Journal of Language and Social Psychology OnlineFirst, published on January 30, 2009 as doi:10.1177/0261927X08330612

Journal of Language and Social Psychology
Volume XX Number X
Month XXXX xx-xx
© 2009 Sage Publications
10.1177/0261927X08330612
http://jls.sagepub.com
hosted at
http://online.sagepub.com

Communication in Medical Records

Intergroup Language and Patient Care

David G. Hewett
Bernadette M. Watson
Cindy Gallois
Michael Ward
Barbara A. Leggett
University of Queensland

Communication failures in the complex environment of hospital care affect the quality of care and occurrence of inadvertent harm. This study investigated doctors' written communication using a sample of medical records, specifically doctors' progress notes, and the frameworks of social identity and communication accommodation theories. These records include standardized and stylized language, and are intended to record assessment and treatment of patients according to known guidelines for practice. An interpretive analysis of the language and discourse in these records revealed that doctors used medical record entries both to express their specialty identity and to negotiate intergroup conflict. Nonaccommodation and interspecialty conflict sometimes took precedence over facilitation of patient treatment and management. Thus, intergroup communication in this context can constitute a serious threat to the quality of patient care.

Keywords: *intergroup relations; communication accommodation theory; medical records; health; patient safety*

The quality of health care is known to vary, yet interventions to improve health care quality are hampered by the complexity of the health system (Institute of Medicine, 2001; Plsek & Greenhalgh, 2001). Hospitals, as complex adaptive systems, contain multiple interdependent subsystems, and coordination between subsystems is achieved predominantly through informal networking and negotiation (Strauss, Schatzman, Ehrlich, Bucher, & Sabshin, 1963; Van Cott, 1994). Communication failures within this environment affect the quality of patient care and the occurrence

Authors' Note: This research was supported by a medical postgraduate scholarship from the Australian National Health and Medical Research Council to David Hewett (ID351641). The authors wish to thank the editors and anonymous reviewers for their input and support. Please address correspondence to David Hewett, School of Medicine, the University of Queensland, Queensland Health Skills Development Centre, P.O. Box 470, Herston QLD, Australia 4029; e-mail: d.hewett@uq.edu.au.

Downloaded from jls.sagepub.com at PENNSYLVANIA STATE UNIV on September 16, 2016

of inadvertent patient harm (Sutcliffe, Lewton, & Rosenthal, 2004; Wilson, Harrison, Gibberd, & Hamilton, 1999). There is therefore a need to understand the communicative dynamics within hospitals and their social influences.

We report findings from a study of doctors' written communication in a university teaching hospital, and its subsequent impact on the quality of care. Our work examines an infrequently studied form of interprofessional health communication—communication between doctors during the hospital admissions of patients requiring care from multiple separate specialist teams. This approach to care, with specialist input that may be sequential or simultaneous, has some features in common but many differences from hospital teams such as those in the operating theatre and intensive care unit (Lingard, Espin, Evans, & Hawryluck, 2004; Poole & Real, 2003). Such multispecialty care is increasingly prevalent in large hospitals, both as a result of increasing medical specialization and the complexity of health care required for patients with multiple comorbidities.

The clinical context for our inquiry was the care of patients with upper gastrointestinal bleeding (UGIB). UGIB is an example of an acute, often life-threatening, medical condition that requires collaboration and coordination across specialty departments. The smooth exchange of information between groups is vital to the continuity and quality of patient care. However, there is little research that examines the communication process between these groups. We address this gap and employ two theoretical frameworks to understand the communication dynamics.

We propose that, like other contemporary organizations, hospitals are intergroup contexts, where power, control, status, and competition are relevant (Jones, Watson, Gardner, & Gallois, 2004). Our approach is sensitive to the social dynamics and complexity in large hospitals, with a focus on the group rather than the individual as the unit of analysis. The underlying theoretical premise for our inquiry is that communication between doctors is an intergroup process (see Hewett, Watson, Gallois, Ward, & Leggett, in press).

Social Identity Theory (SIT)

We invoke SIT to explain how individuals respond to salient group membership in ways that affect their interpersonal communication behavior. SIT proposes that individuals define themselves according to salient group memberships (ingroups), and seek to maximize positive group distinctiveness by comparing themselves favorably to outgroups (Tajfel, 1978; Tajfel & Turner, 1986). Although social identity has been studied previously in hospital contexts, notably nursing (Oaker & Brown, 1986; Skevington, 1980, 1981) and during organizational change (Callan et al., 2007), SIT has only recently been applied to the study of intergroup relations between hospital doctors.

Downloaded from jls.sagepub.com at PENNSYLVANIA STATE UNIV on September 16, 2016

Support for the relevance of SIT to interspecialty interaction comes from related work on interprofessional team communication. This research has focused on confined high-pressure clinical environments such as the operating room and intensive care unit rather than distributed models of care like UGIB. Clinical work within hospitals has been depicted as a process of negotiation and bargaining (Hawryluck, Espin, Garwood, Evans, & Lingard, 2002; Lingard et al., 2004; Strauss et al., 1963), in which conflict between teams of doctors is driven by sociocultural factors and the adverse impact of professional cultures and subcultures (Degeling, Kennedy, & Hill, 2001; Hall, 2005; Lingard, Reznick, DeVito, & Espin, 2002). Specifically, professional "tribal" affiliations combine with perceived inequalities in status, gender, economics, and politics to catalyze communicative tension and error (Bleakley, 2006; Hawryluck et al., 2002; Lingard et al., 2002). The hospital context, then, represents an environment where there are numerous tensions and a clearly defined hierarchical structure. SIT as a theory of intergroup conflict is well placed to explain and predict behaviors in this environment.

Communication Accommodation Theory (CAT)

CAT is an intergroup theory of interpersonal communication (Gallois, Ogay, & Giles, 2005). We use CAT to explain how language is used in intergroup interactions to establish social identities and achieve intergroup comparisons, in terms of interactants' sociolinguistic strategies and behaviors (Hecht, Jackson, & Pitts, 2005). In an interaction, communicative moves are informed by the sociohistorical context and initial orientation of the participants, who are motivated to create optimal sociolinguistic distance and adopt a more accommodative or a nonaccommodative stance (Gallois et al., 2005). Counteraccommodation is a nonaccommodative stance in which divergent and hostile moves are intended to emphasize intergroup differences and sharpen intergroup boundaries.

CAT has been extensively applied to health communication (Street, 2001; Watson & Gallois, 1998, 1999), although not in the context of hospital-based interspecialty interactions or written communication. CAT has been used to analyze written experiences and recollections of intergroup encounters (Gardner & Jones, 1999; Watson & Gallois, 1999; Williams & Giles, 1996); we apply a CAT framework to an exploration of written medical records as intergroup communication.

Medical Records

We were primarily concerned with the communicative activities of doctors through hospital medical records (patient charts): The permanent record used to document clinical encounters, whose primary function is to support direct patient care by providing a medium in which patient-related data and treatment decisions are recorded. In a

Downloaded from jls.sagepub.com at PENNSYLVANIA STATE UNIV on September 16, 2016

teaching hospital, clinical documentation is primarily the responsibility of the resident medical staff (junior doctors undertaking specialist training). Residents record "the core narrative of the patient's medical care" (Hobbs, 2003, p. 454) in a free-text handwritten format (often called "progress notes"); they write on behalf of senior doctors.

The sociological literature emphasizes the constitutive role that written medical records have in the production of medical knowledge and work (Atkinson, 1995; Berg, 1996; Hobbs, 2003; Rees, 1981). By recording the process by which information is obtained, evaluated, and analyzed during the care of a patient (Hobbs, 2003), the record forms an integral part of transforming a patient's problem into a manageable one, and is therefore a window through which to assess how thinking is accomplished in practice (Berg, 1996). Additionally, learning to reproduce medical knowledge through the charting of progress notes ("the write-up") is an important factor in the professional socialization of junior medical staff (Atkinson, 1995; Hobbs, 2004).

The form and syntax used by doctors in the medical record have been described elsewhere (Hobbs, 2004, 2007; Hunter, 1991; Pettinari, 1988). Typically, residents' notes follow a standard format, termed the "SOAP method," in which information is organized and recorded in four broad categories labeled subjective, objective, assessment, and plan (Weed, 1971). One of the characteristic features of physicians' medical records is the use of abbreviations and symbols, generating a dense code that "renders medical records cryptic and incomprehensible to the uninitiated" (Hobbs, 2004, p. 1586).

The tone of medical writing is "cool and objective" (Hunter, 1991, p. 90); the author is removed from the narrative through extensive use of passive voice (Anspach, 1988, referring to medical case presentations, calls this "omission of the agent"). Hunter (1991) depicts the record as devoid of human or personal elements—a minimalist account, characterized by brevity and bare physical and medical facts. These attributes describe a chart with a distinct and highly restricted register (Atkinson, 1995), which, as Hunter describes, is "formidably uncommunicative."

The medical record is clearly important in facilitating information transfer between treating doctors (Hobbs, 2002; Pettinari, 1988), particularly when specialist involvement for a single patient is distributed in time and location, yet there has been little exploration of the role of charts in communication between doctors (but see Hobbs, 2007). Hunter (1991) discusses the occurrence of chart wars when doctors disagree in accounts of a patient's story and clinical management. She argues that although professional regulation has minimized the recording of such conflict, resolution usually occurs through status differentials in work and responsibility, which favor the views of consulting specialists over those of attending physicians and residents. Furthermore, she argues that given the impenetrable nature of written medical discourse, "not everyone is capable of reading a chart or of recognising its representational power," (p. 87) and the medical record must be deciphered by readers who are familiar with the code and "the cultural expectations that inhere in the situation it delineates" (p. 91).

Downloaded from jls.sagepub.com at PENNSYLVANIA STATE UNIV on September 16, 2016

The Present Study

These researchers' observations and those in our previous work (Hewett et al., in press) suggest a need for analysis of medical writing from an intergroup perspective. We examined hospital doctors' use of medical records to express their identity and achieve intergroup comparisons in a context where place in the medical hierarchy, power, and influence were highly salient. An intergroup approach allows a systematic analysis of personal and social identity and the conditions under which social identity is salient and intergroup rivalry is likely to occur. Specifically, we posed the following research questions (RQ):

RQ 1. How are specialty identity and intergroup relations manifest in the written communication of doctors?
RQ 2. How do doctors use their written communication in medical records to emphasize intergroup differences? How is the intergroup context reflected through (non) accommodative strategies and behaviors?
RQ 3. How do the intergroup dynamics reflected in written communication affect the quality of patient care?

Method

This study is part of a larger project examining the relationship between interspecialty communication and the quality of patient care. Data came from an analysis of inpatient medical records, but results also draw on findings from in-depth interviews of doctors at the same hospital about their experiences of interspecialty interactions concerning patients with UGIB (see Hewett et al., in press, for further details). The Human Research Ethics Committees of the University of Queensland and study hospital granted ethics approval.

Research Setting

We conducted this research in a 900 bed metropolitan hospital. A focus on UGIB was chosen as representing a common high-risk medical condition, for which patients require rapid coordinated input from a range of hospital specialists. Treatment begins when patients present to the Department of Emergency Medicine (DEM), where initial assessment, stabilization, and fluid resuscitation is conducted. After hospital admission, patients require urgent upper gastrointestinal endoscopy (internal examination of the esophagus, stomach, and duodenum), which is performed under anesthetic in the operating theatre or Gastroenterology Department (best practice guidelines state within 24 hours: Barkun, Bardou, & Marshall, 2003). In hospital, patients are typically cared for by doctors from the Departments of Internal Medicine (internists) and gastroenterology (gastroenterologists), with further input as required from doctors in Intensive Care Medicine, Anesthesiology, and General Surgery.

Downloaded from jls.sagepub.com at PENNSYLVANIA STATE UNIV on September 16, 2016

In a teaching hospital, patient care is primarily undertaken by doctors in training; in the Australian postgraduate context, a resident (medical officer, RMO) refers to a prevocational doctor yet to commence specialty training (postgraduate years 1 to 3), and a registrar is a doctor undertaking specialist training (postgraduate years 3 to 8). Fully qualified hospital specialists (termed "consultants" or "attendings") have overall responsibility for patient care and supervision of junior staff.

Medical Records and Procedure

We obtained the medical records of all patients presenting with suspected UGIB from the study hospital over a 12-month period during 2004 and 2005. Patients were identified from medical records and endoscopy databases using administrative coding of symptoms of UGIB and associated diagnoses. A total of 227 medical records were obtained, photocopied, and securely stored. Health professionals wrote their clinical findings and recommendations by hand in the medical record on blank pages entitled "progress notes." The hospital required all health professionals to document care for each patient visit.

Data Analysis

We analyzed all handwritten physician entries in the progress notes of each patient's admission with UGIB, using qualitative methods. We initially explored the records in an inductive iterative fashion. Each entry was read multiple times and coded for emergent themes. We focused on entries documenting interactions between doctors from the various specialty departments, informed by our interview findings in which responsibility for informed consent, patient admission policies, and workload pressures were sources of intergroup tension. The first author's clinical experience also informed the analysis, particularly of the quality of patient care. We performed an interpretative analysis, in which we looked for examples of intergroup dynamics in the records and interpreted them using the frameworks of SIT and CAT.

Results

Overview

Doctors' entries typically contained a high proportion of medical jargon and abbreviations. Doctors often used diagrammatic representations of body parts and organs to record findings on physical examination. Despite the brevity of construction, medical entries were usually widely spaced on the page with considerable room around the writing. Residents and registrars used a highly structured format for their medical entries, consistent with SOAP (Weed, 1971). The initial entry after the patient's admission to

Downloaded from jls.sagepub.com at PENNSYLVANIA STATE UNIV on September 16, 2016

hospital ("the admission") was typically quite extensive, comprising several pages documenting the patient's presenting problem, past history, physical examination, overall assessment, and plan. Subsequent entries were briefer, and while still using the SOAP format, focused on changes in the patient's condition and management decisions. In the following extract, a gastroenterology registrar uses SOAP to summarize the presentation of a 48-year-old female patient with UGIB from severe liver disease[1]:

1	26/10 1310 Gastro Reg	
2	48F with UGIB. Known CLD 2º EtOH / HCV.	(S = subjective, summarizes patient history)
3	Hypotensive on arrival. SBP 85. Hb 80. INR 2.4.	(O = objective, gives examination findings and test results)
4	A. Likely variceal bleed.	(A = assessment and diagnosis)
5	P. Octreotide commenced. For endoscopy ASAP.	(P = management plan)
6		(Signature)

Many junior doctor entries focused on operational matters related to the organization of the patient's care and hospital processes. Management plans tended to be concerned with micro-level day-to-day decisions about practical care issues. Senior doctors usually did not write in the medical record themselves, instead relying on junior staff from their department to write on their behalf. When present, consultant entries were less operational and contained a higher-level synthesis of the patient's problems and overall condition, management, and prognosis. It was unusual for senior doctors to explicitly use the SOAP format to structure their entries.

We now report findings from our analysis of the medical records. The first author made multiple readings of the texts to explore the use of intergroup communication. We found that, despite the operational and highly constrained nature of written medical language, doctors used language to express social identity and negotiate intergroup distinctions.

Specialty Identity (RQ 1)

The salience of specialty identity to hospital doctors was evident throughout the medical record. Doctors identified themselves in their handwritten entries as members of individual specialty departments within the hospital, and typically recorded the name of their specialty and position within that department. We found this formal identification consistently in doctors' entries, usually featured prominently at the beginning of their note, adjacent to the time and date (e.g., "Gastro Reg" in the first line of the example above). Other specialty labels and positions used included the following: "ICU SR" (ICU senior registrar) or "Surg Reg" (surgical registrar). For

Downloaded from jls.sagepub.com at PENNSYLVANIA STATE UNIV on September 16, 2016

some specialties with multiple "units" or teams of doctors within that specialty, the unit membership was recorded in addition to or instead of the general specialty (e.g., "Liver Reg" [hepatology registrar within gastroenterology], "Med 2B RMO" [RMO for Internal Medicine Unit 2B]). To emphasize the lack of interpersonal salience in the records, while specialty identification was almost universal, we found that doctors often did not write their name (as in the previous example).

Intergroup Relations (RQ 1)

We examined the charts to explore how doctors used written documentation of patient care to interact with other doctors in the hospital. When writing about other doctors in the medical record, doctors often used specialty labels rather than the names of their colleagues. In one example, an emergency medicine resident documents the transfer of the care of a patient from the emergency department to internal medicine: "Patient accepted by 2B Med Reg for admission." We also found numerous instances where doctors wrote the collective name of the department instead of the name or even position of a particular doctor within that department. For example: "ICU contacted regarding admission post urgent endoscopy," "R/V [review] by Gastro today," and "Rang Gastro to check time of endoscopy."

We found a lack of interpersonal salience in doctors' written records of their interactions or conversations with other doctors, which were typically across specialty departments, regarding their contribution to a patient's care. Doctors usually recorded the position and specialty unit of the other doctor, and less commonly wrote his or her name. In the following extract, an internal medicine resident documents a telephone call with the gastroenterology registrar regarding the timing of an endoscopy ("scope"): "D/W (discussed with) Gastro Reg—scope this evening." If the name of the doctor was recorded, this was usually accompanied by specialty label; for example, in a discussion between an emergency medicine resident and a medical registrar (Dr X) about the admission of a patient to Internal Medicine Unit 2A: "D/W Med Reg for Med 2A (Dr [X]) → transfer to ward." Later, we revisit the high intergroup and low interpersonal salience reflected in these entries.

Intergroup Conflict (RQ 1)

In a related study, doctors described significant tension between specialty groups associated with certain hospital processes, such as admissions policies and informed consent (Hewett et al., in press). Doctors conceptualized patient care using capitalist terms such as "ownership" to delineate responsibilities for patient care, and described conflict in negotiation over contested responsibility. Relatedly, we found that doctors used the medical record to document the process of interspecialty negotiation of responsibility for patient admission. There were multiple examples of doctors making explicit statements about which specialty unit had admitted the patient, to clarify

Downloaded from jls.sagepub.com at PENNSYLVANIA STATE UNIV on September 16, 2016

responsibilities for patient care, and which specialty unit had ownership. For example, an internal medicine resident declares that Internal Medicine Unit 2C has admitted the patient:

1 15/11/04 1500 Med 2 RMO
2 Patient is definitely Med 2C, regardless of consultant on-call.

Also of interest is the statement that the patient "is" Med 2C (cf. "under the care of"), suggesting that this resident defines both self and patient by the specialty membership of Medical Unit 2C.

The next extract by a gastroenterology resident (RMO) demonstrates this ownership tension. It immediately follows a nursing entry about a patient who had arrived from the ICU. The nurse indicates that he or she contacted the gastroenterology resident regarding the patient's hemoglobin level and whether a blood transfusion is required. The resident has then written the following:

1 27/6/05 RMO Gastro
2 Patient is not Gastro, but Med 6B (have D/W registrar)
3 (Signature)

The gastroenterology resident's entry prioritizes clarification of patient ownership on clinical involvement, by stating which specialty unit is responsible for this patient's care rather than assisting with the nurse's clinical concern about whether to commence a blood transfusion.

We also found examples where interspecialty negotiations on patient ownership occurred quite explicitly through the medical record itself, in addition to or in place of verbal discussions between specialists. This was not a common finding; more subtle examples of intergroup negotiations were typical of the intergroup relations revealed in the charts. In the next extract, a gastroenterology registrar writes about the transfer of care for Mr. Fleming (pseudonym), who is to be discharged from the ICU to an Internal Medicine ward. The gastroenterology registrar (GE Reg) records the outcome of a telephone conversation with an Internal Medicine physician (Dr Y), who he or she expected would take over the care of Mr. Fleming when he arrived on the ward. Dr Y declines to accept Mr. Fleming to his or her care, citing an internal medicine policy where the patient should be referred to the unit "on take" (on-duty) on that day:

1 21/5/05 1225 GE Reg
2 Have discussed with Dr [Y] as the patient was not
3 discharged from ICU yesterday as planned (due to
4 difficulty with extubation). He is not prepared to
5 accept his care. When he is discharged, Mr. Fleming
6 should be referred to the unit on take for that day
7 (internal medicine policy).
8 (Signature)

Downloaded from jls.sagepub.com at PENNSYLVANIA STATE UNIV on September 16, 2016

This extract illustrates the use of power and threat to negotiate an intergroup encounter. The internal medicine physician (Dr Y) uses the hospital policy to establish his or her authority in this situation, and defend his or her position regarding who should care for the patient. In response to this statement of power, the GE Reg, despite being of lower status, deliberately documents this position in the medical record. Although the GE Reg is of lower status than Dr Y, he or she is a representative of an equally high-status specialty group. This entry by the GE Reg may reflect the membership of his or her specialty group and the implicit disapproval by group specialty rather than the status of a registrar commenting about a senior physician. These observations are supported by findings in the interview study, in which doctors expressed frustration at the specialty-specific use of medical records. For example, one intensive care specialist stated, "What we need is a standardized physiologically based note, not a 'this is my territory' note." Although it is important not to overinterpret the entry above, other results corroborate the view that there is power play between specialties.

Our findings highlight the pervasive presence of intergroup tension within this hospital, stemming from ambiguities on patient ownership and responsibility for care. They highlight the potential for intergroup conflict to interfere with patient care. The medical record is a vehicle for doctors to express their specialty identity in statements that they will not compromise their specialty by assisting in the care of a patient for whom they do not feel responsible.

Intergroup Communication (RQ 2)

Accommodation. We found occasional examples of an accommodative stance in the written communication between doctors from different specialty units. This appeared more frequently between junior doctors (of similar grade and status), or when junior doctors were seeking the assistance of their senior colleagues in aspects of patient care. In the following extract, a resident on-call after-hours (ward call RMO) is called by ward nursing staff to insert an intravenous cannula (iv). As shown in the following entry, after multiple attempts by emergency medicine (DEM) and nursing staff, and two failures by this doctor, he or she sought the assistance of a senior colleague, Dr Z (an internal medicine registrar, also on-duty after hours), who agreed to help as the anesthesiology registrar (Anaes Reg) was unavailable. The language chosen by the resident is significant—"will kindly see [patient]"—as it suggests the adoption of an ingratiating stance, to show appreciation and deference for the experience and skills of the more senior colleague.

1 - 30/1/05 Ward call (RMO)
2 - called to site iv
3 - DEM and nursing staff have failed
4 - I failed on 2 attempts
5 - requires iv for blood transfusion

Downloaded from jls.sagepub.com at PENNSYLVANIA STATE UNIV on September 16, 2016

6 - D/W Dr [Z]. Anaes reg unable to come, . . .
- Dr [Z] will kindly see pt to site iv
7 (Signature)

The interface between specialty units was often the site of significant intergroup conflict, where intergroup behavior took precedence on patient care. Our interview data (Hewett et al., in press) suggest that the interface between DEM and inpatient specialties was particularly tense. An emergency medicine registrar described how disputes arose over which specialties would accept the care of patients in hospital. This interview provided clear descriptions of the process of intergroup negotiation as a "tug of war," in which patient care was not perceived as a priority of other specialty groups. Such "tugs of war" were rarely documented explicitly in the medical records, but were more subtly evident during documentation of intergroup negotiations. We found that doctors accommodated toward specialty group members when requiring their involvement in the patient care; for example, when care was being transferred from one specialty unit to another. In the following extract, an emergency medicine registrar documents a series of interactions in which ongoing care of the patient was negotiated. There is a series of discussions with various specialty units recorded, and it is not until the fourth attempt that he or she was able to find a specialty team who agreed to accept the patient.[2]

1 1820 D/W Old GM—can we D/W Med 3B Reg
2 D/W HDU—reluctant 2º MRSA, will D/W ICU boss
3 D/W Gastro—scope currently—likely Mallory-Weiss tear
4 1845 D/W Med 3B Reg—will see pt, many thanks

In a deliberate show of appreciation for assistance, the emergency registrar accommodates to the registrar (Med 3B) who accepted the patient.

Nonaccommodation. We found many more examples of nonaccommodation in the medical records, where doctors used written communication to differentiate themselves according to their specialty group memberships. In the following extract, a surgical registrar (Surg Reg) writes following notification that the family of a patient with suspected UGIB was unhappy that the patient had been waiting for several days for an upper endoscopy (OGD, oesophagogastroduodenoscopy) to be performed.

1 11/9/04 SURG REG
2 Still awaiting endoscopy. I understand wife
3 is not happy re delay—gastro reg was informed
4 on Monday that pt required OGD and
5 we are still waiting—if she (wife) has further
6 queries they should be directed to the gastro reg.
7 (Signature)

Downloaded from jls.sagepub.com at PENNSYLVANIA STATE UNIV on September 16, 2016

The surgical registrar deliberately explains the responsibilities for patient care in this situation. He or she takes an underaccommodative stance and suggests that there is little that he or she can do. This registrar overtly deflects the responsibility for organizing an endoscopy (and any further inquiries) onto the gastroenterology registrar. This stance implicates the gastroenterology team as the cause for the delay, in contradistinction from the surgical team (who "are still waiting"). Such a stance is deliberately unhelpful and potentially inflammatory for the patient and his family, who would not understand these intergroup dynamics and the context for the delay. Indeed, the patient's family (wife) seems to be unwittingly drawn into the intergroup conflict. An alternative accommodative stance would have led to the use of strategies and behaviors to minimize tension, perhaps undertaking to investigate the cause of the delay, confirm that an endoscopy booking had been made, or at a minimum, agree to personally contact the gastroenterology team rather than expect the patient's family to do this.

In the next extract, a gastroenterology registrar documents a difference of views on the appropriate management of a patient with UGIB. The patient (Mr. Prince, pseudonym) had an upper endoscopy at the time of his admission to hospital that showed a very large duodenal ulcer containing an exposed blood vessel and appearing to have eroded through the intestinal wall. Mr. Prince initially received endoscopic (nonsurgical) therapy, although he continued to experience symptoms of bleeding, and the general surgical consultant (Dr Z) called the gastroenterology registrar (Gastro Reg) to arrange repeat upper endoscopy, before considering surgical treatment.

1 3 Oct Gastro Reg
2 Haemodynamically unstable recurrent GI bleed.
3 Probably has had unrecognized bleeding for last day.
4 Dr [Y] feels that immediate surgery
5 is indicated → MASSIVE ulcer? eroding into pancreas
6 with large visible vessel. Dr [Z] feels endoscopy
7 should be performed first. It is our opinion that
8 urgent surgery and ICU support is required.
9 This has been discussed with the surgeons.
10 NO FURTHER ENDOSCOPIC TREATMENT IS POSSIBLE.
11 (Signature)

As the entry demonstrates, the gastroenterology doctors believed that further endoscopic therapy would be futile, and that surgery was now required. In documenting this view, the gastroenterology registrar underaccommodates to distinguish the views of the gastroenterologists from those of their surgical colleagues. Specifically, the registrar communicates his or her position in the written record using evocative language (e.g., "immediate," "massive") with capitalization for further emphasis. The registrar cites the views of his or her consultant (Dr Y), and uses the collective "our"

Downloaded from jls.sagepub.com at PENNSYLVANIA STATE UNIV on September 16, 2016

to affirm their opinion. Having earlier referred to the specific surgeon by name, the registrar (9) then emphasizes the intergroup dynamic by depersonalizing the description of the interspecialty interaction in which this opinion was communicated, in the use of the phrase, "the surgeons." The final statement serves as a powerful underaccommodative affirmation of the intergroup difference of opinion.

There is no written response from the surgeon subsequent to this entry. Mr. Prince did not undergo immediate surgery, but was admitted to the ICU for monitoring overnight, going to the operating theatre the following day for surgery. The only subsequent entry from the surgeon is the written record of the operation that he or she performed. This lack of communicative response represents significant underaccommodation from the surgical doctors, who remained determined to maintain their stance in the face of profound disagreement. Rather than acknowledge in writing the need for surgical intervention, they simply proceeded to surgery without comment. These examples again highlight the implications of these dynamics for patient care.

Impact on Quality of Care (RQ 3)

Our related work suggests that intergroup communication between hospital doctors, particularly those from different specialty units, is the norm. Nonaccommodative communication, particularly arising from contested responsibilities for patient care, generates a cycle of ineffective communication and intergroup misunderstandings which interactants use to negotiate group identity rather than resolve to facilitate patient care. We now explore how written communication can affect the quality of care provided for patients with UGIB.

In circumstances of intergroup conflict, nonaccommodative intergroup communication like that presented above becomes a tool for the expression of specialty identity. In the extract by the surgical registrar, whose patient was "still waiting" for an endoscopy, this form of intergroup communication emphasizes intergroup differences, but does little to facilitate timely performance of endoscopy or to alleviate the concerns of the patient's family. Below, the impact of escalating intergroup tension and communication on patient care is illustrated in a series of entries in the medical record of an elderly patient, Mrs. Jensen (pseudonym). Mrs. Jensen has end-stage kidney failure, and was admitted to the care of the Internal Medicine Department on 8th June with recurrent episodes of severe UGIB. This had become a challenging clinical problem, as it was Mrs. Jensen's fourth admission within 3 weeks. Previous investigations by the Gastroenterology Department had not revealed a cause for her bleeding. Internal medicine physicians (REG7B and Dr B) were primarily responsible for her care, with specialty input by doctors from gastroenterology (Drs C and D) and nephrology (Dr A). The next extracts appear in the chart on successive days, highlighting the tension between specialty groups on contested responsibilities and the use of intergroup communication in negotiating this conflict.

Downloaded from jls.sagepub.com at PENNSYLVANIA STATE UNIV on September 16, 2016

1 9/6/05 DR [A] (RENAL)
2 –Unfortunately patient has been admitted for the? fourth
3 time with upper GI bleed and reason for bleeding
4 still obscure.
5 –We would very much appreciate GI team to clarify
6 plan of management.
7 (Signature)
8 10/6/05 REG7B
9 Readmitted with GI bleed Hb 73.
10 Dr [B] requests that Gastroenterology
11 take over Mrs. Jensen's care as there has
12 only been requirement for Gastro input
13 on last admissions.
14 D/W Dr [C] who will kindly check with
15 Dr [D].
16 (Signature)

In the first entry (1 to 7), the renal specialist takes an accommodative stance in communicating with the gastroenterology specialists ("GI team"), and politely requests assistance in managing Mrs. Jensen's challenging problem. The following day (8 to 16), the internal medicine team's stance becomes less accommodative. In a second attempt to convince the gastroenterology team to take responsibility for further decisions in Mrs. Jensen's management, there is a quite explicit request (from the consultant, Dr B) for Mrs. Jensen's care to be transferred to Gastroenterology Department ("take over"). The internal medicine registrar (REG7B), when contacting the gastroenterology registrar, still accommodates ("will kindly"), and indicates that the gastroenterology registrar (Dr C) has agreed to ask his or her consultant (Dr D).

17 11/6/05 REG7B
18 Spoke to Gastro Reg late today 5.20 p.m.
19 Happy for Mrs. Jensen to go home if stopped
20 bleeding. Want enteroscopy organised for
21 next week → will F/U in O/P.
22 Too late to organise today.
23 Pt anxious about possibility of going home.
24 Plan: Further clarify plan with Gastro.
25 (Signature)

Despite this request, on 11th June, there is still no entry in the medical record from the gastroenterology doctors, only an entry from the internal medicine registrar (REG7B) which states that he or she had contacted the gastroenterology registrar ("Gastro Reg," Dr C), who was happy for Mrs. Jensen to be discharged (17 to 25) to return the following week for further investigation (enteroscopy: an internal examination of the small bowel; F/U: follow-up; O/P: outpatients clinic). Although there is no direct response from the gastroenterology registrar to provide a reason for this

Downloaded from jls.sagepub.com at PENNSYLVANIA STATE UNIV on September 16, 2016

approach, the response that the patient can "go home" does little to contribute to Mrs. Jensen's care, and allows the gastroenterology team to retain control on her care without taking ownership for it with her as an inpatient. It introduces yet another delay to further investigation of the recurrent bleeding—a concern that was actually recorded in the notes by REG7B, who states that Mrs. Jensen was anxious about going home. Suggesting that this arrangement was not satisfactory, REG7B then states that he or she will clarify the plans with gastro.

26 12/6/05 REG7B
27 Dr B has discussed care with Dr C
28 (Gastro Reg). Mrs. Jensen can go home.
29 Plan (as per Dr C)
30 –Discharge today
31 –if bleeds, represent to DEM and Gastro Reg
32 on call is to be notified immediately
33 and to be admitted by GASTRO as she
34 has bleeding source difficult to identify.
35 Letter written to DEM re admit Gastro if GI bleed,
36 notify Gastro Reg immediately.
37 (Signature)

In fact, the following day, REG7B escalated the issue to his or her consultant (Dr B), who intervened and called the gastroenterology registrar himself or herself. This is documented in the final entry (26 to 37), where on lines 27 and 28, there is a statement that the internal medicine consultant (Dr B) had discussed the situation with the gastroenterology registrar (Dr C), although the outcome did not change and Mrs. Jensen was sent home. Of interest are the subsequent statements regarding the process to follow if Mrs. Jensen presented again to the hospital with further bleeding. The stance is now clearly nonaccommodative, and declaratory statements are then employed by REG7B to state which department would be responsible for Mrs. Jensen's care next time, including the quite unusual step of writing a letter to the DEM to confirm this.

These extracts demonstrate the impact of intergroup conflict on patient care and the use of written intergroup communication to negotiate this conflict. In this example, delays in patient care arose from intergroup posturing and rivalry about patient ownership. Mrs. Jensen remained in hospital for 4 days without gastroenterology input or further investigations, and was then discharged to return for a specialized examination the following week.

In fact, Mrs. Jensen re-presented to the hospital the next day with a catastrophic UGIB that required emergency surgery, and she died shortly afterward in the ICU. This outcome may have been inevitable given Mrs. Jensen's end-stage kidney disease, although earlier coordinated and uncontested interspecialty collaboration would certainly have facilitated earlier investigation and at least provided information and some reassurance for Mrs. Jensen and her family. This sequence shows the consequences of ambiguous and contested ownership of this patient, and the capacity of the medical

Downloaded from jls.sagepub.com at PENNSYLVANIA STATE UNIV on September 16, 2016

record to afford nonaccommodative intergroup communication. The staff of the gastroenterology unit did not feel required for several days to respond in writing to the request for assistance. Their eventual response, conveyed indirectly through the internal medicine registrar, advocated a minimalist management plan without giving reasons, in spite of the concerns of internal medicine doctors. Even if their opinion was correct (and it may have been), the medical record indicates that internal medicine staff were expected by other specialists to deal with this difficult problem on their own. Gastroenterology staff underaccommodated by not responding.

Discussion

Medical records comprise a tradition of stylized codified communication that is consistent across health systems and countries. Nevertheless, embedded in a language of obscure symbols, diagrams, and medical jargon is an intergroup dynamic that demonstrates pervasive intergroup tension. Despite their highly constrained form and apparent objectivity, our findings show that doctors use their written entries to express their identity and negotiate intergroup conflict. In recording a codified and highly structured narrative of the patients' diagnostic evaluation and treatment, doctors inject a subtle and ubiquitous intergroup flavor to their language, which during times of interspecialty tension becomes underaccommodative or hostile and is used strategically to achieve intergroup dominance.

We found that doctors consistently identified themselves as members of specialty groups, stating their specialty membership and position prominently in their medical record entries, and they interacted as members of specialty groups. These memberships were salient enough that collective group labels or positions were often used in place of doctors' names when documenting these discussions (e.g., Gastro notified). These observations are consistent with those of our previous work, where doctors spoke of themselves and their specialty colleagues in intergroup terms (Hewett et al., in press). Certainly, interactants in many other organizational contexts refer to departments and not to individuals. We argue that this behavior is inherently intergroup. In the current context, we posit that the importance of specialty drives the emphasis on group rather than personal identification. Medical students are not taught to use specialty labels rather than doctors' names. It is a tradition that is embedded in the culture and serves to distinguish health care delivery within the hospital system.

Intergroup communication between hospital doctors is the norm. During routine patient care, doctors take a slightly underaccommodative stance that maintains role boundaries and social distance between specialties. This stance is reflected in language where specialty memberships are salient during routine interspecialty relationships (e.g., "D/W ICU Reg"). Junior doctors, who have lower status, may nevertheless be motivated to accommodate to specialist doctors to secure assistance in patient care. The defined roles of doctors within specialties are particularly

Downloaded from jls.sagepub.com at PENNSYLVANIA STATE UNIV on September 16, 2016

salient in an intergroup climate fostered by a model of patient care where one specialty has overall responsibility for care of a patient (Hewett et al., in press).

Interspecialty conflict leads to the adoption of a more distinctly underaccommodative or even counteraccommodative stance. This stance was reflected in medical record entries through the use of strategies communicating a shift in responsibility for (and blame for delays in) patient care to other specialty groups. Doctors employ nonaccommodative communication to deliberately and provocatively state in written form their dissatisfaction with other specialists' contributions to patient care (e.g., "we are still waiting"), or demands for other specialty groups to be involved in or responsible for patient care ("[patient] to be admitted by GASTRO").

The prevalence of intergroup communication in medical records constitutes a threat to the quality of patient care. In this study, our results show how doctors can employ intergroup communication in a written form to win conflicts. Patient care and satisfaction become secondary concerns. Instead, patient care is used to negotiate the interspecialty dynamic, and patients and their families may inadvertently be drawn into the conflict. Rather than using communication to facilitate and enhance patient care, intergroup rivalry consumes doctors' attention, counteraccommodative intergroup communication becomes a tool for the expression of specialty identity, and the result is compromised quality of care.

Concluding Remarks

Our work in this emerging field is by necessity exploratory and diagnostic. Much more research is needed to understand fully the moderating variables in the hospital context and to develop interventions that improve interspecialty harmony and prevent adverse impacts to patients. At present, most communication interventions in hospitals concentrate on basic communication skills for medical and nursing staff. Although these are important, the findings of this study indicate that lack of communication competence is not the only problem. To be effective, interventions must also focus on the structural aspects of hospitals as organizations, ambiguities in which currently perpetuate intergroup disharmony.

Social identity and communication accommodation theories are very relevant in explaining current critical issues in the hospital system. Specialty identity is important in promoting expertise and in socializing doctors in training to the demands of their profession. Thus, it is important that this identity is employed in ways that promote cooperation in patient care rather than intergroup rivalry and conflict. SIT predicts that intergroup conflict is significantly exacerbated under conditions of scarce resources and structural ambiguity; our findings highlight ambiguities on patient ownership and responsibility for care. The model of unispecialty inpatient ownership is a significant environmental variable precipitating conflict. Furthermore, management problems such as bed shortages lead to competition, setting specialty against specialty. Future research should lead to evidence-based interventions that promote cooperative

Downloaded from jls.sagepub.com at PENNSYLVANIA STATE UNIV on September 16, 2016

behavior between groups and units. To achieve this outcome, interventions must take account of both identity/identification and of key structural variables.

We have described some of the problems that arise in hospitals as intergroup contexts. There are many others, such as impacts on workplace harmony, staff retention, and health professional training. We have found that communication between hospital doctors is inherently intergroup and problematic. Communicative strategies and behaviors that reinforce identity and secure intergroup dominance are pervasive, and patient care may be displaced as the first priority. At the beginning of this article, we stated that hospitals are complex. We suggest that the hospital culture itself is a key area for future investigation.

Notes

1. This entry documents the admission of a 48-year-old female (48F) with upper gastrointestinal bleeding in the context of known chronic liver disease (CLD) secondary (2º) to alcohol (EtOH) and hepatitis C virus (HCV). On arrival in Department of Emergency Medicine, she had a low systolic blood pressure (SBP, hypotensive) and blood count (Hb: hemoglobin) suggesting hemodynamic instability from significant bleeding. A laboratory test of blood clotting was also abnormal (INR: international normalized ratio, normal 0.8 to 1.2), consistent with advanced liver disease. The doctor's assessment was that the patient was likely to be bleeding from esophageal varices (dilated internal veins because of cirrhosis of the liver), and intravenous therapy was commenced (octreotide) and emergent endoscopy planned.

2. This entry records the conversations between an emergency medicine registrar and several different specialty registrars who are each asked to accept the patients care. The first is the after-hours general medicine (Old GM) registrar responsible for "old" GM patients (those admitted previously to a general medicine unit), who asks that the specific registrar for General Medicine (Med) Unit 3B be contacted. The High Dependency Unit (HDU) registrar is then reluctant to accept care, as the patient is a carrier of a resistant bacterium (MRSA, methicillin-resistant *Staphylococcus aureus*). The gastroenterology registrar reports that an upper endoscopy (scope) is not (º) indicated, as the likely cause of the bleeding is a tear in the patient's esophagus (Mallory-Weiss tear). Finally, the registrar for General Medicine Unit 3B agrees to see the patient.

References

Anspach, R. R. (1988). Notes on the sociology of medical discourse: The language of case presentation. *Journal of Health and Social Behavior*, *29*, 357-375.

Atkinson, P. (1995). *Medical talk and medical work: The liturgy of the clinic*. London: Sage.

Barkun, A., Bardou, M., & Marshall, J. K. (2003). Consensus recommendations for managing patients with nonvariceal upper gastrointestinal bleeding. *Annals of Internal Medicine*, *139*, 843-857.

Berg, M. (1996). Practices of reading and writing: The constitutive role of the patient record in medical work. *Sociology of Health and Illness*, *18*, 499-524.

Bleakley, A. (2006). You are who I say you are: The rhetorical construction of identity in the operating theatre. *Journal of Workplace Learning*, *18*, 414-425.

Callan, V. J., Gallois, C., Mayhew, M. G., Grice, T. A., Tluchowska, M., & Boyce, R. (2007). Restructuring the multi-professional organization: Professional identity and adjustment to change in a public hospital. *Journal of Health and Human Services Administration*, *29*, 448-477.

Degeling, P., Kennedy, J., & Hill, M. (2001). Mediating the cultural boundaries between medicine, nursing and management: The central challenge in hospital reform. *Health Services Management Research*, *14*, 36-48.

Downloaded from jls.sagepub.com at PENNSYLVANIA STATE UNIV on September 16, 2016

Gallois, C., Ogay, T., & Giles, H. (2005). Communication accommodation theory: A look back and a look ahead. In W. B. Gudykunst (Ed.), *Theorizing about intercultural communication* (pp. 121-148). Thousand Oaks, CA: Sage.

Gardner, M. J., & Jones, E. (1999). Problematic communication in the workplace: Beliefs of superiors and subordinates. *International Journal of Applied Linguistics*, *9*, 185-203.

Hall, P. (2005). Interprofessional teamwork: Professional cultures as barriers. *Journal of Interprofessional Care*, *19*(S1), 188-196.

Hawryluck, L. A., Espin, S. L., Garwood, K. C., Evans, C. A., & Lingard, L. A. (2002). Pulling together and pushing apart: Tides of tension in the ICU team. *Academic Medicine*, *77*(10 Suppl), S73-76.

Hecht, M. L., Jackson, R. L., & Pitts, M. J. (2005). Culture: Intersections of intergroup and identity theories. In J. Harwood & H. Giles (Eds.), *Intergroup communication: Multiple perspectives* (pp. 21-42). New York: Peter Lang.

Hewett, D. G., Watson, B. M., Gallois, C., Ward, M., & Leggett, B. A. (in press). Intergroup communication between hospital doctors: Implications for quality of patient care. *Social Science & Medicine*.

Hobbs, P. (2002). Islands in a string: The use of background knowledge in an obstetrical resident's notes. *Journal of Sociolinguistics*, *6*, 267-274.

Hobbs, P. (2003). The use of evidentiality in physicians' progress notes. *Discourse Studies*, *5*, 451-478.

Hobbs, P. (2004). The role of progress notes in the professional socialization of medical residents. *Journal of Pragmatics*, *36*, 1579-1607.

Hobbs, P. (2007). The communicative functions of the hospital medical chart. In R. Iedema (Ed.), *The discourse of hospital communication: Tracing complexities in contemporary health care organizations* (pp. 39-66). New York: Palgrave.

Hunter, K. M. (1991). *Doctors' stories: The narrative structure of medical knowledge*. Princeton, NJ: Princeton University Press.

Institute of Medicine. (2001). *Crossing the quality chasm: A new health system for the 21st century*. Washington, DC: National Academy Press.

Jones, E., Watson, B., Gardner, J., & Gallois, C. (2004). Organizational communication: Challenges for the new century. *Journal of Communication*, *54*, 722-750.

Lingard, L., Espin, S., Evans, C., & Hawryluck, L. (2004). The rules of the game: Interprofessional collaboration on the intensive care unit team. *Critical Care*, *8*, R403-408.

Lingard, L., Reznick, R., DeVito, I., & Espin, S. (2002). Forming professional identities on the health care team: Discursive constructions of the "other" in the operating room. *Medical Education*, *36*, 728-734.

Oaker, G., & Brown, R. (1986). Intergroup relations in a hospital setting: A further test of social identity theory. *Human Relations*, *39*, 767-778.

Pettinari, C. J. (1988). *Task, talk, and text in the operating room: A study in medical discourse*. Norwood, NJ: Ablex.

Plsek, P. E., & Greenhalgh, T. (2001). Complexity science: The challenge of complexity in health care. *British Medical Journal*, *323*, 625-628.

Poole, M. S., & Real, K. (2003). Groups and teams in health care: Communication and effectiveness. In T. L. Thompson, A. M. Dorsey, K. Miller, & R. Parrott (Eds.), *Handbook of health communication* (pp. 369-402). Mahwah, NJ: Lawrence Erlbaum.

Rees, C. (1981). Records and hospital routine. In P. Atkinson & C. Heath (Eds.), *Medical work: Realities and routines* (pp. 55-70). Farnborough, UK: Gower.

Skevington, S. M. (1980). Intergroup relations and social change within a nursing context. *British Journal of Social and Clinical Psychology*, *19*, 201-213.

Skevington, S. M. (1981). Intergroup relations and nursing. *European Journal of Social Psychology*, *11*, 43-59.

Strauss, A., Schatzman, L., Ehrlich, D., Bucher, R., & Sabshin, M. (1963). The hospital and its negotiated order. In E. Freidson (Ed.), *The hospital in modern society* (pp. 147-169). New York: Free Press of Glencoe.

Downloaded from jls.sagepub.com at PENNSYLVANIA STATE UNIV on September 16, 2016

Street, R. L. (2001). Active patients as powerful communicators. In W. P. Robinson & H. Giles (Eds.), *The new handbook of language and social psychology* (pp. 541-560). New York: John Wiley.

Sutcliffe, K. M., Lewton, E., & Rosenthal, M. M. (2004). Communication failures: An insidious contributor to medical mishaps. *Academic Medicine*, *79*, 186-194.

Tajfel, H. (1978). *Differentiation between social groups: Studies in the social psychology of intergroup relations*. London: Academic Press.

Tajfel, H., & Turner, J. C. (1986). The social identity theory of intergroup behavior. In S. Worchel & W. G. Austin (Eds.), *Psychology of intergroup relations* (2nd ed., pp. 7-24). Chicago: Nelson-Hall.

Van Cott, H. (1994). Human errors: Their causes and reduction. In M. S. Bogner (Ed.), *Human error in medicine* (pp. 53-65). Hillsdale, NJ: Lawrence Erlbaum.

Watson, B. M., & Gallois, C. (1998). Nurturing communication by health professionals toward patients: A communication accommodation theory approach. *Health Communication*, *10*, 343-355.

Watson, B. M., & Gallois, C. (1999). Communication accommodation between patients and health professionals: Themes and strategies in satisfying and unsatisfying encounters. *International Journal of Applied Linguistics*, *9*, 167-180.

Weed, L. L. (1971). *Medical records*, *medical education*, *and patient care: The problem-oriented record as a basic tool*. Cleveland, OH: Case Western Reserve University Press.

Williams, A., & Giles, H. (1996). Intergenerational conversations: Young adults' retrospective accounts. *Human Communication Research*, *23*, 220-250.

Wilson, R. M., Harrison, B. T., Gibberd, R. W., & Hamilton, J. D. (1999). An analysis of the causes of adverse events from the quality in Australian health care study. *Medical Journal of Australia*, *170*, 411-415.

David G. Hewett, MBBS, FRACP, is a gastroenterologist and PhD candidate at the Queensland Health Skills Development Centre and the University of Queensland School of Medicine. His PhD studies have explored interspecialty communication from an intergroup perspective and its impact on the quality of patient care. He has related interests in health services research, medical education, and simulation training.

Bernadette M. Watson, PhD (Queensland), is a senior lecturer in the University of Queensland Schools of Psychology and Medicine. Her research focuses on effective communication between health professionals and patients and within health care teams, including research on the influence of identity and intergroup processes. She is a board member of the International Association of Language and Social Psychology and has served on the board of the International Communication Association.

Cindy Gallois, PhD (Florida), is acting executive dean and professor of psychology in the Faculty of Social and Behavioural Sciences at the University of Queensland in Brisbane, Australia. She is a fellow of the Academy of the Social Sciences in Australia and the International Communication Association (United States). Her research interests encompass intergroup communication in health, intercultural, and organizational contexts, particularly interactions between health professionals and patients, organizational health communication, and quality of patient care.

Michael Ward, MBBS, FRACP, FRCP, is the health quality and complaints commissioner in Queensland, Australia and emeritus professor with the University of Queensland School of Medicine. He is a gastroenterologist and was previously director of the Queensland Health Clinical Practice Improvement Centre. His research interests and publications have related to clinical and basic laboratory aspects of gastroenterology, organizational aspects of health care delivery, and clinical information management systems.

Barbara A. Leggett, MD, FRACP, is professor of medicine at the University of Queensland School of Medicine, director of gastroenterology and hepatology at the Royal Brisbane and Women's Hospital, and honorary principal research fellow at the Queensland Institute of Medical Research. Her research interests include the molecular genetics of colorectal cancer and the quality of health care delivery in areas such as screening and diagnosis of colorectal cancer and management of viral hepatitis.

Downloaded from jls.sagepub.com at PENNSYLVANIA STATE UNIV on September 16, 2016