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En-case-ing the Patient: Disciplining Uncertainty in Medical Student Patient Presentations

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Abstract The problem-oriented medical record is the widespread, standardized format for presenting and recording information about patients, which is taught to future physicians early in their medical training. Based on our participant observation of medical training, we analyze the ways in which the patient presentation operates in medical training as a disciplinary technology that manages uncertainty in the clinical decision-making process. We uncover various mechanisms at work including the construction of a coherent narrative structure in which chaotic experiences are re-organized and re-interpreted to fit neatly in a linear plot with a predictable ending, the atomization of the patient as a whole into separable “problems,” the attempt to solve these “problems” as though they are independent of one another, and the mystification of translations in scale, which give rise to much of the uncertainty in medicine. Operating at the boundary of the chaotic and often ungraspable world of the suffering experience of the patient and the highly structured realm of the medical record, a patient presentation is one medium through which both a disciplined record of experience and disciplined medical practitioners are produced. This process functions to transform the human subject patient into a recognizable, generic clinical case, and the medical student into an identifiable, professional future physician.

We would like to dedicate this paper to Gay Becker, who initially encouraged us to take seriously the analysis of narratives in health and health care.

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Introduction

The clinic is both a new ‘carving up’ of things and the principle of their verbalization in a form which we have been accustomed to recognizing as the language of a ‘positive science’. (Foucault 1973, xviii)

Humans through history have grappled with and sought to manage uncertainty in diverse ways, from magic and witchcraft (e.g., Evans-Pritchard 1937) to technology and biomedicine (e.g., Fox 1957, 1980, 2000). While biomedicine actively reconfigures the topography of suffering and the body in the contemporary world, uncertainty has not been eliminated. Uncertainty disappears and reappears in the most peculiar places, revisiting sites it had previously abandoned and colonizing sites it previously ignored (Dumit 2000). For example, it was once thought that humans had won the battle against bacteria with the development of antibiotics. Shortly after victory was declared, certain bacteria developed resistance to the available antibiotics. Now, it is uncertain for what period of time each new antibiotic will protect the public and which nucleic acid mutations might bring resistance (Dehnel 2010). Biomedicine even creates its own, new forms of uncertainty through the risks and side-effects of treatment (Castel 1991, Fox 1980, Lupton 1999). Although medical students quickly learn that “uncertainty and death...[are] the only certainties,” uncertainty is continuously problematized because of its destabilizing effects (Fox 1980, p. 1). As Renee Fox notes, “uncertainty is not only regarded as a challenging and problematic constant, but also as a matter of serious concern because of the adverse ways it affects the work and role responsibilities of physicians and the fate of patients” (Fox 2000, p. 409).

While biomedicine itself is one source of uncertainty in clinical practice, there are many others, such as the impossibility of the communication of pain (e.g., Das 1996; Scarry 1987), the unresolved conflict between local and official biomedical forms of knowledge (e.g., Adams 2002; Lock 2009), and the inexact translations in scale between the population and the individual as well as between the individual and the test tube (e.g., Aronowitz 1998; Foucault 1973; Fox 2000; Rosenberg 2002). At the same time, physicians are expected to give their patients clear answers and explanations. Owing to its slippery and unpredictable nature, as well as its material consequences for patients and the anxiety it produces for physicians, uncertainty must be actively managed (Fox 1957; Kuipers 1989). There are many different ways in which biomedical practitioners attempt to tame uncertainty to make the daily practice of medicine both practical and fruitful for patients and for themselves.

In this article, we delineate the process and effects of learning one ubiquitous technology—known as the problem-oriented patient presentation—through which future biomedical physicians engage in “the semiotic reduction of uncertainty and disorder” (Kuipers 1989). Most often called simply “the patient presentation,” this form has two intimately related incarnations. The initial presentation of a patient

when they are first admitted to a hospital or first introduced in an outpatient clinic is called the “History and Physical.” All follow-up patient presentations in the inpatient and outpatient settings are termed “The SOAP Note.” Here, “SOAP” stands for the format through which a biomedical patient presentation is broken up into the following categories: “Subjective, Objective, Assessment, and Plan.” While there are many practices in medical training that aid in the transformation of students into physicians (e.g., Good and DeVecchio Good 1993; Fox 1988), the patient presentation is especially important due to the frequency with which it is performed and its centrality not only to the engagement between the medical team and the patient but also between the medical student and their career in the profession of medicine (Anspach 1988, Good and DeVecchio Good 2000). In this article, we illustrate how the overall structure of the problem-oriented patient presentation serves first to transform the uncertain, chaotic illness experience of the patient into an easily recognizable and diagnosable, “textbook” clinical case. We call this “en-case-ing” the patient, in other words, transforming the human individual and their unique suffering experiences into an abstract, generic case representing an acontextual disease entity. Second, we demonstrate the patient presentation functioning to discipline the uncertainty of experience, identity, and subjectivity of the medical student into a recognizable, professional physician–trainee. Finally, we argue that the problem-oriented patient presentation buries the uncertainty of everyday medical practice under the coherent metanarrative of universal biomedical science.

Narrative, Medicine, and Subjectivity

What counts in the things said by men is...that which systematizes them from the outset, thus making them thereafter endlessly accessible to new discourses and open to the task of transforming them. (Foucault 1973, p. xix)

There have been many notable social studies of narratives in medicine (see reviews by Kuipers 1989 and Mattingly and Garro 2000). The topics covered are broad, including the structure of biomedical narratives (Young 1995), everyday lay “tales” about illness (Briggs 1996), the importance of narrative emplotment to the understanding of the newly ill-self (Becker 1997; Kaufman 1988), the making of medicolegal documents out of complex medical procedures (Pettinari 1988), the construction of difficult and noncompliant patients out of nuanced situations (Taussig 1980), the meaning and importance of illness narratives to clinical practice (Kleinman 1989), the dialogical construction of patient narratives (Crenner 2005; Velpry 2008), and the soteriological functions of narrative in medicine (Charon 2004, 2006, 2007; Good 1994). Building on the research of Good and DeVecchio Good (2000), who analyze the processes by which medical students move from seeing the arbitrariness and interpretation inherent in narratives about patients to seeing these narratives as natural, and the work of Anspach (1988), who traces the ways in which patient presentations symbolically separate biological processes from persons and observations from those who make them, we seek to elucidate the processes by which the dual

functions of managing uncertainty and constructing physician subjectivity are accomplished through the medical student patient presentation.

In his review of narrative analysis in medical anthropology, Kuipers (1989) calls for a hybrid of situated interaction perspectives focused on micro-negotiations between physician and patient and social differentiation perspectives focused on power and abstracted biomedical discourse. He uses the term, “entextualization,” to denote the processes by which a given—to use Foucault’s words—“formulation” (situated, individual speech utterance) becomes detached, “decentered” from its immediate context to become a repeated, circulate-able “discursive statement” (Foucault 1972; Kuipers 1989). We take seriously this entreatment to consider the ways in which local, situated formulations become framed (c.f. Butler 2009) by the structure of the patient presentation such that they can travel temporally and geographically and such that they can function in the context of contemporary biomedicine. At the same time, we expand beyond Kuipers’ boundaries around the interactions between physician and patient to consider also the interactions within the medical team in the context of training. In this way, we interrogate the ways in which the structure of the patient presentation not only “entextualizes” the patient’s illness narrative but also transforms the subjectivity of the clinical trainee.

The Patient Presentation

The problem-oriented patient presentation is the most common—indeed hegemonic in Gramsci’s sense of widespread and largely unquestioned—structure in which written and verbal patient presentations take place in outpatient clinics and in inpatient wards in Western biomedicine. This format was proposed by the American academic physician, Lawrence Weed (1968), in his classic *New England Journal of Medicine* article. This format, organized around the physicians’ chronicling of the health “problems” of the patient, was intended to decrease medical error through standardization (Hurst 1971). In addition, proponents asserted that this format would improve efficiency, which was increasingly important in the context of intensifying market pressures on the health care sector of the American economy in the 1960s (Dunea 1978; Hurst 1971). Over the several years following Weed’s article, the problem-oriented structure became widespread, replacing what came to be known retrospectively as the “source-oriented medical record”—made up of myriad unprioritized notes of every member of the health care team (e.g., physicians, nurses, dieticians, social workers, etc.), which one of Weeds’ contemporaries sarcastically compared to “*the Greater Babylon Area Directory*” (Dunea 1978).

This general structure is utilized by medical students to present information on each patient multiple times per day to the intern, resident, and “attending” (faculty) physician during rounds (see Conrad 1988; Konner 1987). Both the History and Physical form and the SOAP note form have become such ubiquitous and unquestioned structures in medicine that current literature searches of these topics reveal only multitudes of “how to” articles (including their own Wikipedia pages). The narrative structure of the patient presentation has become deeply ingrained and is considered by many to be indispensable to the efficient practice of contemporary

biomedicine. In fact, beginning medical students regularly have the experience of presenting a patient's illness in conversational format to the attending, who is unable to hear what they had clearly stated because it was not organized in the expected structure. As we have seen in our ethnographic research, the problem-oriented patient presentation does meet its explicit goal of fostering the efficient communication of large amounts of information among biomedical professionals. However, the patient presentation is not merely the simple structure for conveying information that it may seem on the surface, but also a complex and subtle mechanism for masking and managing the uncertainty of human experience, the uncertainty experienced in the subjectivity of the trainee, and the uncertainty of biomedical science itself.

Methods

Each of the co-authors completed the third and fourth years of medical school after completing doctoral training in cultural and medical anthropology. The authors completed the first 2 years of medical school while beginning graduate studies in anthropology. In the most common medical school curriculum model, the general outlines of which were followed in our medical training, the first 2 years of medical training focus on the basic science coursework, such as anatomy, physiology, pharmacology, and cell biology. During these first years also, medical trainees are introduced to the basics of patient interviewing, physical examination, and patient presentations. The third and fourth years of medical school consist of full-time clinical rotations, including internal medicine, surgery, family medicine, obstetrics and gynecology, and pediatrics. During the first 2 years of medical school, the authors participated in and took field notes during patient presentation courses. During the final 2 years of clinical rotations, the authors observed over 2000 and performed over one thousand patient presentations. During the following 4 years of internship, residency, and fellowship, each author observed approximately another one thousand patient presentations by medical students each year. In all of these years, the authors observed not only medical students and participated as medical students, but also observed the responses of attendings, fellows, residents, interns, and patients as well as participated as fellows, residents, interns, and on occasions, as patients or parents of patients. Our participant observation of clinical rotations during medical school, internship, residency, and fellowship took place in over 20 different hospitals and clinics in federal, state, county, and private health systems in several states throughout the US. Each author took field notes on the process of clinical training during each rotation. In addition, at the end of each clinical rotation, the authors interviewed each other for approximately 2 hours regarding their experiences that month. Each of these interviews was recorded and transcribed.

This article analyzes our ethnographic data from medical school to understand the process and effects of learning the patient presentation. Given our focus on the management of uncertainty by the medical student through the patient presentation as a potential site of the production of the subjectivity of the clinical trainee, we focus primarily on the experiences and discursive practices of medical students. Learning

to present patients, according to Good and DeIVecchio Good's (2000) medical student informants, is "probably the biggest thing medical students learn". We began learning the problem-oriented patient presentation in our patient interviewing course during the first year of medical school, and then redoubled this learning through immersion during the intensive clinical rotations of the third year. The methodology of participant observation as well as the study of both the first two "preclinical" years and the last two "clinical" years highlights the difference between the ideals of medical education and the reality of hands-on clinical training.

In order to protect the identities of the physicians and patients from whom we learned during medical school, we present here our ethnographic vignettes as composites of real events and situations. The ironic downside of this choice is the loss of contextual specificity in an article critiquing, among other things, the erasure of individual difference in the service of patient presentations as structured cases. However, we have chosen to avoid the use of identifying information from any one individual precisely because of the specific context of confidentiality, privacy, vulnerability, and stigma in contemporary American medicine. In addition, such composite vignettes allow us to portray and analyze the contours of multiple real events within a single example.

Patient Presentation Vignette

To illustrate the ways in which the patient presentation manages and transforms uncertainty, we present a vignette of our interactions as medical students with our attending physicians during the initial "History and Physical" presentation of a patient newly admitted to the hospital. This is a common event that occurs many times throughout the day in a medical student's typical "on-call" or "admitting" shift. Although the patient is the same in both presentations, the first is enacted by a medical student on their first rotation of their third year of medical school, and the second is enacted by a seasoned medical student "sub-intern" in their fourth year of medical school, who is a member of the same medical team. "Sub-intern" is the temporary title given to each fourth year medical student during the required 1 or 2 months spent doing the full duties of an intern and being evaluated on their skills and efficiency in this role.

Third-Year Medical Student

I just met Mrs. Jones and she's really nice, but going through a difficult situation. At first, I couldn't interview her because she was pretty upset about the strange "chalky" diet of hospital food she is getting. I helped her talk with the nurse about it and she became much more cooperative. It turns out she is 70 years old, lives on her own just down the road a few blocks, and is going through significant financial hardship and stress. Her daughter got married in late July in New Jersey. It was very expensive, and she had to take out loans to help pay. She also did a lot of work to prepare for the wedding. This was stressful for her, and she thinks the stress led to pain in her right foot. Her right foot became red and

puffy and then a sore opened up. When I pry for more information, she says that she was wearing tight high-heeled shoes and that she had to do a lot of heavy lifting, for example setting up tables for the wedding reception. She says the same thing happened to her aunt when her daughter got married and it turned out to be a skin cancer that she had to have surgically removed. She noticed that the sore on her foot is starting to smell bad, kind of like her neighbor's compost pile, and she doesn't remember her aunt having this problem. There's also green liquid oozing from the wound and staining her socks. That's got her really worried. She's also really worried because the wedding reception went way over budget and she is not sure how she will be able to pay for it on top of rent, electricity, food, and now this hospital stay. She also has diabetes and worries about being able to afford her insulin and other medications. She even had to borrow money from her sister to make the clinic co-pay last week. In summary, I'm not sure if her ankle ulcer was caused by trauma during the wedding preparations, by swelling and poor blood flow, by a spider bite and then subsequent swelling, by an infection given her increased risk due to diabetes, or maybe by skin cancer, given her family history. It's hard to tell because the surface is worn away so I cannot do a very precise examination.

Attending Physician

I'm sorry, but it's hard to follow what you're saying. Who is Mrs. Jones and why is she here? [To Fourth Year Medical Student] Could *you* please present the patient in an organized manner? Remember to simplify and include only the pertinent information. Also, don't forget to "put your nickel down" on the diagnosis you think is right and what we should do. I want you to convince us. If you're wrong, I'll correct you later.

Fourth-Year Medical Student

Mrs. Jones is a 70 year old woman with a past medical history of insulin-dependent diabetes who is here due to pain and ulceration of her right foot. She states that she first developed pain, erythema, and edema in her right foot 2 months ago while lifting heavy objects at her daughter's wedding. She endorses wearing uncomfortable, high-heeled shoes. A few days later, an ulceration appeared at the site of her pain, which has since grown in size. She states that a greenish, foul smelling discharge began 5 days ago. She denies any noncompliance with her insulin regimen and denies any substance use, though her primary care provider states that she has had difficulty taking her insulin regularly and does not eat a diabetic diet. Her past medical history is significant for insulin-dependent diabetes, depression, high blood pressure, and hyperlipidemia. She has a family history of basal cell carcinoma. Her social history is significant for smoking, though she denies alcohol or drug use, and she lives in a hotel and has difficulty affording her supplies. Her vital signs are: Temperature 98.4, Pulse 85, Blood Pressure 115/70. In general, she appears anxious. Her heart beat is regular rate and rhythm, no murmurs were appreciated, though the

exam is difficult due to body habitus. Lungs are clear to auscultation bilaterally with no rales, wheezes, or rhonchi. Her abdomen is non-tender and non-distended. Her radial pulses are palpable and equal. Her pedal pulses are not palpable. The right medial, dorsal foot is erythematous, tender, edematous and slightly warm to the touch. There is an ulcer that is approximately 4 by 3 cm with green-and-white colored, foul-smelling discharge. Her white count is 20.2 and there is a neutrophilic shift. Her hemoglobin A1C is 9.2.

Assessment: In summary, we have a 70-year-old woman with insulin-dependent diabetes and poor pedal circulation with an infected diabetic foot ulcer.

Plan: Problem #1: Infected diabetic foot ulcer: We have ordered foot X-rays to rule out underlying osteomyelitis. We will call a podiatry consult to look at her foot and dress her wound. We'll call an infectious disease consult to advise us on the best antibiotic regimen. For now, we started her on bactrim, given the high incidence of MRSA in the area. Problem #2: Insulin-dependent Diabetes Mellitus: We have instituted the insulin sliding scale on top of her usual evening dose of 12 units of glargine. We will adjust the dose daily based on the finger sticks. Problem #3: Vasculopathy: We have ordered an ankle brachial index to find out the extent of her vascular problem. We will wait to call a vascular surgery consult until we have those results. Problem #4: Noncompliance: We have asked the dietician to talk with the patient about her diet, and we stressed the importance of taking her insulin exactly as prescribed. Problem #5: Social: The patient smokes and has difficulty affording her medicines. We will refer her to social work to see if they can connect her with resources to quit smoking and provide any assistance in obtaining her medical supplies.

Attending Physician

[To Fourth Year Medical Student] Strong presentation. You will make a great intern.

The new third-year medical student's attempt to tell the attending physician about her patient is structured in a typical conversational format. She recounts the patient's illness narrative, following a chronological order of events starting where the patient began and ending where the patient finished. The narrative conveys substantial uncertainty both regarding which events should be considered as possible contributors to the patient's plight and what the ultimate diagnosis is. The story as conveyed by the patient is a jumble of concerns regarding her daughter's wedding, financial and physical stressors, her diabetes, and her difficulty affording medications. It is common for the medical students, when first starting the hospital component of their training, to have difficulty sorting through all of the components of the patient's story and determining which are medically relevant to the patient's condition. The medical students' confusion and desire to include all of the chaotic details of the patient's reality are evident in her attempt to present the patient in this temporal conversational format. The medical student is quickly and directly

reminded that this conversational structure is not functional in the context of rounds in a busy hospital where time is the essence. Multiple times a day, the medical student is made to practice the problem-oriented patient presentation format until, as a “sub-intern” fourth year, it comes naturally. The transformation of the patient’s illness narrative into a biomedical patient presentation can be seen as a ubiquitous instance of medical entextualization (Kuipers 1989), the structure and details of which are analyzed below.

The Chief Complaint

The patient presentation is preceded by a brief, one to two sentence introduction containing the patient’s age and gender (and sometimes ethnicity), the problem for which they were admitted, and the brief health history that is most pertinent to that problem. This section, called the “chief complaint,” is felt by some attending physicians to be the most important part of the presentation. The management of uncertainty on the part of the medical trainee is visible first in the prioritizing of the patient’s problems to choose which one is “chief” among them and second in the choice as to which aspects of the patient’s prior history are most relevant. This problem is chief not necessarily because it is most important to the patient and not entirely because it was the stated cause for the patient’s visit, but rather because it begins the narrative by leading the listener in the direction of the diagnosis suspected by the medical student. Stating the primary problem up front turns the structure of a temporal conversational narrative on its head—the end of the patient’s narrative becomes the beginning of the patient presentation. Thus, the end of the presentation—the diagnosis—affects the rest of the patient presentation, including its very beginning (see Rosenberg 2002). This prior classification of the disease by the medical student often differs significantly from the explanation by the patient (c.f. Kleinman 1989, see also Good 1994 for a review of the anthropology of illness classifications). In the example above, the fourth-year medical student deemed only the patient’s pre-existing diabetes worthy of inclusion in the chief complaint section. Selecting a single problem and limiting the background data provided in the chief complaint focuses attention and “bounds” the problem in such a way that it becomes more certain and manageable. Much of the social, financial, and psychological background that the patient emphasized is simplified and relegated to the “subjective,” history section of the presentation.

The Patient and The “Subjective”

During our first year of medical school, we completed a required course in which we learned how to interview patients and prepare patient presentations. This course emphasized that the first section of the patient presentation should be a patient’s description of their illness in their own words. In the initial presentation, this section focuses on the “history” provided by the patient and includes the “History of Present Illness,” “Past Medical History,” “Family History,” and “Social History.”

In the follow-up SOAP presentation, this is the “subjective” section. The ideal version of this section of the presentation accurately recounts the raw experience of the patient and their social and economic circumstances, and summarizes their explanatory models (Kleinman 1989) of their illness. Much of this drive to include a patient’s perspective derived from the work of Kleinman (1989) and Good (1994) and was further popularized by Fadiman (1998).

This ideal version of the first section of the patient presentation, which we read about and practiced during mock interviews and mock presentations, made sense in the first 2 years of our training. As soon as we entered the world of clinical practice in the hospital and outpatient clinic, however, the priorities changed. It quickly became clear that the real experience of the patients that we came into contact with was too chaotic and unstructured to fit into a concise patient presentation. As in the example above, we were frequently interrupted by attending physicians who felt we were dwelling too long on the details of the patient’s experience. As explained by one of Good and DelVecchio Good’s (2000) medical student informants, “you don’t talk about your patient, you ‘present’ your patient”. When the attending in the above example tells the sub-intern to present the patient in an organized manner, they are not just asking for a specific organizational structure to be used, they are asking also for the information itself to be tidied and trimmed. While the ideal version of the “subjective” history section of the presentation would be constructed from the raw experience of the patient, the trainee learns that a particular sequence of translations is required to manage the chaos of the patient’s experience and present it in such a way that it can be heard efficiently by the attending. All of the information that the patient felt was pertinent to their situation but which is deemed extraneous by the biomedical model of their illness must be edited.

First, the student must limit and background the portions of the patient’s illness narrative—particularly social and economic circumstances—which would generate uncertainty as to the potential causes and treatments of the patient’s problem within a medical framework. We do not mean to give the impression that the medical profession is blind to the hardships caused by economics and social stratification. It is rather that the current structure of health care constrains the ability of the medical team to address such problems because of lack of time and resources in the midst of other pressing priorities in the hospital. As the attending physician can do little to ameliorate their patient’s financial problems, they shift the focus of attention to problems that medicine can help. This filters down to the medical student, who is encouraged to focus on the proximal biological or behavioral causes of medical problems and address these factors rather than distal social and financial factors. Thus, the patient presentation reflects and reproduces the biomedicalization of human suffering (Scheper-Hughes and Lock 1987), defining suffering as primarily biomedical in nature and solution, thus symbolically moving it outside the realm of political, social, and moral critique. In the example above, we see that much of the information the patient provided regarding the financial and social circumstances surrounding her foot pain is judged to be inconsequential and superfluous to the attending physician. As has happened numerous times to each of the authors during training, the attending was able to hear and understand the sequence of events much more clearly when these realities are curtailed. To deal with the patient’s social,

economic, and political realities in a manageable way, they are bounded in one subsection of the history under the heading, “Social History.” Most often, these realities are reduced to a tally of “risk behaviors” related to alcohol, tobacco, and illicit substances. In this way, the uncertainty related to the patient’s social and economic position is limited and controlled.

Second, as mentioned related to the chief complaint, the trainee is taught to emphasize the parts of the patient’s story that fit with the presumptive diagnosis and deemphasize those that do not. Thus, while the patient presentation appears to be a transparent story of events in an illness leading to a specific diagnosis, it can also be thought of as a recursive instrument in which the final diagnosis structures the story preceding it (c.f. Rosenberg 2002). As medical students, we were often told to “put your nickel down.” This phrase, in the context of medical school, meant that we should turn our patient presentations into arguments, directing the listener toward the diagnoses we believed matched each case. This is achieved by excluding certain parts of the patient’s experience (especially those that do not support one’s ultimate diagnosis) and emphasizing or highlighting others (those that paint the patient as a case of a particular disease). This limits uncertainty, minimizing any factors not directly related to the ultimate medical diagnosis.

In the example above, the fourth-year medical student has already reasoned that the patient has an infected diabetic foot ulcer. Therefore, in the first section of the presentation, she includes and emphasizes the portions of the patient’s story, which fit—the diabetic past medical history, the tight shoes, the heavy lifting, and the temporal evolution of the lesion. In addition, this student adds a comment from the patient’s primary care provider regarding possible non-adherence with diet and insulin to destabilize the patient’s statement that she had been taking her insulin as directed. While this does not fit with the ideal version of the subjective section of a patient presentation in which everything should be in the patient’s own words, it is used as evidence to support the medical student’s conclusion that the patient’s “poorly controlled diabetes” is partly to blame for her foot ulcer. This inclusion simultaneously fosters certainty, leading the listener toward the final diagnosis, and undermines the perception of the patient as an agent or subject in their medical narrative.

Third, medical students learn to replace the patient’s detailed and sometimes messy descriptions of their experiences with biomedical terminology that is easily and quickly understood by other members of the medical team. In the example above, the patient’s “red” and “puffy” foot becomes “erythematous” and “edematous.” Rather than a “sore opening up,” her foot develops an “ulceration.” This has the effect of distancing the description of events from the personal human realm of experience (c.f. Cicourel 1983) and categorizing the narrative into recognizable symptoms and signs for diagnostic and clinical consumption. It obscures the uncertainty of experience by codifying the chaotic and sometimes ambiguous descriptions provided by patients into precise clinical language that is interpreted efficiently by the attending physician.

On a more profound level, this transformation of language involved a transformation of our own subjectivity, distancing us from the world of the patient toward that of the biomedical professional. Through chastisement and praise,

medical students are trained to engage in this translation to be identified as members of the medical profession. In fact, in one small group course, the professor told a story about one student who “identified too closely with his patient and not closely enough with the medical team” and then was reprimanded by the medical school administration for having poor “professionalism.” Though this story was never elaborated on, it had the effect on the students of instilling fear, leading us to actively manage our language use even more carefully to be identified as professional.

In our first year patient interview course, we were taught also to explore the patient’s belief system surrounding their illness and to include this in the “subjective,” history section. However, we learned during third- and fourth-year clinical rotations not to include these in the presentation. Functionally, the exclusion of the patient’s explanatory models of illness avoids plurality in disease categorization in the presentation and thereby decreases uncertainty. As already noted in the above vignette, the medical student largely avoids referencing the patient’s concerns about economic strain as a causative factor because it does not fit within the primary final diagnosis. As another example, one of the authors had an experience in medical school of being scolded by an attending for including a patient’s description of their illness causation in the “subjective” section of their follow-up SOAP Note. This attending cited the potential for malpractice as the reason for redacting the section and taking out the patient’s explanatory models. This attending explained that including the patient’s “beliefs” (c.f. Good 1994) in the written SOAP Note without further addressing them in the “plan” through further testing or treatment could leave the team open for litigation. Thus, including the patient’s explanatory models increases uncertainty not only related to the primary diagnosis in the presentation but also in terms of the overall legal standing of the medical team.

Fourth, medical students learn to employ certain verbs in the “subjective” section, such as “complain,” “deny,” “claim,” “endorse.” These verbs, called “account markers” by sociologists of discourse (e.g., Anspach 1988), function to place the patient’s explanations and descriptions in the category of “subjective belief” as opposed to the category of “objective knowledge,” in turn reserved for the explanations and descriptions of the biomedical practitioner (Good 1994). In addition, phrases such as “the patient failed prednisone” are employed to bracket uncertainty and unpredictability and remove the blame from the realm of the physician and biomedical technology and place it squarely in the realm of the patient. In these ways, the uncertainty and “idiosyncrasy” of individual human suffering (Aronowitz 1998) is erased in the interest of efficiency, coherence, and certainty.

The Medical Trainee and The “Objective”

The second section of the patient presentation is labeled “Physical Exam” in the initial presentation and “Objective” in the follow-up presentation. In our patient interviewing course during the first 2 years of medical school, we were taught that the “objective” exam section should contain only facts and exam findings without any interpretation. Anspach makes the point that the linguistic omission of the agent

in this section implies the epistemology of biomedicine in which the observer is irrelevant to what is being observed, i.e., “anyone would have ‘noted’ the same ‘thing’” (1988, p. 367). Unlike the “subjective” section in which the patient’s observations are translated, the “objective” section is supposed to be the location of the medical professional’s unbiased observations. This idealized version of the “objective” physical exam section, however, does not match the actual practiced version. As described above for the “subjective” history section, once a medical student transitions to the hospital and clinic it becomes clear that they cannot include every detail and datum as the litany would overwhelm the listener (and simultaneously destabilize their claim to the status of “future physician”). There is an expectation that the physical exam will be described concisely and in precise medical language. Of course, the inclusion of certain observations and the simplification of the narrative into a “case,” necessarily involves prioritization and choice. We call this “en-case-ing the patient,” which involves editing the individual human social actor and their idiosyncratic suffering into a generic case of an abstract disease entity based on the previously determined end result of the case, the diagnosis.

In other words, the very structuring of the “objective” physical examination section clearly inheres “subjective” interpretation. Again, this interpretive structuring is part of the act of leading the listener to a particular diagnostic entity. One clear example is the heart murmur. When listening to a murmur, the medical student hears a whoosh of sound that could be described in many different ways. Because the structure of the vessels, valves, and chambers may be different in each heart and because the experiences, perspectives, and expectations may be different in each listener, there are infinite different heart sounds that could be heard (see Kuriyama 1999 for a related discussion of the multiple ways to understand the pulse). One could imagine that this would lead to an infinite number of possible descriptions. For example, one murmur could be described as “the sound of a crashing wave,” another might be “the staccato beating of the rain on a window pane,” and a third might simply be “Velcro-like.” However, these would be considered inappropriate descriptions within biomedicine. There are a set number of proscribed terms that one may use to categorize a murmur, and the trainee is admonished if he/she strays from these. For example, a murmur should be categorized as “crescendo–decrescendo,” “blowing,” “harsh,” “diastolic,” or “systolic.” As medical students, often we were not sure what we were hearing; however, we were taught to pick from among these official biomedical terms. Such terms not only allow the communication of exam findings such that treatments based on generalized, aggregated findings may be initiated for the patient, but also foster the perception of the medical student as a future physician. In addition, trainees often describe the sound using the terminology that they have learned applies to the type of murmur the patient should have based on a known defect. For example, the student may have noticed in the patient’s chart ahead of time the diagnosis of “aortic stenosis” and thus chosen to describe the murmur as “systolic, crescendo–decrescendo.” In these ways, the “objective” section contains not only interpretations but also retrospective reconstructions based on prior diagnoses.

Presentations of heart murmurs provide another example of the ways in which the uncertainty of the trainee may be shifted symbolically to the patient. As in the above

example, when a student is especially unsure of the characteristics, timing, appropriate description or even existence of a murmur, they may state that “the murmur was difficult to ascertain due to the patient’s body habitus” (in this context, “habitus” indicates the size and shape of the body, particularly the obese body). This statement takes the uncertainty of experience and knowledge of the trainee and links it to the body of the patient instead of stating simply, “I am not sure what kind of murmur it was or whether she even had a murmur.” Medical sociologists have called this discursive process “covering,” whereby a trainee’s language helps them maintain their credibility and avoid detailed scrutiny (e.g., Anspach 1988). This form of covering is perfectly acceptable in medical school and is even encouraged indirectly by attending physicians. It is often easier to symbolically blame the patient for any uncertainty that arises from the physical exam than to admit to uncertainty on the part of the examiner and then face further questioning.

The “objective” physical exam section contains also many catch phrases, such as “clear to auscultation bilaterally,” indicating that the examiner listened to both lungs and did not hear anything indicative of a breathing problem. These phrases are important in establishing the professional nature of the presentation and the status of the trainee as a future physician. They also simplify the description of exam findings and aid efficiency. In addition, they imply the knowledge and performance of a set of examination maneuvers. Rather than narrating, “I asked the patient to pull up the back of her gown and then placed my stethoscope over one lung field and then another and listened for one full breath in each, respectively,” the student is encouraged to imply all of this—as well as their claim to citizenship in the biomedical profession—with the catch phrase, “clear to auscultation bilaterally.” As we have observed numerous times in practice, such phrases often hide the fact that many health professionals and trainees are not able to complete full examinations in every instance, largely due to impossible time pressures. This practice can serve as another effective form of covering. Several such catch phrases are included in the vignette above.

In addition, when the above patient arrived at the hospital emergency room, many laboratory and radiological tests were performed. Rather than state all of these values individually, the trainee mentions and emphasizes values that reinforce their diagnostic conclusion. The patient has a high white blood cell count with a neutrophilic shift, which is often seen in the setting of infection, and the patient has a high hemoglobin A1C, which is often seen in the setting of poorly controlled diabetes. Here again, we see that the prior commitment to a diagnosis informs the selection of data for the patient presentation.

Atomization in the “Assessment and Plan”

The final section of the patient presentation in both the initial and follow-up contexts is the “Assessment and Plan.” It is in this section that the full transformation from the unique human patient in their complex social context to a typical, generic case of a particular disease entity is made complete. For this section, the student is instructed to encapsulate the patient presentation thus far,

including presumed diagnosis, and enumerate the appropriate follow-up tests and treatments to be provided. As Gordon (1988) points out, biomedicine does not address the patient as a coherent whole. Instead, biomedicine operates through reductionism and atomization, breaking down the whole into a series of parts and then treating these parts as if they are not inextricably interrelated. In the “Assessment and Plan,” this is accomplished by listing a series of “problems” and then addressing each—as though independent—with a separate “plan.” Through this deconstruction of the patient into problems and the reconstruction of the patient through myriad distinct plans, the uncertainty of the patient’s subjective experience is erased in favor of mechanistic reductionism. Each problem can then be approached as though independent from the human patient and their social and economic situation.

Early in medical school, we found this reductionism foreign and difficult to accomplish. In the above example, the third-year student attempts to explain the patient’s situation in a temporal, conversational narrative. She perceives the combination of social, economic, physical, pharmaceutical, and dietary circumstances as an interrelated whole and presents them as such. For example, the student in the above example may have perceived that the patient’s socioeconomic circumstances—such as her daughter’s wedding—may have led the patient to intermittent insulin use, which led to worsening blood sugar control, impaired vascular function, and impaired wound healing culminating in an infected foot ulcer that, in turn, further worsened the patient’s blood sugar control, vascular function, and wound healing, not to mention ability to take care of herself and her family. To the busy attending, however, this presentation is inefficient and even confusing. The narrative sounds like a jumble of issues with no clear entry-point for amelioration using the tools available in biomedicine. When the patient’s illness narrative is separated into independent problems via the problem-oriented patient presentation, however, each piece is examined as a case of a particular disease entity and then treated appropriately. However, for early medical students this can be imagined in multiple different ways. Should the foot ulcer be listed as a qualifier under the problem of diabetes? Should possible non-adherence be listed as its own problem? The unitary experience of suffering of the patient in the above example becomes four problems: Problem #1: Infected diabetic foot ulcer; Problem #2: Insulin-dependent Diabetes Mellitus; Problem #3: Vasculopathy; Problem #4: Nonadherence.

Weed proposed the problem-oriented medical record (1968) with the explicit goals of decreasing the risk that any of the patient’s problems be forgotten while simultaneously increasing efficiency. The breaking down of the whole into multiple smaller parts does succeed in making it more efficient for the team to grasp the pieces, work on them with discreet actions such as calling the appropriate consultants, and indirectly to justify billing. This separation also increases the likelihood that each problem will be remembered and dealt with on consecutive days. It is the very complexity of the patient as an interrelated whole that must be erased, or at least relegated to the sidelines, for biomedicine to operate effectively. This, in the above example, has the co-effect of displacing those very issues that the patient views as the heart of her problem—her social, economic, and family circumstances. Simultaneously, the simplicity of the final list of problems

obfuscates the work involved as the medical student manages uncertainty, deciding how to categorize, order, and separate the components of the patient's sickness into distinct, independent pieces.

This atomization of the illness narrative into actionable problems is necessary not only for the functioning of the biomedical system, but also for the production of medical student subjectivity. The longer one is in biomedical training, the more natural and taken-for-granted the process of transformation of a patient's illness narrative into a "problem list" becomes. This internal disciplinary process, operating through the externality of the patient presentation with its necessary translations, inclusions, exclusions, and structuring, slowly transplants the trainee from the category "student" into that of "physician." In other words, as the subjectivity of the medical student changes such that this reductionist and abstracting clinical gaze (Foucault 1973) becomes second nature, the medical student becomes recognized as belonging among biomedical professionals. Not only is the student seen as a future physician, as having "professionalism," but also as someone with whom the attendings, residents, and interns want to work because they are understood to be someone who is efficient and effective in the health care system.

After the reductionist experiment of dissecting the patient's narrative into individual problems, these pieces can then be reconfigured to produce a coherent narrative. The experience of the patient and the laboratory and physical exam findings are reformulated to fit within a specific category of disease such that the patient may be compartmentalized as a case of that disease. Thus, the disease is reified as a universal, everywhere-the-same entity as opposed to its unique, situated instances in each individual (Rosenberg 2002). The very core of "evidence-based medicine" rests on the assumption that each patient can be viewed as a standardized case of a particular disease. This derives from the stated purpose of evidence-based medicine, which is to apply the results of clinical trials, formulated in broad categories, to individual patients (Fox 2000, p. 417). In doing so, the particularities of the patient must be erased in favor of the similarities to the group. The net effect is that the patient is viewed as a sum of their problems rather than a complex, interrelated whole.

Conclusion

Through our vignette above, we have attempted to illustrate the functionality of the problem-oriented patient presentation in transforming complex, situated, individual human experience into decontextualized cases of universalized, standardized diseases. This technology supports "the notion that diseases can and should be thought of as entities existing outside the unique manifestations of illness in particular [persons]" (Rosenberg 2002). This transformation is achieved through a series of erasures, translations, separations, and reconstructions. The first line, stating the "chief complaint," inverts the structure of a temporal conversational narrative by pointing to the final outcome before its antecedent events. In the "subjective" history section, the student must selectively edit and translate the

patient's version of reality to point the listener toward a specific diagnosis. In the "objective" physical examination section, the unavoidable uncertainty in physical exam findings and interpretation inherent to laboratory findings are erased through the certainty of medical terminology. In the "Assessment and Plan," the patient's complex, uncertain experience is dissected into a list of diagnoses that can be approached with their corresponding treatments. Particularities are erased in favor of identifying commonalities with a standardized case of a given disease. In the words of Foucault, "individual variations are spontaneously effaced by integration" within the gaze of the clinic (1973). According to Rosenberg, "the uniqueness of experience and particular clinical interactions" are converted "into a portable and collectively accessible form of data" through diagnosis (2002). Crenner describes the process by which patients' narratives become "medically recognizable account[s] of a disease" in the medical chart in the emerging technical, scientific biomedicine in the America of the early twentieth-century (2005, p. 86). In these ways, the problem-oriented patient presentation effectively en-cases the human patient for efficient biomedical consumption.

However, biomedicine's patient presentation is not only en-case-ing the individual, idiosyncratic human patient into an abstract, generic case of a reified disease. It is clear also that this textbook case then revisits and acts on the individual through symbolic and material mechanisms, treatments, therapies, procedures, reimbursements, denials, hopes, fears, subjectivities, stigmas, and biosocialities (see Rabinow 1992; Taussig 1980; Freeman and Sarah 1986). As stated above, our biomedical understandings of disease derive in large part from our ability to aggregate individuals into statistical calculations in order to develop "evidence based" treatment plans (c.f. Foucault 1973; Fox 2000; Rosenberg 2002). In this way, the individual patient is en-cased and aggregated into the abstract disease. This mutual constitution of the individual and the collective is one primary activity of biomedicine in general and the patient presentation specifically.

However, the discursive movement from patient to case and back again is not our only interest here. We have been interested in the patient presentation particularly in the context of clinical training, how it is learned and how it affects the trainee. The problem-oriented presentation disciplines uncertainty not only in the translation from individual to population, but also in the subjectivity of the clinician trainee. As discussed above, the medical student, over time, adopts the linguistic form and specific terms of the patient presentation. As Good and DelVecchio Good have shown, medical students come to identify more closely with the physician team and distance themselves from the patient simultaneous with the process of biomedical language coming to appear natural to them (2000). This is one way in which medical students begin to perform "certitude" even while they do not experience it (Fox 1980). The abstraction of the patient in the problem-oriented presentation allows also for the development of the dynamic equilibrium of "detached concern" (Fox 1988), understood to be necessary in much of contemporary biomedicine. In this article, we have focused on the uncertainties and anxieties of the medical student as they relate to their boundary work of performing citizenship in the biomedical profession. In other words, the perceived "professionalism" of a medical student is determined in part by their ability to effectively and efficiently

wield the technology of the patient presentation, especially its technical terminology, separation of subject and object, and dissection of patient experience into a problem list. This perceived professionalism, then, determines to what degree they belong and are welcomed into the category, future physician (c.f. Bosk 1981).

The patient presentation is one technology that allows biomedicine to operate in a complex and chaotic world full of uncertainty. This technology allows for the efficient functioning of biomedicine within the contemporary American context of health care, transforms the chaotic experiences of the patient into a recognizable case, establishes the medical student as an identifiable future physician, and serves as one tool within the broad project of transforming the uncertainty of clinical experience into the seemingly coherent, rational, and universal metanarrative of science.

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