

Managing the division of labor: the discursive construction of treatment in two hospital obstetrical units

Pamela Hobbs

Abstract

Medicine, as a scientific discipline, is discursively constructed, and medical discourse is constitutive of medical work. In the modern hospital, the official record of this activity is the patient's medical chart. The medical chart both records the patient's progress and inscribes the expert division of labor, documenting the structuring of participation and the manner in which the work is performed. This paper examines the impact of institutional structure on medical work through a comparison of notes recorded in the obstetrical units of two hospitals where the division of labor is differently distributed. Both cases involved a patient who was admitted to the hospital in apparently-normal latent labor but was found on initial examination to display signs of placental abruption, a life-threatening obstetrical emergency. By comparing the recording and management of this condition on the two units, I demonstrate the relationship of organizational structure to the structuring of medical work. In so doing, I reveal the subtext constructed by the writers' discursive practices, through which their professional and institutional identities are enacted and displayed.

KEYWORDS: MEDICAL DISCOURSE; HOSPITAL CHART NOTATION; PROFESSIONAL IDENTITY; SELF-PRESENTATION

Affiliation

Pamela Hobbs, Department of Communication Studies, University of California, Los Angeles, Box 951538, 2303 Rolfe, Los Angeles, California USA 90095-1538
email: p37954@earthlink.net

Introduction

Language plays an important role in the construction of professional knowledge and professional identities (see Drew & Heritage, 1992: 29), and this is as true in medicine as it is in other fields. In recent years, the growing interest in medical discourse in the fields of sociolinguistics and discourse analysis has resulted in the publication of an impressive number of papers and books. These works have examined topics including physician-patient communications during outpatient office visits (Sarangi & Clarke, 2002; Peräkylä, 1998; West, 1998; 1984; Heath, 1992; Maynard, 1992; Roter & Hall, 1992; Fisher & Todd, 1983), junior physicians' oral case presentations during morning rounds (Atkinson, 2004; 1999; 1995; Lingard et al., 2003; Erickson, 1999; Anspach, 1988), and the discursive structure and communicative functions of the medical chart (Hobbs, 2004; 2003; 2002; Cook-Gumperz & Messerman, 1999; Pettinari, 1988; Rees, 1981). Nevertheless, as Atkinson points out, apart from the literature on case presentations, there have been few studies of the communications that construct the routines of hospital care (1995: 33–34). Accordingly, because the organization of the modern hospital represents 'a dispersal of discourse as well as a distribution of organizational knowledge and professional expertise' (Atkinson, 1999: 77), much work remains to be done.

This paper examines the impact of institutional structure on medical work through a comparison of notes recorded in the obstetrical units of two hospitals where the division of labor is differently distributed. The medical chart both records the patient's progress and inscribes the expert division of labor, documenting the structuring of participation and the manner in which the work is performed. By comparing the recording and management of this condition on the two units, I demonstrate the relationship of organizational structure to the structuring of medical work. In so doing, I reveal the subtext constructed by the writers' discursive practices, through which their professional and institutional identities are enacted and displayed. Thus this paper responds to Atkinson's call to expand the study of medical discourse to more fully address the 'rich diversity of social action and interaction' (Ibid: 33) that hospital work entails.

Methodology

As a sociolinguist, my interest is in pragmatics, the contextual factors that guide the selection of linguistic forms and the meanings they are perceived to convey. However, the study of hospital communication presents unique methodological challenges. Problems of access and confidentiality pose barriers to research

(Sarangi & Roberts, 1999: 23) and, although these barriers are not impenetrable, the greater challenge that awaits the researcher who successfully gains entry to medical sites is learning to negotiate and comprehend the daunting complexities of clinical practice. Thus in order to understand the structuring of hospital interactions, it is imperative that the researcher immerse herself in the context that she seeks to describe (Sarangi & Roberts, 1999: 2).

My own socialization into the language of medicine began in 1993. At that time, I was an attorney employed by a major metropolitan law firm located in the Midwestern United States and was entering my eighth year of practice. In March of that year, I was invited to join a division of the firm that specialized in the defense of alleged obstetrical malpractice, and became a senior member of the team assigned to represent an urban teaching hospital which is one of the largest obstetrical centers in the United States. Lacking any previous background in either science or medicine, I initially believed that I would attain only passive competence in the field of obstetrics: that I would learn to understand the physicians' explanations of obstetrical issues, but would not myself be able to operate the intricacies of medical analysis. However, I quickly discovered that active competence would be required, for my case preparation entailed reviewing hundreds of pages of medical records¹ and preparing a detailed summary of the records and an analysis of the care provided, supported by citations to the relevant obstetrical literature retrieved from the MEDLINE medical database used by physicians. As a result, I acquired a detailed understanding of the fields of obstetrics and neonatology (newborn care) which enabled me to read and interpret medical records and fetal monitor strips, identify and analyze the issues presented by the recorded data, and discuss and critique the clinical course, medical management and outcome of the patient from an appropriately 'clinical' perspective.

During the two years that I represented this hospital, I became, for all intents and purposes, an insider: I had a hospital identification card and parking pass, and was allowed access to 'backstage' areas, where I spent hundreds of hours in both formal meetings and informal conversations with physicians and nurses. This immersion in the peer culture of academic medicine provided me with the opportunity to not only *observe*, but also to *experience* the world of medicine in a way that is not normally accessible to members of the lay public (see also Hobbs, 2004: 1580–1581). I absorbed the sights and sounds, observed the orientations and perspectives displayed, and amassed stores of knowledge and information about the education and training of physicians and nurses, the classification of hospitals, the organization of hospital departments, and the fine-grained details of obstetrical practice. In addition, through my discussions of patient care notes with the physicians and nurses who had written them, I acquired a comprehensive understanding of their construction and interpretation.

However, the rich fund of knowledge that resulted from this experience raises for me as a researcher the question that all those engaged in the linguistic analysis of technical, scientific or professional discourse must answer: How much local context should be included in my analysis? That is, how much detail about medical education and training, the organization of hospital departments, and the generic features of medical discourse should I include in order to enable the reader to engage the data and to assess the validity of my interpretations? This is a question to which researchers have provided a number of different answers (see Sarangi & Roberts, 1999: 25–33 for discussion). I agree with Cicourel that, in investigating the complexities of medical interactions, '[k]nowing something about the ethnographic setting, the perception of and characteristics attributed to others, and broader and local social organizational conditions becomes imperative for an understanding of linguistic and non-linguistic aspects of communicative events' (1992: 294). Accordingly, my analysis of the data is prefaced by a discussion of the relevant aspects of the professional and institutional settings in which it is situated.

Hospitals and staffing

There have been numerous attempts to develop a system for the classification of hospital obstetrical units (Lefevre et al., 1992: 259). In the United States, a widely-used system applies criteria developed by the National Institute of Child Health and Human Development to designate three levels of care (Ibid: 260). Level I hospitals ('community hospitals') have no neonatal intensive care unit and are equipped to care for only healthy newborns and those with minor medical problems (Phibbs et al., 1996: 1055). Level II hospitals have both a neonatal intensive care unit and in-house ultrasonography (Lefevre et al., 1992: 260); they are equipped to care for moderately ill newborns, including the provision of either short-term or long-term ventilatory support (Phibbs et al., 1996: 1055). Level III hospitals are equipped to treat acutely-ill newborns (see Lefevre et al., 1992: 260). As a result, the Level III designation qualifies an obstetric department as a regional tertiary care facility for purposes of the transfer or referral of high-risk mothers and infants (Phibbs et al., 1996: 1054–1055). Tertiary-care facilities are often housed in academic medical centers, whose combined mission is patient care, physician training, and research.

A hospital's designation as Level I, II or III reflects its capacity to manage the care of critically-ill patients, in terms of both its physical plant and the availability and qualifications of its medical and nursing staffs. In the United States, half of the hospitals that provide obstetrical care are Level I community hospitals with fewer than 500 births per year; as a result, the community hospital is the

site of the majority of American births (James et al., 2003: 815). In many of these hospitals, in the absence of complications the physician is not present during labor, and the primary responsibility for managing the patient's labor falls to the obstetrical nurse (Ibid). For example, a Level I community hospital with 120 beds might have an obstetrical unit staffed by four obstetricians who maintain an outside office practice, and who come to the hospital primarily to perform deliveries and to round on hospitalized patients. The organizational structure of the community hospital is accordingly such that a 'nurse-managed labor model' is used:

The nurse decides when uterine activity is within normal limits and whether the fetal heart rate pattern is reassuring or nonreassuring, initiates ambulation, hydrotherapy, use of the birthing ball, and so on, suggests the timing for parenteral pain medications or regional anesthesia, manages the second stage of labor, and calls physicians to ask them to come to the hospital if the condition of the mother or fetus changes or if birth is imminent.

(Ibid, citation omitted.)

By contrast, a tertiary-care facility with 5,000 deliveries a year may have more than a dozen board-certified obstetricians on staff, including those with subspecialty training and certification in maternal-fetal medicine (the management of high-risk pregnancies), and may also have a residency program in which junior physicians receive four years of post medical school training in the combined specialty of obstetrics and gynecology. In this setting, the primary responsibility for the care and monitoring of laboring patients falls to the resident physicians, and nurses play a more restricted and secondary role (Ibid: 814).

Medicine and nursing as complementary (not competing) perspectives

Much has been written about the relationship between medicine and nursing, and much has been made of the real or imagined power struggles in which physicians dominate and nurses are relegated to subordinate roles (see, e.g., Stein, 1967; Stein et al., 1990). However, characterizations of the physician-nurse relationship which focus on gender-based power issues act to obscure the fact that the relevant difference between medicine and nursing is not that medicine has been a traditionally male profession and nursing a traditionally female profession, but that medicine and nursing are different professional functions with different professional training, perspectives, and goals.

Medical education begins in medical school, which entails four years of post-baccalaureate study culminating in the M.D. degree, and medical graduates are

eligible for licensure and admission to practice as physicians without further training. For many, however, the medical degree is seen, not as a terminus, but as the initial phase of their professional education. Thus an increasing number of physicians choose to pursue specialty training in one or more medical or surgical fields. In the United States, these hospital-based training programs are referred to as ‘residencies’, and the physician-trainees are referred to as ‘residents’; hospitals that offer such training programs are referred to as ‘teaching hospitals’. Residency programs offer the novice physician the opportunity to engage in hands-on patient care under the supervision of physicians who are fully qualified in the relevant specialty and who are referred to as ‘attending physicians’ or ‘attendings’. These programs, by requiring the resident to assume progressively increasing responsibilities for patient care, are designed to develop the particular technical and analytic skills necessary to the practice of the specialty field in question (Hobbs, 2003: 453–454); thus the resident is both a physician and a student.

By contrast, nursing education is complete by the time that a nurse embarks upon her² hospital career. However, unlike the requirements for medical licensure, the requirements for licensure as a registered nurse are not uniform across the United States; accordingly, students may become eligible to sit for the national licensing examination by completing a two-year college program, a three-year, hospital-based (‘diploma’) program, a four-year college program, a two-year master’s degree program, or a nursing doctoral (N.D.) program (Kovner, 2003: 39).

Kovner, who notes that ‘patient satisfaction with care is probably more dependent upon good nursing care than on anything else’ (2003: 43), cites Virginia Henderson’s classic definition of the nurse’s role: ‘to assist the individual (sick or well), in the performance of those activities contributing to health or its recovery (or peaceful death) that he would perform unaided if he had the necessary strength, will, or knowledge. And to do this in such a way as to help him gain independence as rapidly as possible’ (Kovner, 2003: 38, citing Henderson, 1966). This definition may be contrasted with descriptions of the physician’s role provided by two celebrated practitioners. Sir William Osler, who was the first chief of staff of Johns Hopkins Hospital, and who is often referred to in the United States as the father of modern medicine, stated that ‘[t]he physician’s challenge is the curing of disease, educating people in the laws of health, and preventing the spread of plagues and pestilences’ (Bean, 1968: 90). Similarly, Dr. Lawrence Weed, who developed the concept of the problem-oriented medical record as a training tool for medical residents in the 1960s, stated that ‘the basic criterion of the physician is how well he can identify the patient’s problems and organize them for solution’ (1969: 3).

The differing but complementary focuses of medicine and nursing, which are seen in the ways that physicians and nurses view their respective professional functions and roles, can be characterized by contrasting a focus on *cure* with a focus on *care*. Diagnosis requires both a vast store of knowledge of human physiology and disease pathology and the experience necessary to translate knowledge into action, what physicians refer to as medical judgment (Hunter, 1991: 40); thus physicians tend to focus on disease processes. However, the nurse's role in alleviating pain, discomfort, fatigue and emotional distress gives her work an explicitly human focus that leads her to view herself as a patient advocate (James et al., 2003: 819–820; Kovner, 2003: 38). The physician is engaged in outcome management, while the nurse is concerned with the quality of the patient's experience. Of course, this is not to say that nurses are unconcerned with patient outcomes, or that physicians are indifferent to their patients' physical and emotional needs; but rather, that the ability of each profession to focus on one aspect of patient care, while relying on the other to focus on the other, equally-important aspect, results in the delivery of optimal health care services.

Data

The data examined here are drawn from a collection of obstetrical records obtained from a number of different hospitals in various parts of the United States, the majority of which involve labor and delivery complications. Although the cases themselves are not typical in the sense that they include adverse events, the records that document these events are representative of the documentary practices of obstetrical departments in hospitals throughout the United States, as confirmed by my research, and contain no unusual features.

This paper presents an analysis of notes recorded in a patient's chart in the obstetrical units of two hospitals where the division of labor is differently distributed. Both cases involved a patient who was admitted to the hospital in apparently-normal latent labor, but upon initial examination showed signs of placental abruption, a condition that may be described as follows.

The placenta is the organ that supports the fetus, delivering blood, oxygen and nutrients, and filtering fetal wastes (Cunningham et al., 1997: 95–96). It is implanted in the uterus in the earliest weeks of pregnancy (Ibid: 108), and ordinarily is expelled immediately after birth. However, in approximately one in 200 pregnancies, a normally-implanted placenta becomes detached from the uterine wall, resulting in hemorrhage (bleeding) and the formation of a hematoma (clot) which causes further separation as it expands (Gilbert & Harmon, 1998: 398, 391; Gorrie et al., 1998: 684). This condition, known as

placental abruption in the United States, and as accidental hemorrhage in Great Britain (Cunningham et al., 1997: 746), is life threatening to both mother and fetus.

Hospital A: Resident's progress notes

Hospital A is a publicly-owned, 463-bed teaching hospital located in the Midwestern United States and providing acute and tertiary care to a largely urban population of approximately 500,000. The hospital is the regional referral center for high-risk pregnancies and houses the area's only Level III neonatal intensive care unit. It offers a four-year residency training program in obstetrics and gynecology which is staffed by board-certified obstetricians with advanced subspecialty certification in maternal-fetal medicine, reproductive endocrinology, gynecologic oncology, and ambulatory care. The number of births at the hospital is approximately 2,700 per year.

The note that will be examined here was written by the obstetrical resident, Dr. Daniel O'Brien.³ Although the handwritten note has been reproduced here in typewritten form, and line numbers have been added for convenient reference, the formatting of the note (line breaks, spacing, indentation, spelling, strike-outs, abbreviations, etc.) has been preserved.

1 6/29/00OB resident
 2 09 30 I was called at about 06:15 to see
 3 this pt. who was transferred from Glendale
 4 for pre-ecclampsia. Pt. stated that she
 5 had a headache and midepigastic
 6 pain. BP - 173/84 - Apresoline 5 mg IV push
 7 was ordered. Pt then stated that
 8 she felt as if she had to have
 9 a bowel movement. I told her that
 10 I would like to check her cervix
 11 since the pressure might be the
 12 fetal head. Upon checking the
 13 pt I expressed about 200 cc of
 14 blood clots from the vagina.
 15 The cervix was closed/thick/high.
 16 I did a quick scan c u/s and
 17 noted +cardiac activity, a placenta that
 18 appeared big and minimal fetal movement.
 19 I came out of the room and called
 20 Dr. Lowry to discuss my findings.
 21 However while I was talking to Dr. Lowry
 22 the nurse came out and stated
 23 that she could not pick-up FHT's.

24 I went back to the ~~remove~~ room
 25 and repeated a quick scan which
 26 showed +cardiac activity but slow and
 27 decreased. A stat c/s was called, after
 28 informing Dr. Lowry, who asked that
 29 the staff physician, Dr. Neville, covered
 30 for him while he is in transit.
 31 Anesthesia was notified. Pt was moved
 32 to the C/S room prepped and draped. However
 33 anesthesia dept had a delay in inducing anesthesia.
 34 After the pt was placed under G.E.T. anesthesia, she
 35 underwent a LTCS.
 36 D. O'Brien

The following information will assist in an understanding of the situation discussed. Preeclampsia is a complication of pregnancy that is characterized by elevated blood pressure, swelling of the face and hands due to edema (fluid retention), and abnormal concentrations of protein in the urine (Cunningham et al., 1997: 694–695). Severe preeclampsia can result in fetal death; accordingly, where the fetus is at term, immediate delivery is warranted (Ibid: 716). The patient's reported symptoms – headache and epigastric pain – are classic symptoms of severe preeclampsia, and the presence of one or both may be indicative of eclampsia (convulsions), which can lead to maternal coma and death (Ibid: 713, 718–720).

An injection of Apresoline, a blood-pressure-reducing drug, was ordered alleviate these symptoms, following which the patient complained of rectal pressure, a sensation which may be caused by the pressure of the fetal head against a fully-dilated cervix (a sign of potentially imminent delivery). A vaginal examination confirmed that she was not in labor but revealed a large amount of clotted blood in the vaginal vault, a sign strongly suggestive of placental abruption. A bedside ultrasound scan revealed that the fetus was alive, but indicated minimal fetal movement and an enlarged placenta, signs that are confirmatory of a diagnosis of placental abruption. A second ultrasound indicated that the fetus' heart rate had slowed, a sign of potential fetal jeopardy, and the decision was made to perform an immediate cesarean section delivery.

Hospital B: Nursing notes

Hospital B is a 116-bed hospital located in the Central United States and serving a predominantly rural population of approximately 100,000. The hospital offers a range of services including medical/surgical, pediatric, emergency/trauma, psychiatric, and community health services, and has an obstetrical unit and a level II neonatal nursery. The hospital's medical staff includes four

obstetricians who maintain an office practice in the vicinity of the hospital.⁴ There is no obstetrical residency program. The number of births at the hospital is approximately 550 per year.

The note that will be examined here was written by the obstetrical nurse, Susan Chase. As with the resident's note reproduced above, the original formatting of this note has been preserved, although it is reproduced here in typed form. The multi-part note is divided into segments which sequence its events into closely-timed intervals (1945, 1950, etc.),⁵ and the nurse marks the end of each segment with a horizontal line which extends to the right-hand margin of the page; these lines, like the headings in academic papers, act to signal a transition to the note's readers.

1 1-8-99 Assisted into W/C in ER waiting
 2 1945 rm & brought to Women's Services
 3 area, accompanied by husband. Cheerful,
 4 talkative, reports occasional mild
 5 contx & SROM clear fluid @ 1910.
 6 1950 Remains in W/C by nurses station,
 7 awaiting LDRP to be cleaned, pt
 8 calm & Ø discomfort noted. Dr.
 9 Taylor visits c pt—————
 10 2005 To LDRP 328, assisted into pt. gown
 11 & to bed, small amt. of dark red
 12 drainage noted on W/C seat.
 13 Gush of large amt dark red vag
 14 drainage while positioning self in
 15 bed—————
 16 2009 EFM on, Average LTV, prolonged decel to 70's c
 17 return to baseline x 30 sec, followed
 18 by decel to 80's & 90's x 70 sec, again
 19 return to baseline x 30 sec. Continue
 20 leaking moderate amt dark red vag
 21 drainage. Dr. Taylor called
 22 2012 to rm. SVE—————
 23 2013 IV LR started LFA c #18 Indyte
 24 infuses wide open rate —————
 25 2015 EFM off, to OR per bed—————
 26 2018 Transferred to OR table, R hip roll placed.
 27 S. Chase, RNC

This note opens with the mundane details of the apparently routine admission of a patient in latent labor; however, as she is being assisted out of the wheelchair and into the bed, a large amount of vaginal bleeding is noted. The nurse immediately activates the fetal heart-rate monitor ('EFM on'), documents the patterns noted and the patient's continued bleeding, and calls the physician to the room. He examines the patient and orders an immediate cesarean section delivery.

Analysis

The formal requirements of medical documentation include an elaborate system of conventions which are constitutive of the genre, and which control the form and content of patient care notes. These linguistic conventions create a framework of expectations that guide both writers' pragmatic choices and the manner in which the notes are interpreted, and thus play a critical role in ensuring their intelligibility. In addition, the act of recording information in a patient's chart is an exercise of professional skill that displays knowledge, responsibility and judgment and thus entails a projection of professional identity that influences both the form and interpretation of patient care notes. The following analysis will examine some of the most prominent generic features of patient care notes, including conventions relating to notation practices and reliance on background knowledge, and will then examine in detail the manner in which these notes record the self-presentation of professional and institutional roles.

Notation conventions

Medicine is by definition a matter of life and death; thus physicians and nurses must provide the maximum amount of information in the minimum amount of time. The result is a highly condensed form of communication, characterized by telegraphic syntax and a system of abbreviations that is one of the most recognizable features of medical records (Hobbs, 2004: 1586). For example, in the following excerpt from the nursing note under examination here, Nurse Chase records her impressions of the read-out from the fetal heart-rate monitor, which contain a number of the abbreviations commonly used in obstetrical notation, including *EFM* ('electronic fetal monitor'), *LTV* ('long-term variability', relative to the fetal heart rate), *decel* ('deceleration', or slowing, of the heart rate), *c* (for the Latin 'cum', meaning 'with'), *x* ('times', used to state duration), *sec* ('seconds'), *&* ('and'), *amt* ('amount'), and *vag* ('vaginal'):

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16 2009 EFM on, Average LTV, prolonged decel to 70's c
17 return to baseline x 30 sec, followed
18 by decel to 80's & 90's x 70 sec, again
19 return to baseline x 30 sec. Continue
20 leaking moderate amt dark red vag
21 drainage. Dr. Taylor called

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To the lay reader, these abbreviations reduce medical records to a string of impenetrable jargon; however, within the medical community, they serve as a universally-recognized form of professional shorthand whose purpose is to save time, and identical or near-identical abbreviations for many common medical terms are used in hospitals and clinics throughout the United States (Hobbs, 2004: 1587).⁶

Nurse Chase's note also illustrates the telegraphic syntax that characterizes the chart notations of many writers, in which all words that are not essential to an understanding of the message – including not only articles and pronouns, but often the subject and the object as well – are elided in the interest of saving time. Thus the following excerpt

1 1-8-99 Assisted into W/C in ER waiting
 2 1945 rm & brought to Women's Services
 3 area, accompanied by husband. Cheerful,
 4 talkative, reports occasional mild
 5 contx & SROM clear fluid @ 1910.

would be interpreted by inserting the 'missing' words, which are indicated in brackets below:

[I] assisted [the patient] into [a] wheelchair in [the] Emergency Room waiting room and brought [her] to [the] Women's Services area, accompanied by [her] husband. [She is] cheerful, talkative, [and] reports occasional mild contractions and spontaneous rupture of membranes [yielding] clear fluid at 7:10 p.m.

This highly-compressed notational style may be contrasted with that of the resident, Dr. O'Brien, as exemplified in this excerpt:

1 6/29/00 OB resident
 2 09 30 I was called at about 06:15 to see
 3 this pt. who was transferred from Glendale
 4 for pre-ecclampsia. Pt. stated that she
 5 had a headache and midepigastic
 6 pain. BP - 173/84 - Apresoline 5 mg IV push
 7 was ordered. Pt then stated that
 8 she felt as if she had to have
 9 a bowel movement. I told her that
 10 I would like to check her cervix
 11 since the pressure might be the
 12 fetal head. Upon checking the
 13 pt I expressed about 200 cc of
 14 blood clots from the vagina.
 15 The cervix was closed/thick/high.

Dr. O'Brien makes liberal use of standard medical abbreviations, but his note contains no elisions, and thus presents a more conventionally 'conversational' tone. This is primarily a matter of personal style, as the use of telegraphic syntax varies among both physicians and nurses (see, e.g., Hobbs, 2004: 1484–1584, for an example of its use by a resident). However, the apparent loquacity of residents' notes, a separate but related issue, is *not* a matter of personal style,

but of the resident's professional status and role: The resident is both physician and student; thus residents' notes serve both patient care and pedagogical functions. As patient-care notes, residents' notes both document the resident's observations and actions and communicate them to other treaters, in order to facilitate management of the patient's ongoing care. Yet an equally-important purpose of residents' notes is to provide the resident with the opportunity to both rehearse and display his or her reasoning and analysis, and thus to demonstrate the acquisition of professional knowledge and clinical judgment (Hobbs, 2002: 268, citing Pettinari, 1988: 1). As a result, residents' notes are instantly recognizable by their length, amount of detail, and carefully-crafted, copybook form (Hobbs, 2007: 50).

This excerpt from Dr. O'Brien's note also serves to illustrate an additional convention of medical notation, the use of evidential markers (see Hobbs, 2003). Because the source of information is deemed to be a critical element of its evaluation in medicine, in their progress notes physicians carefully distinguish between their own personal observations and actions, the patient's reported observations and actions, and the observations and actions of other members of the health care team. The physician uses 'I' to report what he or she did ('I told her that I would like to check her cervix'), and uses statements of fact to report what he or she observed ('The cervix was thick/closed/high'). The physician uses 'the patient' to report what the patient said or did ('Pt. stated that she had a headache and midepigastric pain'). However, the actions and reports of other treaters are recorded using passive, often agentless, constructions. Thus Dr. O'Brien's use of the passive voice in lines 6–7 ('Apresoline 5 mg IV push was ordered') clearly signals that it was not he, but someone else, who ordered the Apresoline. In fact, it was ordered by the nurse, as is made clear elsewhere in the chart.⁷ Such evidential markers, which act to encode perceptual and evaluative limitations (e.g., whether information was obtained at first or second hand, and whether it is independently verifiable) reflect medicine's central concern that decision-making be evidenced based (Hobbs, 2003: 460).

Background knowledge

This excerpt from Nurse Chase's note, previously examined above, also serves to illustrate certain shared assumptions about what a note should contain.

16 2009 EFM on, Average LTV, prolonged decel to 70's c
 17 return to baseline x 30 sec, followed
 18 by decel to 80's & 90's x 70 sec, again
 19 return to baseline x 30 sec. Continue
 20 leaking moderate amt dark red vag
 21 drainage. Dr. Taylor called

In general, it is conventionally understood that chart entries should include information that is relevant and omit that which is merely extraneous or redundant; accordingly, the presence of information in a writer's note will be taken to index his or her judgment that the information is clinically significant (see, e.g., Rees, 1981: 62). However, although the lay reader will be struck by the frequency with which these notes appear to omit the very interpretations and conclusions that are most relevant to an understanding of the patient's condition, these 'omissions' are not apparent to the notes' intended audience.

Like every community of speakers, the medical community shares a set of common assumptions which are deemed to be too obvious to require explanation or explicit commentary, and which form a part of the community's 'background knowledge' (Hobbs, 2002: 267). Reliance on background knowledge underlies the concept of conversational implicature in Gricean pragmatics, as illustrated by this example cited by Schiffrin:

A: Smith doesn't seem to have a girlfriend these days.

B: He has been paying a lot of visits to New York.

(1994: 9, citing Grice, 1975: 51).

Schiffrin points out that the apparent lack of connection between A's utterance and B's rejoinder does not prevent B (or others) from inferring that B's intent is to suggest that Smith has a girlfriend in New York. Similarly, reliance on background knowledge renders superfluous explanations such as why a thunderstorm aborted a planned day at the beach.

In the excerpt of Nurse Chase's note reproduced above, she records without comment precipitous drops in the fetal heart rate ('prolonged decel to 70's ... followed by decel to 80's and 90's'),⁸ classic signs of fetal distress, and the patient's continued vaginal bleeding, a cardinal sign of placental abruption. Both separately and in conjunction with one another, these symptoms are too telling to require explanation.

Self-presentation

Patient care notes record not only the writer's observations and activities, but the self-presentation of professional and institutional roles. Moreover, while record categories reflect institutional requirements, the production of a document satisfying the descriptive requirements of a physician's progress note or nursing note involves the display of both professional and local (situation-specific) institutional knowledge (Cook-Gumperz & Messerman, 1999: 146). The notes examined here provide evidence of the writers' discursive construction of identity in an organizational context in which the distribution of responsibilities

shapes the performance of professional roles, thus demonstrating the extent to which the structuring of participation and decision-making is determined by wider professional and institutional frames.

In Hospital A, a regional tertiary care facility with a residency training program in obstetrics, the residents are primarily responsible for the management of laboring patients; however, in Hospital B, a level I community hospital staffed by 'outside attendings' (obstetricians who maintain an office practice), the corresponding responsibility falls to the nursing staff. As a result of this difference in staffing and the distribution of institutional responsibilities, in the cases considered here, the resident, Dr. O'Brien, and the nurse, Nurse Chase, are performing the same function. Nevertheless, they do not assume identical roles, for there is not a single category of 'labor manager' which can be filled by either a resident or a nurse. Instead, the separate but related concepts of 'nurse-managed labor' and 'resident-managed labor' reflect the different roles and relationships that the differing institutional structurings produce, creating divisions of labor (in both senses of the word) by which individuals with different training and perspectives assume primary responsibility for patient care.

The different positionings that result from these differences in training and perspective are mediated primarily through language, in the self-presentation of residents and nurses in their oral and written communications. Through the discursive structures by which they communicate with colleagues, their professional and institutional identities are enacted and displayed (see, e.g., Atkinson, 1999; Erickson, 1999). Thus the two notes examined here, which record the management of identical clinical situations by an obstetrical resident and a labor nurse, provide an ideal opportunity to examine the discursive production of professional identity, and the relationship of organizational structure to the structuring of medical work.

Dr. O'Brien's note begins with his introduction to the medical problem ('I was called at about 06:15 ...'), listing the patient's presenting symptoms and the action that was taken ('Apresoline 5 mg IV push was ordered'). The note then continues as a narrative that presents his examination of the patient as a series of analytic assessments, each resulting in further action, which collectively form the basis of the decision to perform an emergency cesarean section delivery. The assessments that he performs place him at the center of this process, eliciting the patient's symptoms, taking steps to evaluate them, and responding with further action.

7 Pt then stated that
 8 she felt as if she had to have
 9 a bowel movement. I told her that
 10 I would like to check her cervix
 11 since the pressure might be the

12 fetal head. Upon checking the
 13 pt I expressed about 200 cc of
 14 blood clots from the vagina.
 15 The cervix was closed/thick/high.

The note records his investigation, beginning with the patient's complaint of rectal pressure, and documenting in detail the steps that he takes to evaluate it ('I told her that I would like to check her cervix ...'; 'Upon checking the pt ...') and the results and information obtained ('I expressed about 200 cc of blood clots from the vagina'; 'The cervix was thick/closed/high'). He does not comment on his critical finding, the presence of a large amount of blood in the vaginal vault; however, his subsequent actions signal his conclusion that the cause of the patient's symptoms is a placental abruption. In leaving this conclusion unstated, Dr. O'Brien evokes the shared knowledge of the specialist community, which allows him to take for granted that 'the reader will be able to add for himself the details which are not written on the page' (Rees, 1981: 66). Moreover, by omitting explanations that are deemed to be superfluous, he demonstrates his understanding of the conventions of medical documentation, thus constituting himself as a member of the specialist community (Hobbs, 2002: 268).

16 I did a quick scan c u/s and
 17 noted / cardiac activity, a placenta that
 18 appeared big and minimal fetal movement.
 19 I came out of the room and called
 20 Dr. Lowry to discuss my findings.

The note continues by documenting his response to his findings (he performs a bedside ultrasound scan to evaluate the condition of the fetus and placenta), thus displaying a 'clinical orientation' that is 'motivated by the responsibility to assemble and make clinical sense' of the presenting symptoms (Lingard et al., 2003: 607), and that acts to demonstrate an analytical understanding of the clinical issues involved (Erickson, 1999: 39). This analytic focus is reflected in Dr. O'Brien's selection of the information to be recorded: There should be a clear relationship between the description of the history and physical examination and the physician's diagnostic impression (Rees, 1981: 56); thus 'the requirement to produce a diagnosis produces a certain reflexivity in the process of recording the facts of the case' (Ibid).

21 However while I was talking to Dr. Lowry
 22 the nurse came out and stated
 23 that she could not pick-up FHT's.
 24 I went back to the ~~remove~~ room
 25 and repeated a quick scan which
 26 showed / cardiac activity but slow and

27 decreased. A stat c/s was called, after
 28 informing Dr. Lowry, who asked that
 29 the staff physician, Dr. Neville, covered
 30 for him while he is in transit.

The aggregative process by which case information is progressively assembled is illustrated here as Dr. O'Brien records the nurse's summons and the additional information that his repeat examination disclosed. By recording his findings he flags them as 'clinically significant' (see Rees 1981: 62), an additional building block in the construction of the medical story. He then documents his continued consultation with Dr. Lowry and the resulting decision to proceed with an immediate cesarean section delivery.

This note, which traces Dr. O'Brien's construction of the case through a series of analytic assessments in which he identifies the presenting problem, forms an initial impression, initiates action to confirm his impression, contacts his attending, and collaboratively determines that an emergency cesarean section delivery is indicated, presents a compact and well-formed medical narrative. This narrative structuring of medical analysis has frequently been noted. Thus Hunter states that 'medicine's focus on the individual patient, fitting general principles to the particular case, means that the knowledge possessed by clinicians is narratively constructed and transmitted' (1991: xvii). As a result, Atkinson observes that '[n]arrative performance is one of the key professional skills that students and younger medical practitioners need to acquire' (2004: 15).

For the resident, the focus of patient interactions is arriving at a diagnosis and formulating a plan of treatment; in recording the results of these processes, it is the resident's analysis and judgment that are displayed, and that are made visible through the narrative construction of residents' notes. By contrast, the focus of the nurse's role is not on directing treatment, but on assessing the patient's condition in order to minimize discomfort and to report any change in condition or problems that may arise. Moreover, the analytic component of these functions is rarely made visible in the record; instead, the data are treated as entries in a log. Accordingly, while the resident's focus is on the internal processes of medical analysis and judgment, the nurse's focus is on the external processes of noting problems and minimizing patient discomfort, and these differences in focus produce corresponding differences in form.

In a study involving 54 experienced obstetrical nurses from four hospitals operating within a nurse-managed labor model, James et al. noted that '[a]lthough the expert nurses were skilled in electronic fetal monitoring and how to manage labor induction, they also considered themselves expert

in comfort measures and caring' (2003: 818). The nursing notes examined here reflect this dual focus.

Nurse Chase's notes display nursing's focus on monitoring the patient in order to alleviate discomfort and to report potential problems or changes in the patient's condition:

1 1-8-99 Assisted into W/C in ER waiting
 2 1945 rm & brought to Women's Services
 3 area, accompanied by husband. Cheerful,
 4 talkative, reports occasional mild
 5 contx & SROM clear fluid @ 1910.
 6 1950 Remains in W/C by nurses station,
 7 awaiting LDRP to be cleaned, pt
 8 calm & Ø discomfort noted. Dr.
 9 Taylor visits c pt—————

Her initial entry opens with a description of an apparently routine admission in which she records the patient's affect ('Cheerful, talkative'; 'calm & Ø [no] discomfort noted'), her reported symptoms of normal early labor ('mild contx [contractions] & SROM [spontaneous rupture of membranes⁹']) and the physician's greeting of the patient in the hallway while she awaited preparation of her room.

10 2005 To LDRP 328, assisted into pt. gown
 11 & to bed, small amt. of dark red
 12 drainage noted on W/C seat.
 13 Gush of large amt dark red vag
 14 drainage while positioning self in
 15 bed—————
 16 2009 EFM on, Average LTV, prolonged decel to 70's c
 17 return to baseline x 30 sec, followed
 18 by decel to 80's & 90's x 70 sec, again
 19 return to baseline x 30 sec. Continue
 20 leaking moderate amt dark red vag
 21 drainage. Dr. Taylor called
 22 2012 to rm. SVE—————

The subsequent entry signals an abrupt shift in focus with the discovery of a symptom that would trigger in any physician or obstetrical nurse an immediate suspicion of placental abruption. The observation of this symptom invokes Nurse Chase's institutional role as frontline responder. She immediately activates the electronic fetal heart-rate monitor and begins to document the patterns of cardiac activity that she observes. Because these patterns are permanently recorded by a continuous printed read-out that is generated by the machine, her detailed description of the patterns signals the presence of a problem. When the patient continues to experience vaginal bleeding, an ominous sign, she calls the

doctor to the room. The remainder of the note records her subsequent actions taken pursuant to the physician's orders to prepare the patient for an immediate cesarean section delivery.

These notes carefully record Nurse Chase's actions and observations, and include meticulous notations of their timing. However, while Dr. O'Brien's note explicitly displays his active role in identifying and assessing the patient's symptoms ('I told her that I would like to check her cervix'; 'I did a quick scan'; 'I...repeated a quick scan'), Nurse Chase's notes do not. Instead, obscuring the analysis of the patient's symptoms that triggered her decision to activate the electronic fetal heart-rate monitor, she depicts the monitor as the sole agent of the observations that she records.

The nurse's professional role involves nursing as opposed to medicine, and nursing functions are supportive care, monitoring, and reporting, including alerting the physician to the presence of abnormal signs or deterioration in the patient's condition. In a teaching hospital, these professional and institutional roles ordinarily will coincide; however, in community hospitals where physicians are not routinely present, nurses take a more active role in patient care. Nurses refer to this as 'nursing autonomy' (James et al., 2003: 815), and it involves assessments and decisions that appear to fall within the field of medicine rather than of nursing. Yet because both the nurse's professional role and the institutional hierarchy constrain her from recording her activities as analysis or active intervention, her chart entries are framed as documentation and reporting. In the note examined here, Nurse Chase's recording of the monitor readings presents her notations as clerical/administrative; thus the form acts to mask the evaluation implicit in the act of recording. Similarly, her careful description of the patient's bleeding implies that the detail is provided for the purpose of allowing others to evaluate and is not itself evaluative, although evaluation and decision-making are implicit in her decision to summon the physician to the room.

Discussion

Sociolinguistic research on institutional communication reflects the growing awareness and understanding of the structured and structuring effects of professional and organizational discourse practices, and of the importance of communication for the organization of interaction per se (see, e.g., Engeström et al., 2003; Iedema & Scheeres, 2003; Iedema & Wodak, 1999; Sarangi & Roberts, 1999). However, although communication is central to medical work, large areas of medicine's communicative terrain remain unexplored. Much of the existing research examines physician-patient consultations and physician rounds or team conferences, and the focus on these interactions as 'speech

events' serves to frame the institutional settings in which they occur as the *context* of the analysis, rather than its *subject*. As a result, the relationship between the clinical-professional and organizational-institutional dimensions of care is not addressed.

The foundation of medical care is medical knowledge; however, expertise is multifaceted, and must be located within a specific situation and setting in order to be meaningfully discussed (Candlin & Candlin, 2002: 133). Expert medical knowledge includes both professional training and institutional, or 'local', knowledge. Professional training takes place in formal programs with set curricula and requirements. By contrast, local knowledge is not dependent upon formal qualifications, but upon the special competencies that result from the distribution of responsibilities in a given organizational setting, and that may be more relevant to performance than educational degrees, professional licensures, and board certifications (Cook-Gumperz & Messerman, 1999: 146). The labels 'obstetrician' and 'registered nurse' are uncritically accepted as descriptive of the individuals' roles, yet these labels act to foreground professional qualifications while conveying *no* information about institutional responsibilities and competencies that structure professional performance.

Hospital records are a rich site for the exploration of the interplay of professional and institutional knowledge and its implications for patient care. Because patient care notes not only *record* but *perform* medical work (Atkinson, 1999: x), examination of such records provides an unparalleled opportunity to evaluate the impact of institutional structure on the performance of professional roles, and the situation-specific ways in which individuals position themselves within the institutional hierarchy. Moreover, the hospital chart provides graphic evidence of the inherent tension between the variable distribution of institutional responsibilities, which are dependent upon level of staffing and organizational structure, and strictly-demarcated professional roles. The hierarchical structure of the hospital medical team, both historically and in present-day practice, places ultimate authority and responsibility on the attending physician and establishes a chain of command extending in descending order to the residents, interns, and medical students (Siegler, 2003: 30). It should be emphasized that although these trainees, including medical students, are technically part of the medical team, the members of the nursing staff are not (Ibid). These accepted orthodoxies are reflected in both the structure and the content of the medical chart.

The division of patient care notes into discrete categories of physicians' progress notes and nursing notes acts to reify professional boundaries by privileging the focus of training (rather than experience), thus constructing

competence, responsibility and knowledge in disciplinary terms. Similarly, the requirement that writers other than attending physicians and residents include their professional designation ('RN', 'WSU III') in their signature acts to symbolize the physician's unique right to claim full medical knowledge.¹⁰ In addition, professional and legal standards which prohibit non-physicians from rendering medical diagnoses restrict both the form and interpretation of patient care notes.

Thus a physician reviewing Dr. O'Brien's note would conclude that the information presented is sufficient to demonstrate that he had made the diagnosis of placental abruption and, moreover, that his intent in recording the note, including the choice of language used, was to display both his understanding of the significance of the symptoms he had identified and the conclusion that he had reached. The physician reader would also assume that the resident's omission of his reasoning and conclusions was intentional, in order to demonstrate his awareness that the physician-reader can interpret these observations for him- or herself. Thus residents' notation practices display both their understanding of the iconic nature of symptom complexes and their mastery of the task of assembling observations and reported information and presenting them in a way that reveals their characteristic patterns.

However, the same reader would interpret Nurse Chase's similar report of similar symptoms quite differently. This reader would not conclude that the nurse had 'diagnosed' placental abruption, because nurses are not qualified to make medical diagnoses and, accordingly, do not frame their notations to convey a diagnostic impression. Thus, paradoxically, the same local or background knowledge that allows the physician to infer that the resident's omissions signify a diagnosis lead him or her to infer that the nurse's omissions do not – and this inference would stand despite the fact that all readers would infer from the nurse's notation, both that what she described was in fact the symptoms of placental abruption, and that she undoubtedly recognized them as such.

The comparison of these notes demonstrates in exquisite detail the delicate considerations that govern the self-presentation of physicians and nurses whose converging and diverging professional and institutional roles dictate simultaneously what they *do* and what they *may be seen to have done*: the writer must attend to both institutional responsibilities that dictate what must be recorded, and professional standards that dictate the ways in which it may be stated. These notes thus reveal the different levels at which these professional and institutional discourses operate.

Conclusion

Although a significant proportion of medical care takes place in hospitals, the study of hospital communications in the field of sociolinguistics and discourse analysis is underdeveloped. However, the hospital is an ideal site for the study of medical discourse, in both its professional and institutional dimensions. Moreover, the hospital chart, which documents the interface between these domains (Sarangi & Roberts, 1999: 17), revealing the extent to which professional and institutional roles coincide and diverge in various situations and settings, offers an unparalleled opportunity to examine the influence of institutional organization on the structuring of medical care.

This paper has presented the comparison of notes documenting the discovery of placental abruption, a life-threatening obstetrical emergency, in two different hospitals. In the first hospital, the obstetrical residents were primarily responsible for the routine care and management of patients while, at the second hospital, substantially the same duties were performed by the nursing staff. These distributions of responsibility are duplicated in tertiary-care and community hospitals across the United States (see, e.g., James et al., 2003: 814–815), and the rationale for these differing organizational structurings is that community hospitals by definition limit their care to low-risk cases, while tertiary-care facilities are staffed and equipped to care for patients who are at risk for, or who have developed, complications. However, at some irreducible level, all departments of obstetrics are the same: the mission of each is the delivery of healthy infants. As a result, the obstetrical residents at tertiary-care facilities and the obstetrical nurses at community hospitals perform analogous institutional roles. Nevertheless, these institutional roles do not negate the distinctions between medicine and nursing, and these distinct professional roles are reflected both in the writers' self-presentations and in the interpretations that are conventionally placed on their notations. These notes thus document the extent to which institutional structure acts to shape the organization of medical care.

About the author

Pamela Hobbs is a Lecturer in Communication Studies at the University of California, Los Angeles, where she received a PhD in Applied Linguistics, and is also an attorney licensed to practice in Michigan, USA. Her research interests include legal discourse, medical discourse, political discourse, language and gender, and the evolution of communication.

Acknowledgement

I would like to thank Rick Iedema, Dr. Ronald Gabriel, and this journal's referees for their helpful comments and suggestions. Any remaining errors are my own.

Notes

- 1 It was not unusual for medical records to arrive in foot-high stacks.
- 2 As of 2001, fewer than 6% of nurses employed in the United States were men (Kovner, 2003: 37).
- 3 All names have been changed.
- 4 Such private-practice physicians are not employees of the hospital, but are granted 'staff privileges' which allow them to admit patients to the hospital for treatment.
- 5 The time notations use the 24-hour clock.
- 6 Thus although the two hospitals in this study were located in different states, all of the abbreviations used in the notes examined here were familiar to me.
- 7 In the United States, some states allow nurses (or nurses with certain levels of training) to order medications (Kovner, 2003: 39).
- 8 The normal baseline fetal heart rate is 120–160 beats per minute (Cunningham et al., 1997: 351).
- 9 In lay terms, the patient reported that her bag of waters had ruptured, resulting in the rather copious clear drainage of amniotic fluid that provides notice to the pregnant woman that this painless process has occurred.
- 10 Similarly, only a lawyer is permitted to sign letters written on firm letterhead with his or her name, unmodified by a professional title; all others must designate themselves as, e.g., Elizabeth Wright, Law Clerk [or 'Secretary', 'Legal Assistant', etc.] to Margaret Sutherland.

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