days. ***Just depending on*** what they find on ( ) the reports.

Earlier, the nurse took time to refer to the patient's family and made personal comments about the patient's sons. The nurse's focus of practice was both more social (concerned with everyday dimensions of the patient's world), interpersonal (concerned with mediating between the uncertainties of emergency practice and the patient's sensibilities by mobilizing the resources of modality such as 'probably', 'might', 'I think'), and organizational ('there is a chance they might keep you in overnight'). In doing so, the nurse embodies a boundary-spanning role, siding one moment with the clinical professionals and their knowledge ('the stuff *we*'re probably doing') and the next with the patient ('depending on what *they* find . . . *they* might keep you in overnight').

Other exchanges between nurses and patients reveal that nurses practise as the functionaries and apologists of the hospital and the medical system – and thus represent the institutional face of care. They sometimes informally foretell diagnoses (outside of their protocols), which contrasts with the doctors' more cautious approach as shown below. The exchange was recorded during observations as a patient was becoming increasingly agitated with the long wait:

Extract 6

Nurse: They think you've got gout *(to elderly, hard of hearing male patient)*

Patient: They're going to kick me out?

Nurse: No, we think you've got gout.

When the doctor arrived later she asks the patient:

Doctor: Have you ever had gout?

The above commentary identifies a number of discursive practices and ethnographic features of the ED which impact on patient experiences in the ED. Below we undertake a more detailed linguistic analysis of the interactions.

LINGUISTIC ANALYSES OF THE INTERACTIONS BETWEEN PATIENT AND EMERGENCY HEALTH CARE PRACTITIONER

In addition to the broader analyses discussed above we have analysed the interactions for these features:

- Context of consultations between health care practitioners and patients in EDs: contextual (generic) structure of the unfolding of the consultation.
- Language, content – semantics: 1) interpersonal (negotiation: move and speech function analysis; appraisal), and 2) experiential: construal of disease. This analysis is adapted from Eggins and Slade (1997), Halliday and Matthiessen (2004) and Martin (1992), and allows us to describe the different roles taken up by the interactants and the nature and function of the exchanges.
- Language, content – lexicogrammar: 1) interpersonal (mood), 2) experiential (transitivity, including process type; metaphor, including nominalization), and 3) textual (theme, lexical cohesion).
- Language, expression – phonology: intonation.

In terms of the analysis of linguistic features, we have focused here on two major sections or 'slices' through the different levels (strata) listed above (see Matthiessen et al., 2005); these are characterized in terms of metafunction:

- Interpersonal, in relation to tenor within context: the analysis of interpersonal patterns in the exchange of information between patients and health care practitioners – in particular focusing on the difference between these features in doctor–patient interaction and nurse–patient interaction.
- Experiential, in relation to field within context: the analysis of experiential patterns in this information, more specifically the construal of some key aspect of the experience of being a patient – the construal of the procedures associated with health care, and the construal of the patient and of disease and symptoms of disease (including analysing the variation in choice of process types by clinicians and patients in order to construe disease).

In the next section we will discuss some of these analyses – the overall text structure of the interactions; the speech function analysis describing the different types of questions used by doctors and nurses and lastly the construal of disease and medical conditions by doctors and patients.

Context of consultations: generic structure

We examined the overall contextual structure of each of the nine recorded sets of interactions between the particular patient and clinicians, in order to establish whether or not the generic staging in the ED consultations was different from that of other, more familiar medical consultations, such as those conducted in general practice. The following stages of ED consultations were identified from the ED data:

> [Greeting] ^ Initial Contact ^ Exploration of Condition ^{n} History Taking ^{n} Physical Examination ^{n} [Diagnosis Tests/Procedures] ^{n} Consultation with other doctors ^ Diagnosis ^ Treatment ^ Disposition [^ Goodbyes]

As the above description specifies, in many of the consultations, the Exploration of Condition and History Taking stages were recursive; they could be repeated when different doctors took histories from the same patient. This repetition of these stages of the consultation process may well be confusing for individual patients, especially for those from a language background other than English. We can reasonably assume that most patients would not be as familiar with the emergency consultation context, compared to the more predictable consultation exchanges conducted by a general practitioner.

A significant feature that emerged through an exploration of the generic structure is the issue of reconciling the different goals of clinicians and patients realized in the narratives and recounts during the History Taking stage(s). As mentioned earlier in this article, our analysis of the ED data revealed that clinicians and patients often have different goals in the ED consultation (see Gu, 1996) – notwithstanding the over-riding goal of getting well as soon as possible. So for example, clinicians are concerned with asking for information in order to make a diagnosis as soon as possible, patients often want to tell their story. Patients in the study sometimes received mixed messages as they were 'asked' by doctors to tell their 'story' at the beginning of a consultation, using strategies such as 'Tell me what happened yesterday', interspersed with information-seeking questions.

The 'tell me' demand could invite a recount – a simple record of a sequence of events; however we found that what the doctors wanted was a narrative – something with more of a story structure (for the difference, see e.g. Martin, 1992). In other words, the clinicians are interested in an orientation ^ complication sequence. During the Exploration of Condition and History Taking stages, doctors gathered information about the context of the patient's pressing concern (such as pain, bleeding, vomiting or a rash) and there then seemed to be an implicit assumption on the part of the doctors, that there was a complication, that is, a reason, or a particular event that had precipitated the ED visit (for example, 'Then X happened'; 'Then I felt Y'). Our analysis showed that patients generally recognized the preferred text type; however their narratives often produced several complications, and these were found to occur in various places within the narrative. Our data also showed that patients' narratives were often interrupted by clinicians asking further questions, which took the narrative in another direction, or moved the consultation to a specific information-seeking question–answer sequence. Thus the stories became fragmented and focus on the

complications was lost. This meant that sometimes clinicians failed to pick up on key information, and diagnosis was delayed.

Interpersonal meaning: exchanges

The ED consultations proceed through a series of exchanges between clinicians (usually doctors and also nurses) and patients; each exchange is initiated by a move made by either of these parties, and this initiating move may be followed by a responding move by the other party. Each move is defined in terms of the selections made in the system of speech function by the speaker. See the example in Table 1.

The exchange patterns in the ED consultations are those characteristic of medical consultations in general, thus reflecting the tenor of the relationship between doctors and patients:

- The interviewing doctors initiate exchanges, typically by demanding information (asking questions), while the patient responds once the doctors have initiated an exchange by giving information on demand (answering), as in the example given earlier.
- When they initiate exchanges, the doctors ask many 'assumptive' questions – questions that seem to be strategies to make very certain that they have understood the information given by the patient earlier in the consultation.
- Related to this careful checking that they have understood what they have been told, the doctors do a fair bit of 'backchannelling' and when they begin a new turn after the patient's turn they typically begin by indicating that they've followed what they were told – using 'OK, Yup' or the like.

The doctors ask many questions of the patient, and the patient responds to these questions. As stated above the doctors make nearly all of the initiating moves, with nearly all of these being questions. In three different interactions, one of

TABLE 1. *Example of move analysis in terms of speech function (1)*

Speaker	*Turn*	*Exchange #*	*Move: speech function*
Doctor:	OK, OK.	n-1	follow-up: confirmation of comprehension
Doctor:	So does the room spin around or is it that you just feel light-headed?	n	initiate, demanding information
Patient:	*Last night I felt like the room was spinning out for 2 minutes, 1 minute I think* {{Dr: *Uh huh.*}} *because I think I have an infection here in my throat, up to my ear;* {{Dr: OK.}} *I have antibiotics for that.*		response, giving information on demand (as answer)
Doctor:	Yep, OK.		follow-up: confirmation of comprehension

approximately 1.5 hours, the doctor asked 145 questions and there were none from the patient; the other two interactions of approximately one hour – with the same patient, the doctor asked 48 questions to the patient's four questions, and 56 questions to the patient's nine questions. There was little opportunity for the patients to deviate from this question/answer structure. The daughter who was with the patient also asked no questions until the last few minutes when she asked two questions about the illness. Similarly, in another patient's initial interaction (17 minutes) with the doctor, there were 45 questions about her illness and two questions about the hospital system. The patient only asked three questions about her illness and two about the system during the whole interaction.

It is reasonable to expect there to be many questions and few statements about the illness by the doctors in the initial consultation, however, our analyses indicates that this domination of doctors' questions also occurred in the later consultations. This shows that the patients do not feel that it is appropriate for them to ask questions, or they feel too intimidated by the context to do so. It also indicates how different this interaction is from other consultations between patients and health care practitioners.

The doctors' questions are realized lexicogrammatically in different ways. (Intonation analysis will provide further insights since the system of tone plays an important role in realizing speech-functional distinctions. Thus, one important task will be to develop an account of these different kinds of questions within the overall system of speech function.) Questions clearly differ in terms of how strong the demand for information is (what we might call the degree of interrogativity), and in terms of the speaker's assumption about the response and the addressee's ability to give a response. The question strategies found here may turn out to have something in common with question strategies in other dialogic texts concerned with obtaining information such as police interviews; but they differ, not surprisingly, from question strategies in a number of other registers such as service encounters, where questions are further differentiated not according to state of knowledge but according to politeness.

The different types of question found in our sample include:

- straight or neutral, questions realized by interrogative clauses:

Extract 7

Doctor: Have you had any other things done with him before; have you had a – a telescope passed down or-?

Patient: No, nothing.

Extract 8

Doctor: What's wrong with your son?

Family: He's just stressed out.

Extract 9

Doctor: And have you taken all that course of antibiotics?

Patient: Yes.

- assumptive questions realized by declarative clauses, typically used to check the doctor's understanding of what the patient has said:

Extract 10

Doctor: And you saw him yesterday?

Patient: Yeah.

Extract 11

Doctor: But they didn't find anything with the camera they put down last year?

Patient: No.

Extract 12

Doctor: So when you stand up, it's worse?

Patient: Yeah.

Extract 13

Doctor: And you haven't been unwell; you haven't been vomiting or nauseous, haven't had diarrhoea over the last few days?

Patient: No.

- discretionary questions, apparently used to give the patient the option of a discretionary answer – 'I don't know', realized by clause nexuses of projection, with a projecting cognitive mental clause 'Do you know?'

Extract 14

Doctor: Do you know who that was?

Family: Um, Dr Dr . . .

Patient: Wonderlund.

Family: Dr Wonderlund.

Extract 15

Doctor2: And do you know what your – what you had – your haemoglobin is at all?

Patient: Four month ago there been 110.

Doctor2: And do you know what it was then?

Patient: Er, I don't know because Dr ( ) sent me to make a blood test and yesterday . . .

- command questions, demanding a verbal service:

Extract 16

Doctor: So I've got here that you're feeling sort some vertigo this morning, some sort of dizziness? Tell me about that!

Patient: Um, I just try to stand up in the morning {{Dr: Uh huh.}} and I feel very dizzy.

The assumptive questions can be used to check on something the patient has just said. There is also an extended version of such checks: statements followed by a question:

Extract 17

Doctor: And so the first thing this morning you got up out of bed, and you felt dizzy. Is that [[what you are saying]]?

Patient: Hmm.

There is a version of the assumptive question realized by a declarative clause followed by *or,* which seems to open up the possibility that the assumption isn't valid:

Extract 18

Doctor: It's still regular every month [[you're getting them]] or?==

Patient: Yeah.

Questions may be realized by paratactic clause nexuses (combinations of clauses given equal status), or simply by a cohesive sequence, sort of questioning by zooming in. For example:

Extract 19

Doctor2: How often were you taking Stemitil? Most days do you need to take it?

Patient: No, I went to the hospital, to Greengage Hospital eh – four – four month ago, and they said, 'Take every day before you sleep one tablet!'

Doctor: And who started you on Stemitil? When did you start taking that?

Patient: 4 months ago.

Doctor2: Have you ever had a blood transfusion or anything; you haven't needed that?

Patient: No.

When the paratactic relation is one of alternation (disjunction), this indicates an alternative question:

Extract 20

Doctor: So does the room spin around or is it that you just feel light-headed?

Patient: Last night I felt like the room spin out for 2 minutes, 1 minute, I think.

Some of the major question strategies are represented diagrammatically in the system network shown in Figure 1.

As we have suggested above, enacting institutional roles through interpersonal choices such as choices in SPEECH FUNCTION is an important aspect in ED consultations. The enactment of these roles is typically subtle, and demands deep linguistic analysis in order to tease out the covert language patterning. In the ED setting, the key relationships in which the patient is involved are those with the attending doctors and nurses. Comparisons of the linguistic choices in meaning made in the construction of the relationship between doctor and patient with that used between nurse and patient was revealing.

The linguistic choices made by doctors in patient conversations tend to orient towards the experiential domain of illness and pain within the field of medicine. This contrasts with the linguistic choices made by nurses, which tend

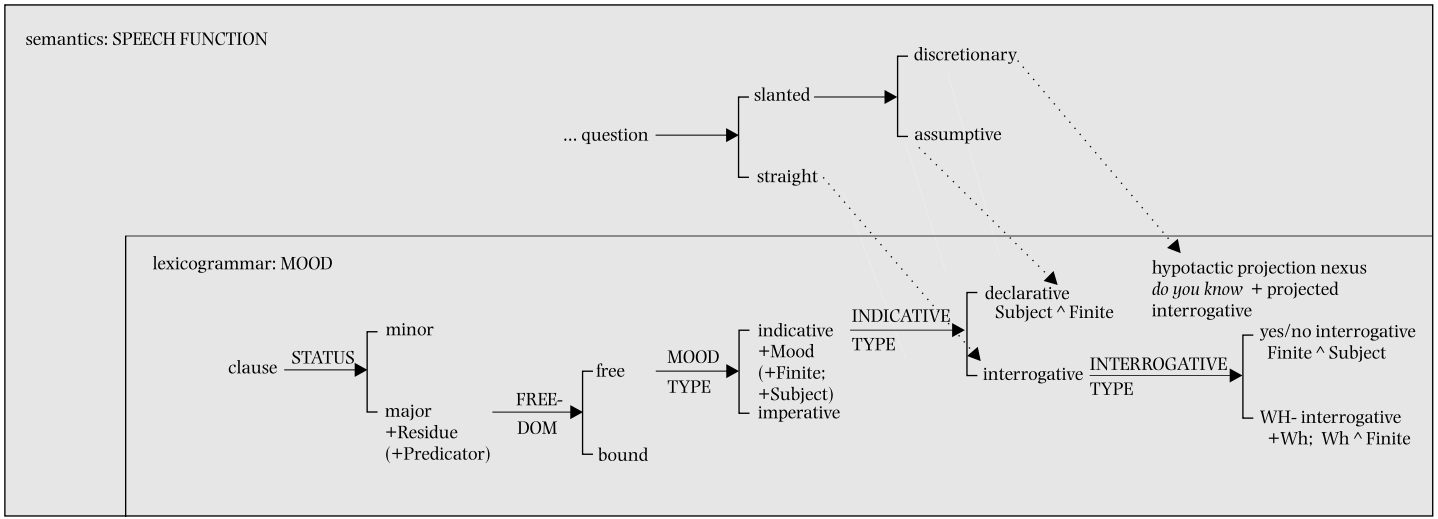

FIGURE 1. *Common types of question in ED consultations (Matthiessen)*

to be oriented also towards the interpersonal relationship with the patient. Their choices can be seen to be more complex interpersonally than that of the doctors. This interpersonal complexity can be exemplified by the example in Table 2 of a patient's construal of feeling cold throughout her ED experience and comparing the variable interpretations of this from both the nurses and doctor attending her. The examples are annotated with the selections in SPEECH FUNCTION in terms of ORIENTATION (giving versus demanding), COMMODITY (information versus goods-&-services) and TURN (initiating versus responding).

In both examples in Table 2, the patient initiates an exchange that can be interpreted (congruently) as giving information – 'I'm cold' or (metaphorically) as demanding good-&-services – 'Do something about this undesirable condition!' However, there are a number of differences between the nurse–patient and the doctor–patient exchanges, including:

- When speaking to the nurse, the patient is successful the second time around in having his/her move interpreted as a demand for goods-&-services rather than simply as a gift of information.
- However, when speaking to the doctor, the patient remains unsuccessful; the doctor does not respond, but just pursues his/her own agenda.

Thus, there would seem to be a division of labour between doctor and nurse. The doctor is necessarily more focused on the experiential diagnosis of illness while the nurse is focused on care of the patient. However, a more subtle consequence of this variation is the degree to which the semantic choices impact the patient. In our discussion of the more general research findings near the beginning of

TABLE 2. *Example of move analysis in terms of speech function (2): three subsystems*

Speaker:	*Move:*	*Turn*	*Orientation*	*Commodity*
Patient:	Oh God. It's cold! Everything ...	initiating	giving/	information
			Demanding	goods-&-services
Nurse:	Yeah.	responding	Giving	information
Patient:	I'm freezing everywhere!	initiating	giving /	information /
			Demanding	goods-&-services
Nurse:	We'll put some warm – we'll put some blankets on you so that you warm up.	responding	Giving	goods-&-services
Patient:	Oh God. It's cold!	initiating	giving	information
Doctor:	Can you take a deep breath. Again. Again. Again.	initiating	demanding	goods-&-services
			demanding	goods-&-services
Patient:	[Taking deep breaths.]	responding	giving	goods-&-services
Doctor:	Good.	responding	giving	information

this article, in 'The patient as outsider' subsection we highlighted the patients' outsider status, contextual unfamiliarity and resulting confusion as a possible communication obstacle within the ED setting. The examples in the tables earlier suggest that the nurse's interactions with the patient are more empowering and inclusive. While the doctor's semantic choices restrict the exchanges available to the patient to the giving of information or goods-&-services on demand, the nurse's choices acknowledge the interpersonal rights of the patient to be both giver and demander of goods-&-services as well as information. By enabling the patient to participate in the full range of speech functions, the nurse's interactions with the patient can be seen to extend beyond concerns with material care and comfort to immaterial, semiotic empowerment of the patient within the unfamiliar and frightening ED context.

EXPERIENTIAL MEANING: CONSTRUING DISEASE AND MEDICAL CONDITIONS

Consultations in EDs revolve around what ails patients, so it is important to know how ailments are understood and discussed. We therefore investigated how doctors and patients construe the patient's experience of ailments – of disease and medical conditions, drawing on Halliday's (1998) corpus-based study of how people construe pain. When a person describes a disease or its symptoms, they can describe it in a number of ways; as part of the goings-on in their external world (i.e. material or behavioural process) as part of the goings-on in the person's internal world (i.e. mental process), as something that they own (i.e. relational possessive process) or as a characteristic or something that can be related to some other thing (i.e. relational process). Examples are shown in Table 3.

One kind of symptom is pain. The study found that clinicians tended to use the external expression of pain but patients tended to express it in terms of internal goings on from a subjective point of view, for example, mental processes with patient as Senser (experiencer) and ailment as Phenomenon being sensed (e.g. 'I'm feeling . . .') or possessive relational with patient as Carrier (possessor) and ailment as Attribute (e.g. 'I have anaemia.'). Our further analysis of process types collocated with either 'I' (patient referring to self), or 'you' (doctor referring to

TABLE 3. *Process types*

Disease described as	*Process type*	*Example*
External goings-on	material	R:... like she'*s lost* her balance, R:... she *is going to fall over*.
	behavioural	Dr: you *haven't been vomiting* Dr2: [Ø: *have* you] ever *vomited* any blood?
Internal goings-on	mental	Dr: So I have got here that you*'re feeling* sort some vertigo this morning, some sort of dizziness
A possession	relational: possessive	F: because I *have* anaemia – very bad anaemia.
A characteristic	relational: intensive	F: I *got* angry R: and she *became* stressed

patient), indicates that the patients construed their illnesses using predominantly mental process, suggesting they were concerned with how they were thinking and feeling whereas clinicians used predominantly material processes and were thus concerned primarily with external goings on in the world. Thus, if the patient was concerned with internal goings on in relation to his or her medical condition and the doctor responded using material processes, then there was a potential mismatch of meanings. An interesting question arising from this kind of analysis is whether doctors' awareness of this would encourage and/or enable them to respond more appropriately to the emotional needs of the patient?

A patient's construction of pain is, not surprisingly, subjective and interpersonal in orientation. This is also reflected in the tendency to grade the intensity of the pain a patient feels, as in the examples below:

Extract 21 Young female patient in Exploration stage of consultation

Very, very bad pain
Extreme pain
Very painful
Very painful
Like a knife
Sharp pain

Patient: Very, very bad pain right there and I can feel it, you're not supposed to feel the band and I can feel it and I've been vomiting every time I eat and, just extreme pain.

In contrast, the doctor construes this patient's pain in terms of objective and experiential properties, being concerned with the nature and the location of the pain:

Extract 22 Doctors during Exploration stage of consultation

Tummy pain
Sort of pain
Left-sided pain
Constant pain
Sharp or dull pain
Stabbing pain
Better or worse pain
Worse pain
Sharp pain

Doctor: OK. Hm-mm and just the left-sided pain? Is it constant pain or?

The doctor is establishing medical aspects of pain about the diagnosis – the kind of pain, while the patient is concerned to emphasize the intensity 'very bad pain'. The doctor did not engage at all in responding to the affect that the patient brought up and could be seen to be mitigating the patient's feeling with the use of 'just'. The kind of interpersonal engagement that the patient demonstrates

regarding pain in the example earlier is consistent with the tendency to choose processes construing the internal goings-on of pain discussed previously. It is nurses who take up this interpersonal engagement as they focus on concern with the whole patient – who they are beyond their illness or disease. So, for example, we found instances of nurses opening conversations about patients' families, and offering information about their own personal lives.

Conclusion

This study has provided the researchers with initial data on how organizational and clinician practices and roles impact on patient experiences in EDs. The study revealed a number of issues that indicate potential communication difficulties between patients and clinicians, such as patients' incomprehension about processes and the use of technical terminology to name but two; and as we continue the research we will use the analyses of the micro-level features of interactions between patients and clinicians (doctors and nurses) to shed light on the complex socio-cultural processes that are in operation at the institutional level of the EDs.

The implications of our analyses for our understanding of emergency communication are as follows. First of all, the complexities inherent in emergency care – medical emergencies requiring simultaneous attention – lead to a prioritization of medical tasks over the experiences and sensibilities of people involved. Here, communication and understanding come second to the goal of saving lives and making people well as illustrated in Extract 3 where the dominance of medical questions entirely overrides the patient's personal circumstances. This prioritization, in turn, has implications for how patients experience emergency care. The chaos of multiple emergencies produces uncertainty and delays for those who are triaged as anything other than a '1' or a '2' – a serious life-threatening situation. Second, the impossibility of proceduralizing emergency work except at times and in places where the emergencies are under control, means that clear explanations about what happens next are hard to come by, as detailed in Extract 5 where information is given to the patient about her next steps but where she understands little. Besides not being doctors' primary concern, the complexity of emergency work renders it only in limited ways amenable to routine. This in turn means that even if clinicians had the time to sit down with patients and explain what was happening to them, the complexity of ED processes would prevent them from saying very much. Third, the disjunction between patients' lifeworld concerns and disease understandings and clinicians' medical-technological insight into bodily problems puts patients at a further disadvantage. Not understanding the logic of medical reasoning, nor the significance of technologically produced (test) information, patients find themselves in a challenging environment at the best of times. They need patient attention for them to be able to feel they can formulate questions and take in answers – our current analysis showing the imbalance of 145 questions to none from one patient; instead they face clinicians who are in a hurry, who

are constantly called away to deal with others, and who do not appear to be able to clarify how their own work works.

In all, and despite nurses' attempts to mediate between them and the complexities of emergency care, patients remain on the outside. In light of recent reforms aiming to enhance patients' involvement in their own safety (Davis et al., 2007), our findings about the logic and communicative nature of emergency care present a special problem. How can emergency clinicians be resourced sufficiently for them to be able to, first, organize their care in the face of rising levels of patient presentations (due to the disappearance of the family doctor, with emergency remaining as the only source of medical attention, even for minor ailments), and, second, develop ways of communicating that, besides satisfying experts' understandings, will also mediate into the patient's lifeworld?

Inadequate communication has been characterized as the main source of 'unsafety' in health care (see earlier). But, given the complexity of emergency medicine, communication is also the principal solution. As the in situ dynamic that connects professionals increases, communication more so than any technological or bureaucratic device harbours the promise of clinicians being able to negotiate clinical complexity (Iedema et al., 2006). Put differently, it is unlikely emergency care will become standardized and routinized, independent of the resources that funders will make available for its 'rationalization'. As the generalist domain of tertiary hospital care (Zink, 2006), emergency is only likely to become more complex, unless radically different solutions are devised to dealing with different types of emergencies and pre-channelling emergency patients. Until that time, the problems described in the present article are unlikely to disappear, the emphasis on communication with patients in medical undergraduate courses notwithstanding. While triage provides an important organizing principle, the interleaving of patient types and triage levels, the access block occasioned by other domains in the hospital proving unable to discharge patients and take on new ones, and the inevitable privileging of the ethos of 'salvaging lives' will continue to combine into a challenging set of factors for unsuspecting patients. It is studies like the one initiated here, however, that may go some way towards alleviating the bewilderment experienced by those entering this environment.

The study presented here puts a microscope on institutional and professional practices in health care at a time when a number of shifting demands are being made by patients on the one hand, and by political exigencies on the other. We are aware that, in Australia, as in many other places in the world, patients want patient-centred care that enables exploration of patients' main reasons for their visit, their concerns and their need for information. To reach these goals, clinicians need an integrated understanding of the patients' world, that is, their whole person, their emotional needs, and life issues (Stewart, 2001). As demonstrated above, the challenges to realizing these goals are considerable.

Our study may contribute to clinicians' and patients' awareness of some of the main disjunctions affecting emergency care delivery. Our study shows how the 'successful' combination of patient narratives, effective medical diagnoses, nursing and systemic support make for safe and comfortable journeys for patients through the ED; and how unresponsive combinations result in

patient dissatisfaction, incomprehension, or at worst critical incidents. Using ethnographic, sociolinguistic and discourse analyses we describe how information about each patient is gathered, interpreted, transmitted and then acted upon – speedily, accurately, professionally and safely – factors on which the premise of a safe passage in the ED is based. We anticipate that our insights will lead to systemic improvements, by allowing stakeholders to make sense (Weick, 1995) of their own and others' institutional behaviours. Studies such as this may not harbour immediate effect, but rendering these problems and challenges visible by engaging in cross-disciplinary research and using multiple methods is a step towards making health practices more explicit and effecting change.

NOTE

1. Our research focused on communication between clinicians and patients who were deemed to be able to communicate effectively in English. The patients who participated in the study were from both language backgrounds other than English (LBOTE) backgrounds and English-speaking backgrounds (ESB). We did not include in the study patients who needed interpreters; this is an important focus for research into community-based interpreting and health care (see e.g. Bancroft, 2005), but would have added a whole new dimension to our research.

REFERENCES

Atkinson, P. (1999) 'Medical Discourse, Evidentiality, and the Construction of Professional Responsibility', in S. Sarangi and C. Roberts (eds) *Talk, Work and Institutional Order: Discourse in Medical, Mediation and Management Settings*, pp. 75–108. Berlin: Mouton de Gruyter.

Australian Institute of Health and Welfare (2005a) *Australia Hospital Statistics 2003–2004.* Canberra: Australian Institute of Health and Welfare.

Australian Institute of Health and Welfare (2005b) *Health Expenditure Australia 2003–04.* Canberra: Australian Institute of Health and Welfare.

Australian Institute of Health and Welfare (2006) *Australia's Health No.10*. Canberra: Australian Institute of Health and Welfare.

Bancroft, M. (2005) 'The Interpreter's World Tour. An Environmental Scan of Standards of Practice for Interpreters', in The National Council on Interpreting in Health Care (NCIHC), The California Endowment.

Cook, R., Render, M. and Woods, D. (2000) 'Gaps in the Continuity of Care and Progress on Patient Safety', *British Medical Journal* 320(7237): 791–4.

Creswell, J.W. (1998) *Qualitative Inquiry and Research Design: Choosing Among Five Traditions*. Thousand Oaks, CA: SAGE.

Daly, B. (2006) 'A Crowded House: Using an Action Research Approach to Address the Problem of Access Block at a Tertiary Referral Hospital', unpublished Masters by Research thesis, School of Public Health and Community Medicine, The University of NSW, Sydney.

Davis, R., Jacklin, R., Sevdalis, N. and Vincent, C. (2007) 'Patient Involvement in Patient Safety: What Factors Influence Patient Participation and Engagement?', *Health Expectations* 10: 259–67.

Donovan, J.L. and Blake, D.R. (1992) 'Patient Non-compliance: Deviance or Reasoned Decision-making?', *Social Science & Medicine* 34(5): 507–13.

Edwards, A. and Elwyn, G. (2001) 'Understanding Risk and Lessons for Clinical Communication about Treatment Preferences', *Quality in Health Care* 10: 9–13.
Eggins, S. and Slade, D. (1997) *Analysing Casual Conversation.* London: Cassell.
Fairclough, N. (1995) *Critical Discourse Analysis: The Critical Study of Language*. London: Longman.
Gu, Y. (1996) 'Doctor–patient Interaction as Goal-directed Discourse in Chinese Socio-cultural Context', *Journal of Asian Pacific Communication* 7: 156–76.
Gumperz, J.J. (1982) *Discourse Strategies*. London: Cambridge University Press.
Gumperz, J.J. and Hymes, D. (eds) (1972) *Directions in Sociolinguistics*. New York: Holt, Rinehart and Winston.
Halliday, M.A.K. (1994) *An Introduction to Functional Grammar*, 2nd edn. London: Edward Arnold.
Halliday, M.A.K. (1998) 'On the Grammar of Pain', *Functions of Language* 5: 1–32.
Halliday, M.A.K. and Matthiessen, C.M.I.M. (2004) *An Introduction to Functional Grammar*, 3rd edn. London: Edward Arnold.
Halliday, M.A.K. and Matthiessen, C.M.I.M. (2006) *Construing Experience through Meaning: A Language-based Approach to Cognition*. London: Continuum,
Haynes, R., McKibbon, K.A. and Kanani, C. (1996) 'Systematic Review of Randomized Trials of Interventions to Assist Patients to Follow Prescriptions for Medications', *Lancet* 348: 383–6.
Iedema, R. (2005) 'Medicine and Health: Intra- and Inter-professional Communication', in K. Brown (ed.) *Encyclopaedia of Language and Linguistics*, pp. 745–51. Oxford: Elsevier.
Iedema, R. (2006) '(Post-)bureaucratising Medicine: Health Reform and the Reconfiguration of Contemporary Clinical Work', in M. Gotti and F. Salager-Meyer (eds) *Advances in Medical Discourse: Oral and Written Contexts*, pp. 111–31. Bern: Peter Lang.
Iedema, R. (2007a) 'Communicating Hospital Work', in R. Iedema (ed.) *Discourses of Hospital Communication: Tracing Complexities in Contemporary Health Organizations*, pp. 1–17. Basingstoke: Palgrave Macmillan.
Iedema, R. (ed.) (2007b) *Discourses of Hospital Communication: Tracing Complexities in Contemporary Health Organizations*. Basingstoke: Palgrave Macmillan.
Iedema, R. and Jorm, C. (forthcoming) 'Researching Patient Safety and Intervening in Clinical Practice: Interventionist Research as Social Entanglement', in J. Waring, R. Finn and E. Rowley (eds) *Patient Safety: Critical Perspectives*. Ithaca, NY: Cornell University Press.
Iedema, R., Long, D., Carroll, K., Stenglin, M. and Braithwaite, J. (2006) 'Corridor Work: How Liminal Space Becomes a Resource for Handling Complexity in Health Care', in M. Muetzelfeld (ed.) *Proceedings of the Australian-Pacific Researchers in Organization Studies Conference*, pp. 238–47. Melbourne: University of Victoria.
Kemmis, S. (in press) 'What is Professional Practice? Recognizing and Respecting Diversity in Understandings of Practice', in C. Kanes (ed.) 'Developing Professional Practice', Ripple Occasional Paper 1.
Kohn, L.T., Corrigan, J.M. and Donaldson, M.S. (1999) *To Err is Human: Building a Safer Health System*. Washington, DC: National Academy Press.
Leonard, M., Graham, S. and Bonacum, D. (2004) 'The Human Factor: The Critical Importance of Effective Teamwork and Communication in Providing Safe Care', *Quality and Safety in Health Care* 13(5): i85–i90.
Martin, J. (1992) *English Text: System and Structure.* Amsterdam: John Benjamins.
Matthiessen, C., Lukin, A., Butt, D.G., Cleirigh, C. and Nesbitt, C. (2005) 'Welcome to Pizza Hut: A Case Study of Multistratal Analysis', *Australian Review of Applied Linguistics* 19: 123–50.

NHMRC/National Health and Medical Research Council (2004) *Communicating with Patients.* Canberra: Commonwealth of Australia.

NSW Health (2005a) *Patient Safety and Clinical Quality Program: First Report on Incident Management in the NSW Public Health System 2003–2004.* Publication SHPN (QSB) 040262: North Sydney: Dept of Health, NSW.

NSW Health (2005b) *Health Care Complaints Commission Annual Report, 2004–2005.* North Sydney: Dept of Health, NSW.

O'Keefe, M. (2001) 'Should Parents Assess the Interpersonal Skills of Doctors Who Treat their Children: A Literature Review', *Journal of Pediatrics and Child Health* 37(6): 531–8.

Salomon, L., Gasquet, I., Mesbah, M. and Ravaud, P. (1999) 'Construction of a Scale Measuring Inpatients' Opinion of Quality of Care', *International Journal for Quality in Health Care* 11(9): 507–16.

Sarangi, S. and Roberts, C. (1999) 'The Dynamics of Interactional and Institutional Orders', in S. Sarangi and C. Roberts (eds) *Talk, Work and Institutional Order, Discourse in Medical, Mediation and Management Setting*. Berlin: Mouton de Gruyter.

Silverman, D. (2001) *Interpreting Qualitative Data: Methods for Analysing Talk, Text and Interaction*. London: SAGE.

Sitzia, J. and Wood, N. (1997) 'Patient Satisfaction: A Review of Issues and Concepts', *Social Science & Medicine* 45(12): 1829–44.

Stewart, M. (2001) 'Towards a Global Definition of Patient Centred Care', *British Medical Journal* 322: 442–5.

Sun, B.C., Adams, J., Orav, E., Rucker, D.W., Brennan, T.A. and Burstin, H.R. (2000) 'Determinants of Patient Satisfaction and Willingness to Return with Emergency Care', *Annals of Emergency Medicine* 35: 426–34.

Tannen, D. (1984) *Conversational Style.* Norwood, NJ: Ablex Press.

Taylor, D.M., Wolfe, R. and Cameron, P.A. (2002) 'Complaints from ED Patients Largely Result from Treatment and Communication Problem', *Emergency Medicine Australasia* 14(1): 43–9.

Weick, K.E. (1995) *Sensemaking in Organizations*. London: SAGE.

Wodak, R. (2006) 'Medical Discourse: Doctor–Patient Communication', in K. Brown (ed.) *Encyclopaedia of Language and Linguistics*, pp. 745–51. Oxford: Elsevier.

Zink, B.J. (2006) *Anyone, Anything, Anytime – A History of Emergency Medicine*. London: Elsevier.

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