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MEDICAL STUDENTS' FIRST CLINICAL EXPERIENCES OF DEATH

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by

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Graduate Program in Health and Rehabilitation Sciences

Submitted in partial fulfillment
of the requirements for the degree of
Master of Science

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THE UNIVERSITY OF WESTERN ONTARIO
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Medical Students' First Clinical Experience of Death

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Abstract

Title: Medical Students' First Clinical Experiences of Death

Research Objective: To elucidate medical students' first experiences with patient death using grounded theory and autoethnographic reflection.

Methods: Final-year medical students at the Schulich School of Medicine & Dentistry were invited by email to share their experience of the death of a patient in their care, either in an interview or focus group, or through email. The interviews and focus group were recorded and transcribed verbatim, which, along with the email responses, underwent qualitative analysis using grounded theory (Strauss and Corbin 1994) supported by Nudist N6™ software. Ethics approval was obtained from University of Western Ontario Research Ethics Board #10351E. In the final section, the author reflects on her own experiences of patient death and the research process in an autoethnographic piece.

Findings: Twenty-nine students had experienced the death of a patient and chose to participate (20 interviews, 5 in a focus group, 4 through email). Beginning with the open code stage that classified deaths as "old", "young", or "unexpected", an axial stage of coding revealed seven major themes prevalent in students' death experiences: (i) "preparation"; (ii) "death event"; (iii)"feelings"; (iv) "role of clinical clerk"; (v) "differential factors between death"; (vi) "closure"; and (vii) "relationships". These themes in turn allow a cyclical model of student experience to be generated, proceeding in five stages; (i) "preparation"; (ii) "the event itself"; (iii) "the crisis"; (iv) "the resolution"; and (v) "the lessons learned". In "preparation" students begin with their personal experience and preclinical instruction. During "the event itself", students may encounter old, young or unexpected deaths, that may precipitate some degree of "crisis". In the "resolution" phase, coping mechanisms included rationalization, contemplation, or learning. The "lessons learned" not only shape medical students' understanding the death experience of future patients and their own experience of such deaths, but of their professional identity. In the final piece, the author reveals some of her own experience with patient death.

Keywords: Medical students, Death, Grounded theory, Autoethnography

Co-Authorship Statement

The first two articles of this integrated-article format thesis, namely “Medical Students’ Perceptions of Ethical Dilemmas in Clinical Clerkship” and “Medical Students’ First Clinical Experiences of Death” were originally conceptualized and written by Emily Kelly. Jeff Nisker and Anne Kinsella have contributed to the writing of these articles only as editors giving suggestions to Emily Kelly to improve the articles’ chances of publication. Their contribution has been in the areas of formatting and writing style. The majority of the writing in both articles was done by Emily Kelly. The third article in this thesis, “The Serpent God” was written entirely by Emily Kelly.

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Preface

Let me tell you the story of the first time a patient died under my care. I was a medical student doing my first clinical rotation in the hospital. She was a 92-year-old woman, very cheerful, bright and pink-faced, down in the emergency room waiting to be seen by our medical team. I had just come off a night of being on-call, and I was tired. She had chest pain. We ordered a CAT scan to check on an aortic aneurysm she knew she had. She was so nice, so friendly and healthy looking, and so “with it” mentally, that I said; "Man I wish I look like that when I'm 92!"

I looked over the CAT scan on a computer screen in the team room four floors above. She had a very impressive aneurysm, quite gigantic. I almost laughed it was so huge. It was the same size as her liver. I went on about my day. Later I had a call from the emergency room. She was dead. Could I do some paperwork downstairs?

When I saw her again, she was really, really, dead. Blue, stiff, and waxy-looking. Only two hours has passed since I'd seen her in the morning, but she was unrecognizably unlike herself. Someone asked me to fill out the death certificate. I knew enough to know that wasn't my job. Then they asked me to call her next of kin. So I did. I said "did you bring Mrs. M to the hospital last night?" Yes, she said, they were neighbors and friends and Mrs. M hadn't been feeling well. "I'm sorry, but she's passed away." Shock and a little cry of pain on the other end of the phone. "I'm very sorry for your loss", I said. And we were done. I felt terribly efficient and hard-nosed about it. At no time in the three years since then have I informed another person about a loved one's death. That was the first, and I'd only been working a few weeks.

It wasn't what I expected. But then, no one else's first death was quite what I expected either.

Introduction

The thread that connects this thesis together is medical students' experiences of difficult moments in their professional development, with particular attention to their first experiences with the death of a patient in their care.

I have begun by telling you my own "first death" story because I was a medical student myself at the same time as being a qualitative research masters' student in the field of health professional education, and am now in training as a family doctor. In this introduction, I will introduce the basic ideas of each of the three papers that constitute this master's thesis: "Medical Students' Perceptions of Ethical Dilemmas in Clinical Clerkship", "Medical Students' First Clinical Experiences of Death" and "The Serpent God". This introduction will also provide justification for the divergent methodologies demonstrated in each paper. Why I've chosen to begin with a story about my own experience should be apparent by the end of this section. The last paper in this thesis will end with another story of a "first death".

"Medical Students' Perceptions of Ethical Dilemmas in Clinical Clerkship"

The opening paper in this thesis presents an analysis of medical students' narratives of any ethical dilemma, not just patient death, that they experienced at any point in their third and fourth years of medical school. In the third and fourth years of training, medical students leave the lecture hall and go work with real doctors and real patients. Because the students' stories were all so different, we were interested in elucidating very basic patterns only. This made that particular project a good candidate for beginning to apply a grounded theory methodology to the analysis of the professional experiences of medical students. It was also fruitful ground for beginning to understand how medical students experience the workplace, their patients, their peers and their supervisors, all of which proved to be key issues in eventually studying medical students' first experiences of patient death.

We used open and axial coding stages, drawing on the Strauss and Corbin [1994] iteration of grounded theory. This allowed us to explore some basic categories of medical students' ethical dilemmas; the *locations* where they occurred, the *target* who was affected negatively by the dilemma, and the *source* who was causing the dilemma. These particular categories seem, in retrospect, fairly predetermined. Glaser's [1992] accusation against Strauss and Corbin, that the axial stage of coding involves forcing data into preformed sociological concepts, rings true to me as I look back at that early work. However, so does Strauss and Corbin's defence- that their step-by-step method is easy to use for novices, and also helps the creation of theory through comparison of "plausible relationships among concepts and sets of concepts" [Strauss and Corbin, 1994]. Both Glaser [1998] and Strauss and Corbin [1990] were eager to make it possible for new grounded theorists, such as myself, to put down the literature and get going with the research, and it was to this end that the ethical dilemma narratives project was begun, as a test pilot for using grounded theory to analyse the experiences of clinical medical students.

One of our code sets in this project, it seems to me, broke through the limitation of sociological category formation, and this was the *nature* of the students' ethical dilemmas. In this series of codes, we were able, through constant comparison between narratives, to draw out themes that many narratives had in common, although we did not know what we were looking for when we began, and no individual student named their particular dilemma as belonging to any of the overarching classes that emerged. Codes in this *nature* category included *inadequate care*, *learning over healing*, and *dishonesty about error*, which I give as examples to convey the idea that these codes represent movement out of simple categorization and towards substantive coding. In the end, my choice of Strauss and Corbin's method of analysis for this particular project was a valid choice because of its ease of use, and because it allowed the formation of substantive codes that illuminated how medical students experienced ethical dilemmas. This was a good launching pad for the main research study in this masters' thesis which is "Medical Students' First Clinical Experiences of Death" .

"Medical Students' First Clinical Experiences of Death"

Unlike the ethical narratives project, which was designed by Jeff Nisker and conducted on data that were originally collected as course requirements for the Medical Ethics and Humanities course at the Schulich School of Medicine and Dentistry, for the research into "Medical Students' First Clinical Experiences of Death" I had a totally free hand in designing the research. I chose to again use Strauss and Corbin's method for generating grounded theory. With this in mind, I designed a semi-structured interview template that was meant to be as open and non-leading as possible: "*What happened at your first experience with the death of a patient in your care? How did it make you feel? How did you cope afterwards? How did the other professionals around you react? Is there anything I haven't asked that's important*?"

The semi-structured interview was the data-collection format that struck the best balance between efficiency in analysis and sensitivity to new data. Some details about medical students' experiences of death are already known, as I have demonstrated in the literature review section that follows this introduction. This known quantity allowed me to create open-ended questions that could explore more of the personal, contextual data that the literature has not addressed in great detail. The flexibility of the semi-structured interview also allowed me to encourage the participants to expand on particularly rich areas of data [Rubin and Rubin, 1995].

I meant to access as much data as possible without shaping the participants' deliveries of their stories, in keeping with Strauss and Corbin's injunction that researchers should have no preconceived hypotheses in their mind as they begin the research process. I did maintain theoretical sampling throughout the study, continuing to interview to the point of data saturation, up to the eventual total of 24 interviews. My definition of saturation is based on Morse's emphasis of variation over quantity. Only when nothing new, regardless of frequency, arose, was the data at saturation [Morse, 1995]. In doing so, and by constant comparison between the emerging theory and codes with what had come before, as recorded in my research memoes, I was able to create a genuine grounded theory, as opposed to the pitfall of mere descriptive study [Becker, 1993]. However, I am skeptical that I removed myself entirely from that interview template design, or from the subsequent data analysis, and I doubt that such removal of self is even possible. On the contrary, I am a social being myself as a researcher, and my experiences contribute to my own observation and interpretation of social processes around me [Baker et al., 1992]. Corbin herself doubts that the interpretation of the researcher can ever be truly set aside by "sticking to the data" [Charmaz, 2006].

My own worldview was present in the questions I chose to ask of the research participants, and it reveals something about my own philosophy of research. Annells [1996] calls for grounded theory researchers to be able to place themselves within the history of grounded theory and its philosophical roots of symbolic interactionism. When I attempt to do so, I find myself in accordance with Blumer's assertions, in turn drawing on Mead, that the self is an attribute formed through social interaction, which forms meanings based on the social interactions it participates within [Blumer, 1969]. This view has been critiqued on the basis that it does not take larger social power structures and their attendant restrictions on social interaction into account [Abercrombie et al., 1986]. This restriction did not become important to me in my study of medical students until after I had been one myself, and experienced the power differentials and strictures on feeling and time that medical training places on its students. Some of this resistance to power is evident in the discussion section of "Medical Students' First Clinical Experiences of Death".

During the write-up phase of the death project I went back and started to reflect on my own experiences with clerkship, and my own first experience with death in a clinical setting, which happened shortly after I finished recording the interviews in 2005. I had no experience of death, nor any experience of clerkship politics when I created the interview template. But by the time I was interpreting the data, I had been through third-year clerkship, seen my patients die and seen the death of my only grandparent. So although the death project was originally designed according to Strauss and Corbin's [1994] suggestions for grounded theory, with the idea of demonstrating something about medical student's selves by exploring their experiences with dying patients, it also became about the interaction between my own meanings and experiences with those of the participants during the data interpretation process. I came to realize that the meaning of "Medical Students' First Clinical Experiences of Death" was influenced in part by my own position as an insider; a medical student studying other medical students.

This is bordering on constructivist territory. Charmaz says of constructivist grounded theory; "Constructivists study *how*- and sometimes *why*- participants construct meanings and actions in specific situations...The theory depends in the researcher's view; it does not and cannot stand outside of it." [Charmaz, 2006(b)]. Thus the methodology of "Medical Students' First Clinical Experiences of Death" really contains two strands, one post-positivist and one constructivist. These are not mutually exclusive. Denzin and Lincoln [1994] in fact, view constructivist-interpretivist as an independent paradigm for inquiry, alongside postpositivsm and critical theory. Nor would it have been honest to the data or to myself to stick doggedly to one or the other, as that blend of methodologies came out of the interpretation and reflection involved in the research process.

However, in terms of outlining the philosophy governing this thesis, the rather important question of ontology remains. Do I think I've elucidated a "real" process happening to medical students, that comes with an attendant critical call to change the situation for the better, or do I think I've created this theory of medical students' experiences and that its meaning really only results from my interaction with the participants?

I do not feel comfortable on the horns of that dilemma. I appeal to Hammersley's [1989] understanding of symbolic interactionism as a middle ground between realism and interpretivism. Another way of expressing this balance was put forward by Heath and Cowley [2004]; "Grounded theory's aim is to explore basic social processes and to understand the multiplicity of social interactions that produces variation in that process". In this project's terms, I accept the presence and analyse the effect of "real" structures on the medical students' experiences, such as the power differential between supervisor and student, or the effect of preclinical training, amongst other things. However, the fact remains that the interview data rise out of a relationship between clinical medical student participants and a preclinical medical student researcher. The interview data were created between us. The subsequent analysis is strongly coloured by my own transformation from preclinical to clinical medical student. I contend however, that this strengthens the research rather than weakening it. Grounded theory needs reflexivity and relationality [Hall and Callery, 2001]. By attending to the relationship between participant and researcher, and to relationships of power and trust within the research, grounded theory becomes more honest.

What is apparent to me in retrospect is that I did have at least one hypothesis when designing "Medical Students' First Clinical Experiences of Death" research project; that the first experience of death in a clinical setting was somehow important to those students as a sort of rite of passage. I carried this assumption with me through the write-up of the paper. An alternative, that in fact the first death experience could easily be irrelevant, or at least incomprehensible, is a topic that I explore in the third paper of this master's thesis, where I reflect more directly on my own experiences with death and with research. In order to really understand my activity in the research process and the writing process, I have provided a third paper for this thesis; an autoethnographic reflection upon of my experience of medical training, death, and the meaning-making process.

"The Serpent God"

"The Serpent God" is an autoethnographic reflection on medical education and the grounded theory writing process. Autoethnography has been defined as "an autobiographical genre of writing and research that displays multiple layers of consciousness, connecting the personal to the cultural." [Ellis and Bochner, 2000]

A reflection on the grounded theory research process completes both the professional onus to make the researcher's intersubjective role in qualitative research more transparent [Finlay, 2002], but it also brings me personal understanding of a professional growth process that has been both exciting and frustrating. The resources I brought to the third paper were my own memories and a journal I recorded during the data interpretation process, through the writing process, and on into the beginning of my medical residency.

These documents are akin to field notes, and they provide what Geertz [1973] has called "thick description". They also provide a way for me to grant credibility to my own self as a source of knowledge [Bass-Jenks, 2002]. However, this is not to say that my own knowledge is privileged over and above data shared by other research participants. It does not represent the "real", singular, truth. Ethnography should not be understood as a sort of immediate and absolute "immaculate perception" [VanMaanen, 1988]. Rather, journals of self-experience, such as the one I draw on for the third paper, should be understood as representing the author's "presence in the field" [Jacobson, 1991]. This has also been expressed as a "self-conscious self-representation (that) signals a reliable narrator and confers credibility on the text." [Roth, 1989].

I wrote an autoethnography of my grounded theory work keeping in mind that unless my own relationships, life events, and emotions are related to my conclusions regarding that research process, then I have only provided two parallel, but ultimately disconnected, strands of evidence. [Jacobson, 1991]. I therefore strove to write an autoethnography that was personally truthful, vulnerable, evocative, and therapeutic. This means that its' value lies in drawing the reader into my own experience of medical training and academic research, and in evoking a connection with the reader's own experience of their life, stimulating their reflection. It is also personally therapeutic. As I allow myself to become studied and vulnerable, I can reflect on what has happened more effectively [Ellis, 2004]. "The Serpent God" combines two elements, the evocative and the cognitively contemplative. The evocative pieces of the autoethnography I have written are ideally meant to get the reader "...immersed in the flow of the story, lost in time and space...". The contemplative pieces of the autoethnography provide a counterbalance to this, thinking *about*, but not necessarily *with* the story. Together, these two elements merge feeling and thinking, and this is one of the criteria for good ethnographic short stories [Ellis, 2000].

The issue of whether or not I am tacitly espousing a realist point of view creeps in here just as it did in the grounded theory paper. Reflective writing such as "The Serpent God" necessarily involves a consciousness of self. However, this should not be viewed as a "real" static self that functions as an external observer. Rather my self in this story is constituted by the discourse of the narrative. Reflexivity gazes at language to see the work it does in constituting the world. [Davies et al., 2004]. In the case of "The Serpent God" the story creates the self that tells the story.

Arguments have been made that connecting grounded theory to autoethnography results in a silencing of the voice of the participants of the grounded theory [Charmaz, 2006(a)]. This is why I have written the grounded theory and autoethnographic papers separately, so that the reader can view the research both with and without my reflective filter. However, I might just as easily have used autoethnographic vignettes within an otherwise grounded-theory oriented paper. This method would allow the reader to dialogue with the connections between the grounded theory process, which is dependent on my cultural and personal interpretations, and the sources of those cultural and personal interpretations that are present in my life history [Humphreys, 2005]. My reason for not using this method rests on the more traditional, self-excluding editorial conventions of medical education journals.

There is a tendency to dismiss autoethnography, and narrative-type research in general, as privileged, romantic, or hyperauthentic [Atkinson and Silverman, 1997, referenced in Bochner, 2001]. This assumes a single, objective, and realist value for all social science, from which autoethnography is a deviation [Bochner, 2001]. In addition, this view of autoethnography as so much "self-indulgent navel-gazing" betrays a deep mistrust about the worth of the self; a denial that one can learn anything about culture from the self by denying that the self is a political being filled with the culture in which it lives [Sparkes, 2002]. Finally then, I have created a personal narrative of being a medical student and a qualitative researcher at the same time, doing my best to avoid an experience-distant account which would fail to fully account for my academic and personal existence "at the margins" of those intersecting cultures. [Kleinman, 1995].

Before moving on to the manuscripts themselves, I will provide some information on what is already known in the literature about death and medical students.

References for Introduction

Abercrombie N, Hill S, Turner BS. Sovereign Individuals of Capitalism. London: Allen & Unwin, 1986.

Annells M. Grounded theory method: philosophical perspectives, paradigm of inquiry, and postmodernism. Qualitative Health Research 1996; 6: 379-387.

Baker C, Wuest J, Stern PN. Method slurring: the grounded theory/phenomenology example. Journal of Advanced Nursing 1992; 17: 1355-60.

Bass-Jenks E. 'Searching for Autoethnographic Credibility', in Ellis C and Bochner AP (Eds.) Ethnographically Speaking: Autoethnography, literature, and aesthetics. Oxford: Altamira Press, 2002.

Becker PH. Common pitfalls in published grounded theory research. Qualitative Health Research 1993; 3: 254-260.

Blumer H. Symbolic Interactionism: Perspective and method. Berkeley: University of California Press, 1969

Bochner AP. Narrative's virtues. Qualitative Inquiry 2001; 7: 131-157.

Charmaz K. The power of names. The Journal of Contemporary Ethnography. 2006(a); 35: 396-399.

Charmaz K. Constructing Grounded Theory: A practical guide through qualitative analysis. London: Sage Publications, 2006(b).

Davies B, Browne J, Gannon S, Honan E, Laws C, Mueller-Rockstroh B, Petersen EB. The ambivalent practices of reflexivity. Qualitative Inquiry 2004; 10: 360-389.

Denzin NK, & Lincoln YS. Introduction: Entering the field of qualitative research. In Denzin NK and Lincoln YS (Eds.), Handbook of Qualitative Research. Thousand Oaks CA: Sage Publications, 1994.

Ellis C. The Ethnographic I: a methodological novel about autoethnography. Walnut Creek CA: AltaMira Press, 2004.

Ellis C. Creating criteria: An ethnographic short story. Qualitative Inquiry 2000; 6: 273-277.

Ellis C, Bochner AP. Autoethnography, personal narrative, reflexivity: Researcher as subject. In Denzin NK & Lincoln YS (Eds.), The Handbook of Qualitative Research (2nd ed.) Newbury Park CA: Sage, 2000.

Finlay L. "Outing" the researcher: The provenance, process and practice of reflexivity. Qualitative Health Research 2002; 12: 531-545.

Geertz C. The Interpretation of Cultures. New York: Basic Books, 1973.

Glaser B. Basics of Grounded Theory Analysis: Emergence versus Forcing. Mill Valley CA: Sociology Press, 1992.

Glaser B. Doing Grounded Theory. Issues and discussions. Mill Valley CA: Sociology Press, 1998.

Kleinman A. Writing at the Margins: discourse between anthropology and medicine. Berkeley: University of California Press, 1995.

Hall WA, Callery P. Enhancing the rigour of grounded theory: Incorporating reflexivity and relationality. Qualitative Health Research 2001; 11: 257-272.

Hammersley M. The Dilemma of Qualitative Method. London: Routledge, 1989.

Heath H, Cowley S. Developing a grounded theory approach: A comparison of Glaser and Strauss. International Journal of Nursing Studies 2004; 41: 141-150.

Humphreys M. Getting personal: Reflexivity and the power of autoethnographic vignettes. Qualitative Inquiry 2005; 11: 840-860.

Jacobson D. Reading ethnography. Albany: State University of New York Press, 1991.

Morse JM. The significance of saturation. Qualitative Health Research 1995; 5: 147-9.

Roth PA. Ethnography without tears. Current Anthropology 1989; 30: 555-69.

Rubin HJ and Rubin IS. Qualitative interviewing: The art of hearing data. Thousand Oaks CA: Sage Publications, 1995.

Sparkes A. 'Autoethnography: Self-indulgence or Something More?', in Bochner AP and Ellis C (Eds), Ethnographically Speaking: Autoethnography, literature, and aesthetics. Oxford: Altamira Press, 2002.

Strauss A, Corbin J. Basics of Qualitative Research; Grounded theory procedures and techniques. London: Sage Publications, 1990.

Strauss A, Corbin J. 'Grounded Theory Methodology: An overview'. In Denzin NK, Lincoln YS (Eds.) Handbook of Qualitative Research. London: Sage Publications, 1994.

VanMaanen J. Tales of the Field; On writing ethnography. Chicago: The University of Chicago Press, 1988.

Literature Review

The purpose of this literature review is to analyse what is currently known about the impact of patient deaths on medical students in their third and fourth years of medical school. It will review how well pre-clinical training prepares the student for this encounter, and how well their supervisors and educational systems respond to medical students' needs during this critical period of their professional formation. Studies interrelating death experience and medical student experience were begun in the late fifties. This report does not intend to be an exhaustive review of all available literature on student experiences of death, but it will cover the highlights of the research undertaken in this area in the last fifty years.

The literature available on this topic is comprised of a mix of quantitative and qualitative research. Quantitative research is concerned with data that can be formulated statistically. Examples of the sorts of results given by quantitative research include significant correlations of categories, predictive values and outcomes that can be measured numerically. Qualitative research on the other hand, concerns itself with rich data that are misrepresented if reduced to numbers. Complex systems and models where each piece affects the whole are best represented by qualitative results. In the case of student death experiences, the interrelation of emotions, education, work-place power inequalities and other influences are best recorded, analysed and reported using qualitative methodologies. Qualitative methodologies frequently accept that methods include interviewing, thematic categorization, and narrative expression [Denzin and Lincoln, 1994], amongst others.

In order to organize the disparate studies performed on this topic, I propose to organize this review topically. I have divided the research into three areas; attitudes, education, and hospital experience. The first area is comprised of research dealing with students' attitudes towards death and the dying, attitudes which they carry with them into their first days at medical school. The second area reviews research into death education programs designed to prepare students for encounters with the terminally ill. The final section reviews the clerk's experiences in the hospital, investigating their role in that setting. Thus the research topics are arranged chronologically, not by the date of publication, but by their relevance to the different stages of professional development as the student first enters medical school, completes their pre-clinical training and moves on to have a stake in the care of real patients.

Students' Attitudes Towards Death

The prevailing attitude of medical students towards death has been historically assumed to be one of fear. The first studies of student's emotions focused on finding adequate ways of quantifying students' fear of death. The classic work in this area was performed by Collett and Lester, who generated the widely used Collett-Lester death anxiety scale, a Likert-type scale which rates four separate fears; the fear of personally dying, the fear of personally being dead, the fear of a loved one dying, and the fear of a loved one being dead, on a scale of one to five [Collett and Lester, 1969]. This test is the standard quantitative tool for assessing students' fear of death. End-of-life (hereafter printed EOL) education has been shown in several longitudinal studies using the Collett-Lester death anxiety scale to decrease fear of working with dying patients and their families, as well as to decrease fear of one's own dying and death [Kaye et al., 1991, 1994, 1998]. These controlled cohort studies were performed on about one hundred medical students, some of whom received EOL education and some of whom did not. Evaluation of their death attitudes was performed after the course had ended and three years thereafter. Long-term statistically significant attitude improvement was demonstrated in the educated versus the control group. This study also made use of the analysis of semantic differences in the language used by students to refer to death situations, in order to rate their attitudes as positive or negative. This is an example of mixing qualitative and quantitative results together, which can enrich and clarify the outcome of a study.

The emphasis on the students' experience of fear was initiated by Feifel's 1967 hypothesis that medical students have a higher fear of death before entering medical school, and that medicine is chosen as a career to master the feelings of fear associated with death [Feifel et al., 1967]. However, this is contradicted by evidence that indicates that non-medical students and medical students do not differ in death fears prior to the first year of medical education. A study which asked 178 preclinical medical students and 171 social science students to use a Collett-Lester scale showed the greatest fear was associated with the death of a close other, and no significant difference was found between the two groups [Howells and Field, 1982]. These results confirmed an earlier study which likewise found no significant difference in fear levels between medical and dental students [Sundin et al., 1979.].

Quantitative research has turned its attention to whether or not clinical exposure to death increases death fear. This was investigated amongst 100 first year medical students using questionnaires, who presumably had no clinical exposure to death, and 52 fourth year students, who had seen dying patients. It was determined that the overall fearfulness of students did not increase, although fourth year students feared their own death somewhat more, perhaps as a result of witnessing painful or stressful deaths and feared working with the dying somewhat less, presumably as they became acclimatized to clinical work. The main difference between clinically experienced and clinically inexperienced students was in the frequency of thought relating to one's own dying. It was suggested that clinically experienced students may think about their own death more than the general population, although how long this effect lasts was not measured [Howells et al., 1986]. A later longitudinal quantitative study followed final year medical students in Britain into their first year as a physician. They found no significant alteration in death anxiety over time, confirming the aforementioned results. More interestingly though, this study also investigated the students' coping mechanisms for patient death. It found that rationalizing was the most common strategy, most favoured by male students. This was closely followed by supporting the patient emotionally, which was most often used by female students. Advice-seeking and avoidance strategies correlated with the highest levels of fear and stress relating to death [Firth-Cozens and Field, 1991]. A study comparing the death anxiety levels of physicians, nursing students and medical students found similar levels of fear in doctors and medical students, with both groups being more death-fearful than nursing students. Higher intolerance of uncertainty was demonstrated to be associated with increased death anxiety [Merril et al., 1998]. The nature of students' reactions to death is very important and will be examined in the third section of this review.

Students' personal exposures to death and dying, both before and after clinical experience, has also been investigated in a questionnaire given to 119 third and 143 fourth year students. The first time the students were meaningfully affected by death was reported by 25 % as being the death of a pet, 56% as the death of a family member, 5% as a disaster and 2.7 % as a fictional death. One third of all students had never been to the funeral of someone close to them. Importantly, only one fifth of students had increased their experience by forming a relationship with a dying person, indicating that their clinical exposure to dying persons was inadequate [Hull, 1991].

Some of the reasons for this inadequate exposure of medical students to dying persons is based on a belief that early clinical exposure to death and dying would increase their death fear. This was again shown to be weak hypothesis in a study which compared 170 medical students before and after a 12 week surgical clerkship. Overall, anxiety levels towards one's own dying, being dead, the death of a close other, dealing with the dying patient and dealing with the dying patient's family did not change. There was increased negativity regarding dealing with the dying patient's family, which was attributed to the inescapability of discussing death directly with the family, as opposed to the situation with the dying patient in which death discussions can be tip-toed around, or even avoided altogether. The study also compared personality types to choices of medical specialty and death anxiety. Rigid authoritarian personality types were most negative and anxious about death, least likely to change over the clerkship, and more likely to select non-clinical careers in teaching or research. The study interpreted the lack of positive change towards death as an indicator that educational intervention about death was needed early in the clinical experience [Linn et al., 1982].

The attitudes of newly graduated doctors toward working with dying patients is frequently negative. A study of 157 family medicine residents attempted to ascertain what the relationship between death anxiety and attitudes towards dying patients might be. It found that younger physician age, intolerance of uncertainty and higher death anxiety were associated with more discomfort in caring for dying patients [Kvale et al., 1999]. There is evidence that negative and anxious attitudes towards death and terminally ill patients become more positive with increasing age. A longitudinal study examining death attitudes on a Likert-type scale found that these improved significantly from 1976, when a sample of around 1500 newly graduated physicians first completed the survey and 1996 when the survey was last followed up [Dickinson et al., 1999]. This demonstrated some flexibility in the medical population as a whole and is an encouraging sign that attitudes towards death in biomedical culture may be improving.

The analysis of students' fear of death shows overall that EOL education and exposure to dying patients improves their negative attitudes towards working with dying persons. However a serious question arises regarding the underpinning of all these studies. Where is the evidence that fear is the most important emotion affecting the attitude of a student towards the dying? When "semantic differences" were used to determine if attitudes towards death were positive or negative, what was the basis of the categorization? Is fear of a patient related to a decreased quality of care? Although such an assumption is reasonable, it is not well justified by the authors of these studies. The difficulty is that the authors have not started at the beginning of the problem. What are students' attitudes towards treating dying persons? This question has not been answered well. This may be because such a question is not well suited to quantitative research methods, and qualitative methods have only recently begun to achieve widespread acceptance. Quantitative methods are excellent for detecting differences in a known variable. When it is not known which variable should be of interest, qualitative methodology should be employed to explore a situation's broader context.

The state of End-of-life education

The previous section focused on student's attitudes, to the extent that they are currently understood in the literature. This section focuses on education interventions designed to increase the effectiveness of students' care for dying persons. EOL education became increasingly important in the mid-eighties. Publications before this time [Carlton, 1978; Haas and Shaffir, 1987] criticized medical curricula for creating doctors designed to memorize vast tracts of information unintegrated with patient care, and to recognize disease and pathology instead of the patient. The accusation, most likely accurate, made in this literature is that because death is viewed as a medical failure, it is ignored in students' education, with the result that many dying patients' care is at best perfunctory and at worst inhumane. Of course, such criticism has not ended today [Davis-Floyd and St. John, 1998]. However, it is increasingly acknowledged that palliative care education should form an important part of any undergraduate medical curriculum, as the studies below indicate.

The overall picture that emerges from investigations of EOL education is that, although there is a growing awareness of the importance of undergraduate EOL education, there is little consensus on the content of the curricula and wide variation in the depth and sophistication of the courses offered [Hill, 1995]. Surveys of death education courses offered in US medical schools were conducted in 1975, 1985, 1995 and 2000 [Dickinson et al., 1976, 1985, 1996, 2002]. The numbers of schools offering at least short courses and occasional lectures on death and dying increased from 80% to 90% in 1995, with the frequency of a multidisciplinary team approach to education increasing from 59 % in 1975 to 76% in 1995. However, the number of schools offering full time courses on death and dying issues has decreased in the same time period. The survey carried out in 2000 continued these trends, with 100% of schools offering at least some course content in death and dying. The surveys predicted that the increased emphasis on dealing with death and acquiring communication skills to be used with dying patients and their families would lead to better patient-physician relationships in the end of life context. A separate study of undergraduate palliative care education found similar results and reached the conclusion that the best learning was based on involvement with dying patients and their families, although this type of learning was frequently unavailable due to physicians' personal discomfort with death [Billings and Block, 1997].

The specific doctors who should theoretically know the most about EOL care, internal medicine physicians, were studied in a survey of 32 US medical schools' residency programs. This study found that although all programs included some EOL education, certain skill domains, such as pain treatment and assessment were lacking, as were comprehensive forms of evaluation in EOL skills [Mullan et al., 2002]. Likewise, a study of 282 internal medicine residents found that although most residents felt comfortable discussing EOL issues with patients, only a minority actually used the curricularly-prescribed methods for having such a discussion [Buss et al., 2005]. An interview-based study of 38 internal medicine residents in New York found that most residents were comfortable talking to families and patients about EOL care, they were not comfortable or trained to provide emotional support. Nonetheless, these residents did not feel that more formal curricular education would have helped. Rather, they believed that direct observation of role model physicians was the most effective way to improve their skills [Rhodes-Kropf et al., 2003].

An analysis of US medical schools methods of teaching death and dying to undergraduate medical students revealed three different curricular approaches [Mermann et al., 1991]. In the first, used by roughly 30% of the schools, one or two lectures on death and dying were offered as part of a larger mandatory course. Most of these lectures were given by faculty, although some were given by a dying patient. The second approach, used by 52% of the responding schools offered a death and dying module within a larger course. The module consisted of lectures, but might also contain group discussion and contact with a dying patient. The third approach used by 18 % of the responding schools provided a separate self contained course. Within this approach however, time spent on the separate course could vary from a weekend workshop to an entire semester. For all three approaches, the longer the time spent on teaching death and dying issues, the more use was made of alternative teaching resources such as audiovisuals, student participation or encounters with dying patients.

However, none of these approaches used much patient-student contact. This gives rise to concern that these studies may suffer from the same difficulties that we have encountered with students' death attitudes studies. The main phenomenon of interest; the encounter between patient and student, is not well understood, and not widely employed in EOL education programs.

This may be because, in the clinical years of undergraduate education, students face an educational paradox. On the one hand, they feel inadequately prepared by their pre-clinical training, and on the other they believe that only live clinical experience is relevant to increasing their knowledge base. A British study from 1982 found that 64% of clinical medical students felt that their training in terminal care was insufficient, especially in regard to treating the psychological needs of dying patients [Ahmedzai, 1982]. More time with dying patients, and more time spent learning about dying patients was also called for [Cox, 1987]. The communication skills needed to break bad news to patients become a focus of education since deficiencies in that area were discovered [Maguire and Faulkner, 1988a, 1988b]. When discussing EOL issues with patients and obtaining Do Not Resuscitate orders, 80% of students at Georgetown University School of Medicine and the Mayo Medical School wanted more education, although 41% felt their education had been "adequate". Although 84% of students anticipated having such conversations with patients, only 27% actually had that experience during clinical education [Buss et al., 1998].

The clinical experience of students in areas where death is a regular occurrence is variable. A study of 3rd year students in surgery and internal medicine rotations found that 41% had never seen a surgeon talk with a dying patient, 35% had never talked with their resident about how to talk to dying patients, 73% had never seen bad news broken to a family, and 85% has never seen a family being informed of a member's death [Rappaport and Witzke, 1993].

Student involvement with dying patients has been found to decrease as the dying process enters its' later stages, especially where deaths occur outside of acute care complexes. In Oregon, where only 31% of patients die in acute care facilities, 42% of medical students had never witnessed a death [Bascom et al, 1999]. Education in EOL care, whether pre-clinical or clinical, is known to increase comfort levels in clinical practice. In a comparison of schools with and without EOL care, those students who received a death education course were shown to be more comfortable treating terminal patients' psychological issues, more comfortable treating their spiritual and cultural issues, and more comfortable in treating symptoms such as pain and breathlessness. Those with clinical experience were further prepared to discuss DNR orders with patients and families and more comfortable with symptom management than those only trained pre-clinically [Fraser et al., 2001]. These studies are particularly valuable because they demonstrate improvements in concrete outcomes of importance to the care of the terminally ill. These well-defined outcomes show the impact of education more forcefully than the attitudinal studies, which, without more qualitative research, remain rather nebulously founded.

On a positive note, it is worth pointing out that students themselves are active in creating new EOL education curricula, such as new chronic illness interview templates [Jones et al., 2001] and new programs with more audiovisual teaching, role-playing and group discussion [Magnani et al., 2002]. These make good use of students' own understanding of the deficiencies in their EOL education in order to improve EOL curricula.

The Position of the Clerk

We have thus far explored students' attitudes regarding death and caring for dying persons, and aspects of their education in end-of-life matters. What remains to be discussed is the research exploring the care that medical students give to dying patients. As members of the healthcare team in hospitals, clinical clerks make an important contribution to the care of persons with terminal illness. What happens to students and their patients in the hospital workplace?

There have been some quantitative studies conducted in this area. A scale of emotional impact was used to compare physicians' emotional reaction to "average" patient deaths. It found that being female or spending more time with a patient increased the emotional impact of a death. It also found that women and less experienced physicians needed more debriefing time with respect to death than what was offered [Redinbaugh et al., 2005].

Narrative study has proven a useful research approach in this area. In this method, students submit stories about their experiences in the hospital, which are then analysed, often using grounded theory, to pick out the main themes that the students experience. This variety of study has helped to elucidate themes that are not immediately apparent, for example, whether communication skills are better taught preclinically in classes, or though clinical observation of skilled professionals. Many students feel that theoretical teaching with no concrete patient contact is unintelligible, since sharing the experience of death with patients is such an transformative experience [Wear, 2002]. This question is explored in other papers, which suggest psychological introspection [Binetti and Bruni, 2003] or the teaching use of writings from physician-authors as potential middle-roads [Donohoe, 2002]. The creators of grounded theory, Glaser and Strauss, made a series of sociological observations about death in a classic monograph from 1968, *A Time for Dying* [Glaser and Strauss, 1968]. Some important findings from their early study were that the experience of death varied with the timing and quality of dying, and that a great deal of physician anxiety had its source in difficulties in communicating and negotiating with dying patients and their families. A study looking at open interviews of 163 physicians found that the classic themes elucidated by Glaser and Strauss were still at play in current times, but that another major dimension of experience had arisen with the advent of aggressive life-prolonging technologies available to modern physicians- the stress of chaotic or prolonged treatment decisions [DelVecchio-Good et al, 2004]. Biomedical technology was also identified as the major stumbling block preventing residents from working with a patient towards a good death in an ethnographic observation and interview-based study of 28 family medicine residents [Dozor and Addison, 1992].

Studies of medical students proper and their reactions to the deaths of patients have only just begun to be published. In a study of 28 interviews with third-year medical students, an overall message that the best end-of-life care teaching came from clinical experience was noted. However, this depended on the presence of supervisors that acknowledged deaths and role-modelled good end-of-life skills. The students also felt that their experiences with death forged an important part of their emerging professional identities. This study recommended more work be done towards understanding student and supervisor responses to death [Ratanawongsa et al., 2005]. A study of 522 reflective essays by medical students demonstrated nine themes of concern to students who were involved with the care of the dying persons. These were expressing emotions, personal grief, communicating effectively, spending enough time, feeling ill-prepared, losing a loved one, shifting emphasis from curing to caring, listening to patients and previous negative end-of-life experiences [Rosenbaum et al., 2005]. Another study of only 10 such essays reveals four themes: worry and uncertainty about end-of-life care, guidance and role-modelling, adequate preparation and recommendations for the medical curriculum [Wear, 2002]. In a mixed methods study of 32 interviews with medical students that included some questionnaire items, it was found that most students (63%) had no debriefing about their "most memorable" patient death, that sudden deaths were more likely to cause emotional distress than expected ones, and that death and emotions in general were considered by supervisors to be a negative aspect of medicine as a career [Rhodes-Kropf et al., 2005].

Experiences with a strong emotional and ethical impact give students the most cause to consider their own identities as will-be physicians, and to consider the meaning of their choice of medicine as a career [Rosenfeld et al., 2004]. The first years of patient contact in hospitals as a clerk are important as an initiatory period, where the student is transformed from neophyte to professional. This transformation has been described by social anthropology in terms of ritual [Haas and Shaffir, 1987]. The good intentions of healing and empathy that students bring with them into the hospital are broken down by initiatory trials of scut labour and sleep deprivation. Inversion is used to strip the student of their former identity; the student sees patients as disease examples instead of people, and oscillates at random between occupying a learning role and a directing role. The goal of these trials and confusions is to induce a loss of idealism which will create uniform physicians who defend the status quo of hospital care. This status quo has been described as technocratic-oriented medicine. Control of the disease rests entirely with the doctor and the key to cure is the external application of drugs or surgery to a pathological process. The patient as person does not really enter this equation. Death is always viewed as a failure [Davis-Floyd and St. John, 1998].

If the student is successfully integrated into status quo technocratic medicine, they are stripped of the ability to make meaningful contact with patients as persons. This has a disastrous effect on the care of dying persons. In cases of terminal illness, technocratic medicine is frustrated: it cannot cure and must try at all costs not to reflect on its own failure. Most students in this position feel torn between maintaining emotional detachment, which they have been told is key to exercising a professional attitude, and the need to acknowledge a suffering human being in their patient. Feelings of guilt are commonplace at this stage, and frequently, no outlet is provided to discuss and manage these emotions. As a result the student learns that caring is synonymous with breakdown, and progressively learns to shut off their empathic response, completing their initiation into technocratic medicine [Carlton, 1978].

This idea of ritual initiation may seem far-fetched at first, but the correlations between initiatory rites of primal societies and religious groups are quite striking. This also fits with the data we have demonstrating that students' empathy with patients actually decreases during medical school. [Nisker, 1997]. The idea that abuse during the clerkship period is transmitted transgenerationally, with each new set of doctors reenacting their abuse on new students, thus preventing any transformation of the clinical education process into a more patient-focused and humane exercise is explored by Silcox [1994].

Finally then, the clerk's position is a very difficult one; he/she encounters deep meaning in the care of dying patients, but no method for integration of the experiences and emotion is provided. The unconscious transformation into a less empathic and more disease-focused physician is difficult to avoid. This sort of physician can only view death as a failure and as a result, does not respond well to the needs of the dying patient. However, there is reason to believe alternatives to this process are possible; alternatives which make use of self-reflection and debriefing of experience [Kaye et al., 1991, 1994, 1998].

Conclusion

I have reviewed the literature pertaining to students' experiences with patient death, tracing the research from an emphasis on preclinical attitudes, through EOL education, and finally arriving at the clerk's workplace patient experience. It is known that medical students' attitudes in approaching death include feelings of fear, however these fears are not substantially greater than those of students in general. This fear does not increase as students encounter more dying patients, although students' consideration of their own mortality does. Students express the desire for more instruction and experience in caring for dying persons. EOL education has become more widely accepted, but curriculum time, curriculum content and the method of delivery are widely disparate, since there are no good data to support one pedagogical method over another. EOL education does make students more comfortable with dealing with death in the hospital, but whether or not this correlates with increased quality of care for the patients and their families remains unknown. Finally, the position of the clerk in the hospital setting is a transitional one where they are transformed from student to physician. This transformation affects a broad range of personal characteristics; emotion, memories of previous events, coping strategies, and learning to name only some. However, to date, no systematic approach has been made to describe this transformation; that is, no one has given a good model of medical students' interactions with patient death. What kind of physician they become depends on the workplace environment in which they are trained, but again, the relationships between supervisor-type and the students' outcome is unknown.

It is my hope that a model of students' interactions with dying patients and their working environment could be created by means of grounded theory. Grounded theory has been attempted before in this area, but it has never progressed beyond the level of thematic categorization. How exactly those themes interrelate has not been described in the literature. I feel that this may be due to inexact application of grounded theory methodology, which goes beyond categorization to creating a holistic picture or model of how categories interact. In this study I apply grounded theory methodology as outlined by Strauss and Corbin [1998] to open-ended student interviews. Through this approach I study the students' first death encounter, which has not been examined previously. The examination of this first encounter would have two advantages- because a student's first experience may occur in any medical area, this study would include deaths that are average, old, young, poignant or routine, rather than selecting for the most meaningful or emotionally important deaths. Secondly, the first death encounter is often something well-remembered by students and richer data may be available from this event than from subsequent events when the encounter with patient death becomes more routine. A model of the medical students' relationships with patient death offers a useful contribution to our understanding of the transformative process whereby a medical student becomes a full physician.

References for Literature Review

Ahmedzai S. Dying in hospital the resident's viewpoint. Br. Med. J. 1982:285; 712-14

Bascom P, Vetto JT, Osborne M. Clinical experiences of medical students in Oregon with dying patients. J Cancer Educ. 1999;14:137-9.

Billings JA, Block S. Palliative care in undergraduate medical education: status report and future directions. JAMA. 1997;278: 733-8.

Binetti P, Bruni R. An uncommon application of counselling in medicine: encountering death in education and in practice. Clin Ter. 2003; 154: 97-104

Buss MK, Alexander C, Switzer GE, Arnold RM. Assessing competence of residents to discuss end-of-life issues. J Palliat Med. 2005; 8(2): 363-71.

Buss MK, Marx ES, Sulmasy DP. The preparedness of students to discuss end-of-life issues with patients. Acad Med. 1998;73:418-22.

Carlton, Wendy. In Our Professional Opinion: the primacy of clinical judgement over moral choice. London: University of Notre Dame Press, 1978.

Collett LJ, Lester D. The fear of death and the fear of dying. J. Psychol. 1969; 72: 179-81.

Cox JL. Care of the dying, reflections of a medical student. CMAJ 1987: 136; 577-79

Davis-Floyd, Robbie and St. John, Gloria. From Doctor to Healer: the transformative journey. Piscataway, NJ: Rutgers University Press, 1998.

DelVecchio-Good M, Gadmer NM, Ruopp P, Lakoma M, Sullivan AM, Redinbaugh E, Arnold RM, Block SD. Narrative nuances on good and bad deaths; internists' tales from high-technology workplaces. Soc Sci Med 2004; 58: 939-953.

Denzin N, Lincoln Y. Handbook of Qualitative Research. Thousand Oaks, CA: Sage, 1994.

Dickinson GE, Mermann AC. Death education in U.S. medical schools, 1975-1995. Acad Med. 1996; 71:1348-49.

Dickinson GE. A quarter century of end-of-life issues in U.S. medical schools. Death Stud. 2002; 66: 635-646.

Dickinson GE. Changes in death education in U.S. medical schools during 1975-1985. J. Med. Educ. 1985;60:942-3

Dickinson GE. Death education in U.S. medical schools. J. Med. Educ. 1976;51:134-6

Dickinson, GE, Tournier RE, Still MS. Twenty years beyond medical school; physician's attitudes toward death and terminally ill patients. Arch Intern Med 1999;159:1741-1744

Donohoe M. Reflections of physician-authors on death: literary selections appropriate for teaching rounds. J Palliat Med. 2002; 5: 843-8.

Dozor RB, Addison RB. Toward a good death: an interpretive investigation of family practice residents' practices with dying patients. Fam Med. 1992; 24 (7): 538-43.

Feifel H, Hanson S, Jones R, Edwards L. Physicians consider death. Proceedings of the 75th Annual Convention, Washington D.C., American Psychological Association. 1967.

Firth-Cozens J, Field D. Fear of death and strategies for coping with patient death among medical students. Br J Med Psychol. 1991; 64: 263-71.

Fraser HC, Kutner JS, Pfeifer MP. Senior medical students' perceptions of the adequacy of education on end-of-life issues. J Palliat Med. 2001;4:337-43.

Glaser BG, Strauss AL, A Time For Dying. New York, Aldine. 1968.

Haas, Jack and Shaffir, William. Becoming Doctors: the adoption of a cloak of competence. Greenwich, CT: Jai Press Inc. 1987.

Hill TP. Treating the dying patient, the challenge for medical education. Arch. Intern. Med. 1995;155:1265-69.

Howells K, Field D. Fear of death and dying among medical students. Soc Sci Med. 1982; 16: 1421-4.

Howells K, Gould M, Field D. Fear of death and dying in medical students: effects of clinical experience. Med Educ. 1986; 20: 502-506.

Hull FM. Death, dying and the medical student. Med Educ. 1991; 25: 491-496.

Jones J, Hall P, Schroder C, Weaver L, Bouvette M. Discussing end-of-life issues with patients: reflections on developing an interviewing template to assist first-year medical students.
J Palliat Care. 2001;17:254-8.

Kaye JM, Gracely E, Loscalzo G. Changes in students' attitudes following a course on death and dying: a controlled comparison. J Cancer Educ. 1994;9 :77-81.

Kaye JM, Loscalzo G. Learning to care for dying patients: a controlled longitudinal study of a death education course. J Cancer Educ. 1998;13:52-7.

Kaye JM. Will a course on death and dying lower students' death and dying anxiety? J Cancer Educ. 1991; 6: 21-4.

Kvale J, Berg L, Groff JY, Lange G. Factors associated with residents' attitudes toward dying patients. Fam Med. 1999; 31(10): 691-6.

Linn BS, Moravec J, Zeppa R. The impact of clinical experience on attitudes of junior medical students about death and dying. J. Med Educ. 1982; 57: 684-691.

Magnani JW, Minor MA, Aldrich JM. Care at the end of life, a novel curriculum module implemented by medical students. Acad Med. 2002; 77: 292-98.

Maguire P., Faulkner A. How to communicate with cancer patients: 1. Handling bad news and difficult questions. BMJ 1988: 297; 907-9

Maguire P., Faulkner A. How to communicate with cancer patients: 2. Handling uncertainty, collusion and denial. BMJ 1988: 297; 972-4

Mermann AC, Gunn DB, Dickinson GE. Learning to care for the dying. Acad Med. 1991;66:35-38

Merril J, Lorimor R, Thornby J, Woods A. Caring for terminally ill persons: comparative analysis of attitudes (thanatophobia) of practicing physicians, student nurses and medical students. Psychol Rep. 1998: 83(1); 123-8.

Mullan PB, Weissman DE, Ambueal B, von Gunten C. End-of-life care education in internal medicine residency programs: an interinstiutional study. J Palliat Med. 2002; 5(4): 487-496.

Nisker, JA. The yellow brick road of medical education. CMAJ. 1997; 156:689-91.

Rappaport W, Witzke D. Education about death and dying during the clinical years of medical school. Surgery 1993: 113; 163-65.

Ratanawongsa N, Teherani A, Hauer KE. Third-year medical students experiences with dying patients during the internal medicine clerkship: a qualitative study of the informal curriculum. Acad Med. 2005; 80 (7): 641-7.

Redinbaugh EM, Sullivan AM, Block SD, Gadmer NM, Lakoma M, Mitchell AM, Seltzer D, Wolford J, Arnold RM. BMJ 2005; 327: 185.

Rhodes-Kropf J, Carmody SS, Seltzer D, Redinbaugh E, Gadmer N, Block SD, Arnold RM. “This is too awful: I just can’t believe I experienced that…”:medical students’ reactions to their “most memorable” patient death. Acad Med 2005; 80 (7):634-40.

Rhodes-Kropf J, Meier D, Adelman R. Interns learning to care for dying patients. J Palliat Med. 2003;6(6):865-72.

Rosenbaum ME, Lobas J, Ferguson K. Using reflection activities to enhance teaching about end-of-life care. J Palliat Med. 2005; 8 (6): 1186-95.

Rosenfeld PJ, Jones L. Striking a balance: training medical students to provide empathetic care. Med Educ. 2004; 38: 927.

Silcox, JA A grounded theory relating to the transgenerational effects of medical-student abuse. London ON: Faculty of Graduate Studies, University of Western Ontario, 1994.

Strauss AL, Corbin JM. Basics of Qualitative Research; Procedures and Techniques for Generating Grounded Theory, 2nd ed. Sage Publications, Thousand Oaks CA 1998.

Sundin RH, Gaines WG, Knapp WB. Attitudes of dental and medical students towards death and dying. Omega Journal of Death and Dying. 1979; 10: 77-85.

Wear D. “Face to face with *It*”: medical students narratives about their end-of-life education. Acad Med. 2002; 77: 271-177.

Medical Students' Perceptions of Ethical Dilemmas in Clinical Clerkship

When medical students become members of clinical teams, they enter into complex relationships with patients, family members, consultants, residents, nurses, and each other that may immerse students in ethically charged situations[1]. The increase in bioethics education in the preclinical curricula of many medical schools[2] allows clinical clerks to identify ethical issues and determine right action.

Narrative approaches to bioethics center on the stories of patients and caregivers, and their relationship to illness and healthcare[1,3-7]. Right action may be learned from the story itself[1,3-5] or from its illumination of ethical theories or principles[1,7]. Narratives can assist caregivers in explaining deeply personal experiences of their patients, their colleagues, and themselves[1,3-7].

Student narratives have been used to assess programs in the training of health professionals[8,9], to examine performance[8], and to promote self-awareness[10]. Through the analysis of medical student narratives, this study explored the ethical dilemmas medical students experienced during their clinical clerkship.

Methods

Final-year medical students at the Schulich School of Medicine & Dentistry, The University of Western Ontario, are required to write a narrative describing an ethical dilemma they experienced during clinical clerkship for their evaluation in Medical Ethics and Humanities. After the 104 students had received their grade (all "complete"), we invited them through email to allow their narratives to be subjected to analysis for this study. We obtained approval for the secondary use of these narratives from the Research Ethics Office of The University of Western Ontario.

All information that could identify the student was removed prior to compilation of the narratives for analysis. We then subjected each narrative to qualitative analysis, beginning with line-by-line coding[11] and supported by NUD*IST6™ software (QSR, Doncaster, Australia). According to the method of Strauss and Corbin[11], themes emerge from the open and axial stages of qualitative analysis, with individual phenomena grouped together according to the qualities they hold in common, in an organic process of constant comparison between the narratives and the emerging themes. To accomplish this, EK studied all 100 narratives several times, line by line. As the analysis continued, EK and JN merged similar categories and split complex categories in an iterative process[11]. Verification of the themes occurred when no orphan themes were leftover, and no narratives have been forced into themes that are unsuitable for them.

We then reanalyzed the narratives using Jameton's determinants of moral action[12]. According to these determinants, we considered narratives to contain "moral sensitivity", if the student displayed the ability to identify a moral dilemma; "moral judgment", if the student could judge right action from wrong; "moral motivation", if the student indicated a commitment to the pursuit of perceived right action; and “moral courage”, if the student did not choose an easier action in place of the perceived right action[12].

Results

Four of the 104 students declined participation. As described in Table A1, four major themes emerged from the qualitative analysis: (1) the clinical service on which the ethical dilemma occurred, (2) the target of the ethical dilemma, (3) the source of the ethical dilemma, and (4) the nature of the ethical dilemma. In some narratives, the student described more than one ethical dilemma.

1. Clinical service on which ethical dilemma occurred

The clinical service on which the ethical dilemma occurred was almost always stated explicitly in the narrative, and in the few narratives in which it was not stated, we could ascertain the clinical service from the description of the ethical dilemma. Figure A1 illustrates the frequency of ethical dilemmas experienced on each clinical rotation. The rotation that combined ICU with general internal medicine was the most common clinical service overall (27%), followed by surgery (20%), obstetrics and gynecology (14%), and oncology (10%).

2. Target of the ethical dilemma

The target refers to the person whom the medical student perceived as having been treated unfairly or with lack of respect, sensitivity, or compassion. This person was most frequently the patient (Figure A2). Lack of respect for a patient who had just died is illustrated in the following excerpt from the narrative of Student A:

"...Tamponade was a very unlikely cause for this patient's arrest. The anesthesia resident used this opportunity to practice his pericardiocentesis technique...I became quite angry at what had gone on... the resident never identified that this was a human being that had dignity, family, and feelings..."

The clinical clerk was the second most frequent target of the ethical dilemma, as illustrated in the narrative of Student B:

"...The senior that I was working under was very tough on all the clerks, but in particular on one of my colleagues. While I felt that it was unfair of the senior to consistently demean, single out and belittle that clerk in front of everyone else, if I spoke up in his defence, then I'd become the new scapegoat..."

3. Source of the ethical dilemma

The source of the ethical dilemma refers to the person whose behavior affects the target (Figure A2). The most common source of the ethical dilemma was the consultant or another member of the medical team, almost always the resident. Similar to the narratives of Student A and Student B excerpted above, Student C reported the resident as the source:

"The patient's long and troubled (and continued) relationship with alcohol had landed him with end stage liver disease. He was often passed over on our daily rounds, for lack of time, and boredom, it seemed on the part of our consultant. According to him, the

patient had brought his own grievous situation upon himself, and there was nothing we would do about it."

However, in 27 narratives, the students identified themselves as the primary source of the ethical problem. Students also identified other students as being complicit with the source.

4. Nature of the ethical dilemma

The most common categories in the theme of the nature of the ethical dilemma (Figure A3) were Consent for treatment, followed by Inadequate care, and DNR orders. A dilemma regarding Consent for treatment is illustrated in the narrative of Student D: *"...A very sick gentleman was to undergo a necessary but very high risk procedure. I was delegated the task of obtaining consent... However, it became clear to me that the patient had no comprehension of the situation or the risk of the procedure. The patient would not be autonomous in the decision to undergo surgery..."*

We derived the inadequate care category from narratives suggesting prejudice against certain patient types, usually substance abusers, the elderly, and those with chronic illness, as illustrated in the narrative of Student C excerpted above. Other categories included error/dishonesty, in which an error has been made and has not been disclosed; abuse of patient, in which a patient is physically or verbally treated in a disrespectful manner; abuse of student, in which a student is similarly physically or verbally treated in a disrespectful manner; resource allocation, in which funding or personnel is not available to a patient, or in which queue-jumping has (unfairly) occurred because of the relationship of the patient to the doctor; learning over healing, in which pressure for the student to learn a clinical skill took precedent over good patient care; hard decisions, in which a traditional difficult ethical decision must be made between two equally difficult options; boundary issues, in which a breach of patient-physician boundaries has occurred through lack of self-disclosure, physical demonstration or gifts; confidentiality, in which disclosure of information private to the patient-physician relationship has been inappropriately shared; company sponsorship, in which the ethical issue arose from the interface of pharmaceutical company involvement with clinician education or patient care; and prenatal screening, in which students reflect on the ethical implications of prenatal screening, such as the tension between how persons living with disabilities may be viewed and reproductive autonomy. The learning over healing category is illustrated in the excerpt from the narrative of Student A above.

In Table A2 we describe Jameton's determinants of moral action[12], and the frequency that these determinants were present in the medical student narratives, providing an example from a student narrative for each determinant. All narratives displayed "moral sensitivity", 76 displayed recognition of what a good corrective action would be ("moral judgment"), and 24 displayed "moral motivation" to undertake that action. Only four of the narratives indicated that the student had taken action to resolve the ethical problem ("moral courage"). The excerpts from the narratives of Student B and Student C illustrate a common concern that fear of reprisal may have inhibited what the student perceived to be right action.

Discussion

An increasing emphasis on bioethics in preclinical medical curricula enables medical students to both identify ethical issues and understand how to address them. The analysis of these medical student narratives suggests that ethical dilemmas are experienced when clinical clerks perceive that an ethical issue exists and that they are not in a position empowered to address the ethical issue. This finding may explain the decline in the narratives from expressive "moral sensitivity" (100%) and "moral judgment" (76%) to "moral motivation" (24%) and "moral courage" (4%). Although the ethical dilemmas may result from the students' perceptions of an ethical problem they would like to resolve rather than necessarily a real problem that they are prohibited from resolving, the dilemmas are real to the students as illustrated in the emotional nature and power of many of their narratives. For example, although the students' fear of "negative repercussions" should they bring their perceived ethical issues to their supervisors' attention, such as regarding lack of informed choice, may be a perceived rather than a necessary fear, the students are still immersed in the ethical dilemma because of their perception and feelings of disempowerment.

That many of the ethical dilemmas described by the medical students were related to the students' perceptions of persons being treated unfairly or with lack of respect, sensitivity, or compassion, in addition to the more traditional issues, such as informed consent and end-of-life decisions, may have resulted from their preclinical ethics curriculum being largely based on feminist[13,14] and virtue ethics[15] approaches that focus on professional relationships. These approaches encouraged the students to focus on relationships[14] and professional obligations, as illustrated in the student narratives concerned with improving consultant and resident sensitivity and communication with patients and themselves.

The most common clinical service for medical students to experience an ethical dilemma was general internal medicine/ICU. This finding may result from the complex ethical issues inherent with end-of-life decision-making more likely to occur of this clinical service, as well as the pressure to free up beds as reflected in the "nature of the dilemma" category of "inadequate care". The finding of the ICU as a common location for medical students to experience ethical dilemmas is consistent with an American study[16].

Consent for treatment was the most frequent category of ethical dilemma organized under the theme of nature of the ethical dilemma (Figure A3), reflecting that the informed choice process is part of the care of all patients, that clinical clerks are "routinely" charged with the responsibility of achieving consent, and that the medical students in this study had been trained as to the requirements of informed choice. The frequency of clinical clerks reporting they faced ethical dilemmas regarding Consent for treatment suggests their understanding of the requirements of informed choice may be different from that of their supervisors. In addition, the narratives suggest that as the signing of the consent form does not usually occur until the night before a surgical or medical procedure, the student's concern regarding inadequacy of a patient's understanding of the procedure may be sublimated to other concerns, including the potential wasting of the surgeon's operating room time and incurring disfavor of supervisors. Issues of consent represented 14% of ethical issues identified by students in an American study[16].

A reason for Inadequate care being a common category of ethical dilemma may be the importance to clinical clerks of patients' psychological health and family member involvement, due to their recent pre-clinical training in this area[17], combined with the perception that their supervisors believe psychosocial aspects of care can be sacrificed to the increasing time-efficiency imperatives[18]. Further, as these students had been educated in the covenant model, not only of the physician-patient relationship[19] but of the medical educator-medical student relationship[20], they may have found themselves in the dilemma of not being able to ensure their patients had the clinical care and professional relationships the students felt they were owed. A British study indicated inadequate care as comprising 22% of the ethical issues identified[21].

The observation that all medical students demonstrated "moral sensitivity"[12], and most demonstrated "moral judgment"[12] could be anticipated, considering both the objective of their assignment, and the students' having received over 100 hours of narrative-based ethics education in their pre-clinical years[1]. To understand why few students acted to correct what they perceived to be an unethical situation, even among those who demonstrated commitment to right action, one needs to first appreciate that many right actions do not involve risk or adversity, and thus do not allow the opportunity to undertake a morally courageous action[16]. However, a more concerning explanation as described in many of the narratives, may arise from the power differentials that exist between medical students and their supervisors, and the resulting fear of negative repercussion should a medical student choose to exhibit "moral courage". These negative repercussions are perceived by medical students to extend beyond their evaluation, to jeopardizing their opportunities to perform procedures they believe are necessary to become "good" doctors (e.g., lumbar punctures)[22], as well as their acceptance into the medical "club" or culture[16]. Indeed, in many of the narratives, students were conflicted as to whether to act in what they perceived to be in the best interest of the patient (and family members), or to protect themselves and the learning that would be of help to their future patients. It is also possible that the students simply did not write about their decision to do the right thing. However, it is just as likely that these final year medical students would have camouflaged their indifference in their final ethics assignment.

"Moral courage"[12] has been an unreasonable expectation of medical students, and their concerns regarding fear of not being able to act according to what they perceive as ethically appropriate may have added to the other numerous psychological stresses medical students experience[23]. Although the increase in ethics education in many preclinical ethics curricula cannot in itself promote "moral courage", it can provide medical students with an understanding of right action and sensitivity to the ethical issues they will encounter on clinical services. With this understanding and sensitivity medical students are obligated to try to influence, within their own comfort level, what they perceive to be ethical practice, regarding both the patients for whom they care and the educational relationships in which they and their peers exist. Although medical students should be expected to always be responsible for their own moral decisions, it is hoped that as supervisor receptiveness to including medical students' ethical concerns increases medical students will have greater responsibility for ethical decisions with the medical team.

The inability of clinical clerks to resolve ethical dilemmas because of their lack of power to do so is similar to the findings that Jameton reported in his research on the determinants of the moral action of nurses in the early 1980s[12]. Jameton's fieldwork observed the decision-making process of nurses in hospital settings. Through his in depth interviews with nurses, he found "moral distress" to be a common accompaniment to nursing practice[12]. More recently, clinical ethicists were found to not only suffer moral distress, but to carry its long-term consequence in an increasing burden of "moral residue"[24], the psychological effect of failing to perform an ethical action[25]. However, not all medical students appeared to have experienced moral distress. For example, although all narratives demonstrated "moral sensitivity" using Jameton's criteria[12], only 24 of the narratives exhibited "moral motivation". This student indifference may result from their perception that if time and other constraints limit their supervisors' interest in, for example, ensuring informed choice, it must not be important. This "mirroring" of their role models' perceived lack of motivation to consider ethical issues could be anticipated, as medical students frequently "mirror" the characteristics of their role models[18,26,27]. This raises questions regarding the future teaching of professionalism in undergraduate medical education. For example, Chen et al.[28] draw attention to the "mental model" regarding teaching professionalism to medical students regarding the physician-patient relationship, and suggest adding the "mental model" to health systems teaching. However, our research suggests that the "mental model" should also been added to the education of faculty and residents regarding professionalism in the medical educator-medical student relationship. Further, the pyramid of professionalism encouraged by Parker et al.[29] has been used to study professional behaviour of medical students, as a basis to recommend remedial action for those who have shown unprofessional behaviour. Our research suggests that the professionalism of medical educators toward medical students should be under similar scrutiny, and continuing professional development programs for consultants and residents should be in place. A mechanism will be required to provide medical students the opportunity to bring such concerns to an ombudsman or neutral medical educator. Should such programs be developed they would serve to dissuade the student indifference observed in our research and potentially be a shield against the reported moral erosion of medical students as they progress through training[30,31]. Student indifference, similar to fear of negative repercussions, can discourage moral decision-making before approaches to remedying difficult situations are even contemplated.

The power differential between medical students and their supervisors can be reduced by methods of assessment used in other disciplines, such as peer, as opposed to supervisor, assessment[32], and innovative learning strategies, such as those embraced in feminist pedagogy[33], role-modeling[18,26,27], and mentoring[34]. These learning strategies have the common element of diminishing the power structure within the educator-student relationship, from a power-over (or hierarchical) model to a power-with model, that allows emotional vulnerability, disclosure of error, and disagreement with superiors[35]. A power-with model would mitigate many of the ethical dilemmas reported by the medical students in our research, and their abandonment of moral motivation and moral courage. The effectiveness of a feminist pedagogical approach, emphasizing the relational quality of power[14], has been demonstrated to increase empowerment, inside the workplace, and in their broader lives at home[33]. The relational quality of power is also emphasized in role-modeling[18,26,27] and mentoring[34], which also turns the potential disempowerment in needing to please supervisors so they will provide both the opportunity to learn clinical skills and a good evaluation, into empowerment[26,27,32,33].

As this analysis of the experience of ethical dilemmas of medical students during their clinical clerkship is confined to the experiences of medical students in one Canadian medical school, trained in a narrative bioethics curriculum, it cannot be seen to be representative of the experiences of all clinical clerks. Ethical issues can be anticipated to arise during clinical training. However, these need not become ethical dilemmas if all members of the clinical team acknowledge the issues, and if clinical clerks are empowered to work to resolve them. If clinical clerks are not empowered to help resolve ethical dilemmas as part of their clinical education, we contend that increasing preclinical ethics education, in promoting students' awareness of, and sensitivity to, ethical issues, may increase their experience of ethical dilemmas, moral distress and moral residue. An increase in bioethics education in postgraduate and faculty development programs should occur in step with the increasing emphasis on bioethics in undergraduate curricula in order that clinical clerks may avoid ethical dilemmas and the accumulation of "moral residue"[24].

Conclusion

Similar to nurses[12] and clinical ethicists[24], medical students lack the authority to resolve situations they perceive to be unethical, may experience ethical dilemmas that may result in "moral distress"[12] and "moral residue"[24]. Clinical clerks' experience of ethical dilemmas might be mitigated if education of their supervisors paralleled the increase in ethics education in preclinical curricula, and included empowering clinical clerks to address ethical issues. After postgraduate and continuing professional development programs in ethics are developed, they should be evaluated as to their effect on reducing the frequency and impact of medical students' experience of ethical dilemmas.

Table A1
Themes from qualitative analysis of medical student narratives of ethical dilemma

Theme	Example from student narrative
1. Clinical service	"A moral dilemma that I faced occurred during my clerkship **general surgery** rotation...."
2. Target of ethical dilemma a. patient	"**The patient's** long and troubled (and continued) relationship with alcohol had landed him with end stage liver disease...He was often passed over on our daily rounds, for lack of time, and boredom, it seemed on the part of our consultant. According to him, the patient had brought his own grievous situation upon himself, and there was nothing we would do about it."
b. student	"...The senior that I was working under was very tough on all the clerks, but in particular on **one of my colleagues**. While I felt that it was unfair of the senior to consistently demean, single out and belittle that clerk in front of everyone else, if I spoke up in his defence, then I'd become the new scapegoat..."
3. Source of ethical dilemma a. supervisor	"...Tamponade was a very unlikely cause for this patient's arrest. **The anesthesia resident** used this opportunity to practice his pericardiocentesis technique...I became quite angry at what had gone on... the resident never identified that this was a human being that had dignity, family, and feelings..."
b. student	"Because of my mistake, the patient would have to go for surgery. I came upon her several times while on call and never told her of my mistake. I can't deny that some part of what happened **was my fault**, and that I never had the courage to tell her."
4. Nature of ethical dilemma	For example, *Consent for treatment* "...A very sick gentleman was to undergo a necessary but very high risk procedure. I was delegated the task of **obtaining consent**... However, it became clear to me that the patient had no comprehension of the situation or the risk of the procedure. The patient would not be autonomous in the decision to undergo surgery..."

Table A2
Jameton's determinants of moral action in the medical student narratives

Jameton's determinants of moral action[12]	**Description**	**% narratives**	**Example from student narrative**
Moral sensitivity	Awareness that an ethical dilemma is present	**100**	"The 25 year-old lady's parents begged the staff doc not to tell her that she'd had a recurrence. They said she'd lose hope. The doc actually promised them not to tell her. I was very uncomfortable about it."
Moral judgement	Understanding of what ethical action should look like	**76**	"During the surgery, an unrelated abnormality was suspected and the removal of the organ was planned. We have been told that consent must be obtained for a different procedure, whatever the reason."
Moral motivation	Commitment to ethical action	**24**	"I wanted to go and tell the patient that harm had been done because of a missed diagnosis, one that there was no excuse for missing."
Moral courage	Ethical action in the face of repercussion or risk	**4**	"The woman was under a general anaesthetic. I saw that no less than three people would perform a pelvic exam. I actually refused to do so. It made me feel as if I was doing something wrong to examine the patient without her consent."

Figure A1

Clinical services on which the 100 final year medical students at the Schulich School of Medicine & Dentistry encountered the ethical dilemma described in their narrative assignments

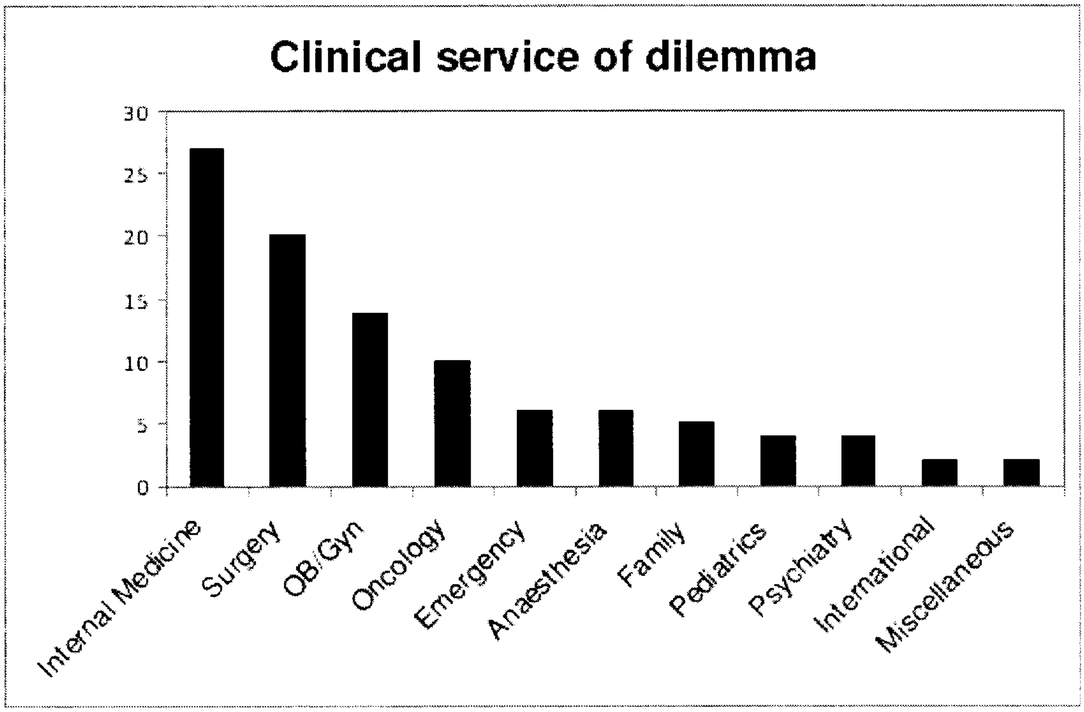


Figure A2

Frequency of the perceived source (■) and target (▨) of the ethical issue that resulted in the ethical dilemma described in the 100 final year medical student narratives at the Schulich School of Medicine & Dentistry

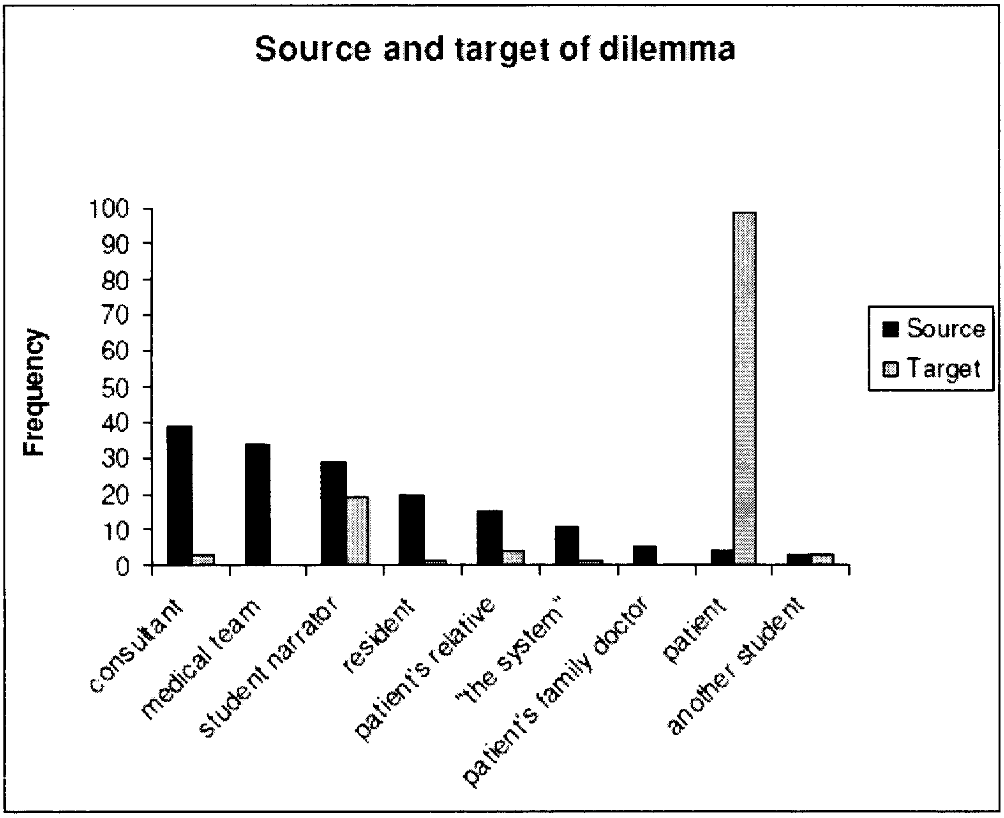
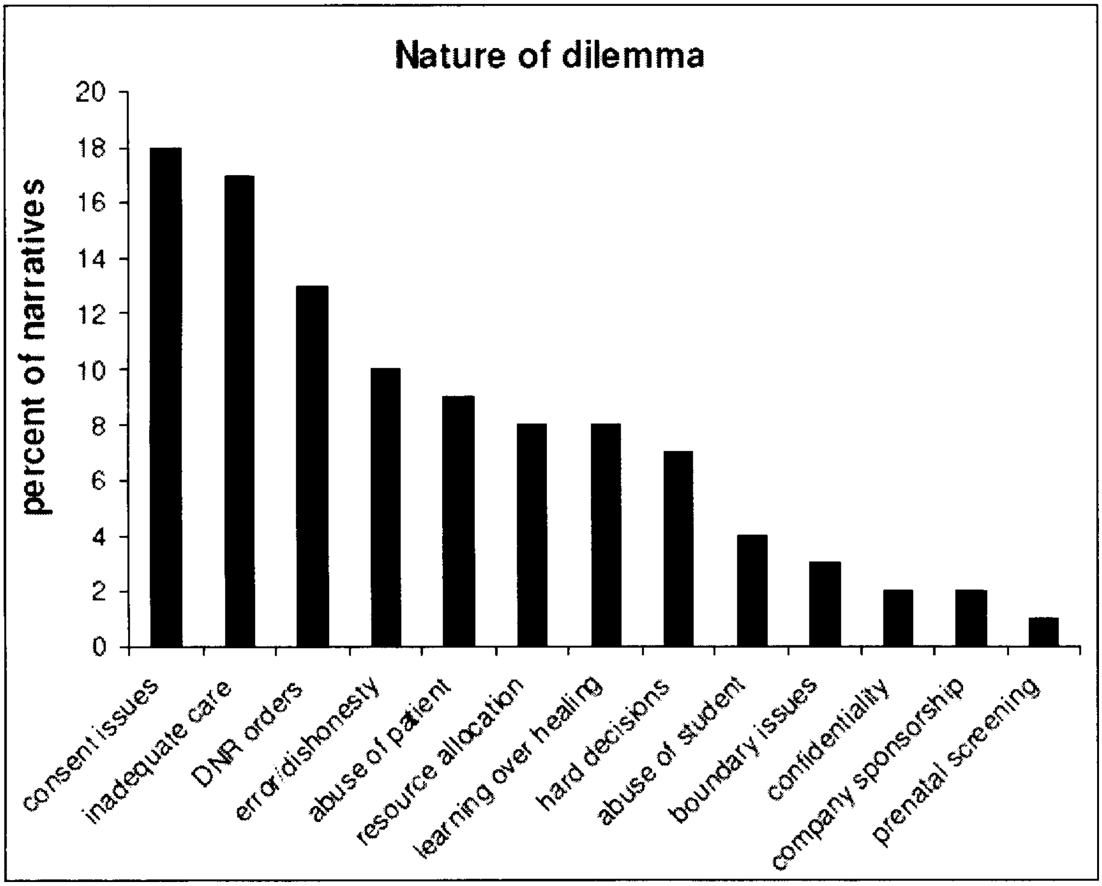


Figure A3

The nature of the ethical issues and the frequency with which they occurred in the 100 final year medical student narratives at the Schulich School of Medicine & Dentistry



References for Medical Students' Perceptions of Ethical Dilemmas in Clinical Clerkship

1. Nisker JA., Narrative ethics in health care, in Toward a moral horizon, Storch J, Rodney P, and Starzomski R, Editors. Pearson Education Leadership and Practice; 2004.
2. Goldie J. Review of ethics curricula in undergraduate medical education. Med Educ 2000; 34(2):108-119.
3. Charon R. Narrative Medicine; a model for empathy, reflection, profession and trust. JAMA. 2001;286:1897-1902.
4. Burrel D, Hauerwas S. From system to story; an alternative pattern for rationality in ethics, in Knowledge, value and belief. Engelhardt HT, Callahan D, Editors. Hastings on Hudson, New York; The Hastings Center 1977: 111-152
5. Brody, H. Storytelling in Medicine in Stories of sickness (second edition). Brody, H. Oxford: Oxford University Press, 2003: 1-19.
6. Jones, A.H. Narrative in medical ethics. In T. Greenhalgh and B. Hurwitz (Eds.), Narrative-based medicine. London: BMJ Books, 1998.
7. Nelson, H.L. (Ed.), How to Do Things with Stories in Nelson, H.L. in Stories and their limits: Narrative approaches to bioethics. New York: Routledge, 1997.
8. Howell SL, Coates CJ. Utilizing narrative inquiry to evaluate a nursing doctorate program professional residency. J Prof Nurs 1997; 13(2):110-123.
9. Maxwell TL, Passow ES, Plumb J, Sifri RD. Experience with hospice: reflections of third-year medical students. J Palliat Med 2002; 5(5): 721-727.
10. DasGupta S, Charon R. Personal illness narratives: using reflective writing to teach empathy. Acad Med 2004; 79(4): 351-356.

11. Strauss AL, Corbin JM. Basics of Qualitative Research; Procedures and Techniques for Generating Grounded Theory, 2nd ed. Thousand Oaks CA: Sage Publications; 1998.
12. Jameton, A. Nursing Practice: the Ethical Issues. Englewood Cliffs NJ: Prentice Hall; 1984.
13. Sherwin, S. No Longer Patient: Feminist Ethics & Health Care. Temple University Press, 1992.
14. Sherwin, S. A Relational Approach to Autonomy in Health Care in The Feminist Health Care Ethics Research Network, Susan Sherwin Co-ordinator, The Politics of Women's Health: Exploring Agency and Autonomy. Philadelphia: Temple University Press, 1998: 19-47.
15. Pellegrino, E.D. and Thomasma, D.C. The Virtues in Medical Practice. New York: Oxford University Press, 1993.
16. Caldicott CV, Faber-Langendoen K. Deception, discrimination and fear of reprisal; lessons in ethics from third year medical students. Acad Med. 2005; 80(9): 866-873.
17. Weston W.W., Brown JB. Teaching the Patient-Centered Method: The Human Dimensions of Medical Education In: Stewart M, Brown JB, Weston WW, McWhinney IR, McWilliam CL, Freeman TR (Eds.). Patient-centred Medicine; Transforming the Clinical Method. London: Sage; 1995: 117-131.
18. Nisker JA. Medical students mirror and hold mirrors. J Obstet Gynaecol Can 2003;25(12):995–999.
19. May WF. Code, covenant, contract, or philanthropy. Hastings Cent Report 1975;5(6):29–38.

20. Nisker, J. A covenant model for the medical educator–student relationship: lessons from the covenant model of the physician–patient relationship Med Educ 2006; 40: 502–503.
21. Hicks LK, Lin Y, Robertson DW, Robinson DL, Woodrow SI. Understanding the clinical dilemmas that shape medical students' ethical development: questionnaire survey and focus group study. BMJ 2001; 322: 709-710.
22. Williams CT, Fost N. Ethical considerations surrounding first time procedures. Kennedy Inst Ethics J. 1992; 2(3): 217-231.
23. Dyrbye LN, Thomas MR, Shanafelt TD. Systematic review of depression, anxiety and other indicators of psychological distress among US and Canadian medical students. Acad Med 2006; 81(4):354-373.
24. Webster G.C. & Baylis F. (2000) Moral residue. In: Margin of Error: The Ethics of Mistakes in the Practice of Medicine (eds S.B. Rubin & L. Zoloth), University Publishing Group, Hagerstown, MD.
25. Marcus RB. Moral Dilemmas and Consistency. The Journal of Philosophy 1980;**77** : 121-136.
26. Althouse LA, Stritter FT, Steiner BD. Attitudes and approaches of influential role models in clinical education. Adv Health Sci Educ Theory Pract 1999; 4(2):111-122.
27. Kenny NP, Mann KV. See one, do one, teach one: role models and the CanMEDS competencies. Ann Royal Coll Physicians Surg Can 2001; 34(7):435-438.
28. Chen DT, Mills AE, Werhane PH. Tools for tomorrow's health care system: A systems-informed mental model, moral imagination, and physician's professionalism. Acad Med 2008; 83(8):723-732.

29. Parker M, Luke H, Zhang J, Wilkinson D, Peterson R, Ozolins I. The "pyramid of professionalism": Seven years of experience with an integrated program of teaching, developing, and assessing professionalism among medical students. Acad Med 2008; 83(8):733-741.
30. Feudtner C, Christakis DA, Christakis NA. Do clinical clerks suffer ethical erosion? Students' perceptions of their ethical environment and personal development. Acad Med 1994; 69(8):670-679.
31. Patenaude J, Niyonsenga T, Fafard D. Changes in medical students' moral development during medical school: a cohort study. Can Med Assoc J 2003; 168(7): 840-844.
32. Dannefer EF, Henson LC, Bierer SB, Grady-Weliky TA, Meldrum S, Nofziger AC, Barclay C, Epstein RM. Peer assessment of professional competence. Med Educ 2005; 39(7): 713-722.
33. Falk-Rafael AR, Chinn PL, Anderson MA, Laschinger H, Rubotzky AM. The effectiveness of feminist pedagogy in empowering a community of learners. Nurs Educ 2004; 43(3): 107-115.
34. Kalet A, Krackov S, Rev M. Mentoring for a new era. Acad Med 2002; 77(11):1171-1172.
35. Berger BK. Power-over, power-with and power-to relations; critical reflections on public relations, the dominant coalition and activism. Journal of Public Relations Research. 2005;17(1): 5-28.

Medical Students' First Clinical Experiences of Death

Many medical students feel inadequately prepared by their undergraduate medical curricula for experiences related to end-of-life situations (Ahmedzai 1982, Buss et al. 1998, Fraser et al. 2001). Although most medical students may not experience caring for a patient at the time the patient dies, those who do have had little, if any, preparation for what they will experience. (Bascom et al. 1999, Rappaport and Witzke 1993, Buss et al.1998). The lack of preparation for the death of someone for whom one cares is part of the broader death-denying trend seen in Western culture since World War I (Rothaupt and Becker 2007). Evidence of death is kept hidden within specialized institutions such as hospitals and nursing homes (Kubler-Ross, 1997), and even within these institutions death is made as invisible as possible to students, staff and patients (Rappaport and Witzke, 1993).

Narrative tools have been used to examine medical student experiences with end-of-life issues. The narratives may take the form of case stories (Ahmedzai 1982; Kelly and Nisker 2008), creative writing (Hatem and Ferrara 2001; Williams et al. 2005), interviews (Rhodes-Kropf et al. 2005, Ratanawongsa et al. 2005) or reflective journaling (Pitkala and Mantyranta 2004). Most research into the patient death experience has either focused on fully-trained physicians (DelVecchio-Good et al. 2004, Jackson et al. 2005) or has been carried out to study end-of-life curricula (Billings and Block 1997, Kaye and Loscalzo 1998). The research that has studied medical students directly includes, Rhodes-Kropf et al. (2005), which used open-ended interviews to investigate medical students' "most memorable death". This study revealed that patient deaths could be emotionally powerful for students, even if they were not close to the patient and that many students felt inadequately emotionally supported by their medical team and supervisors. Wear (2002) analysed medical students' narratives about caring for dying patients, showing that students did not feel well-prepared by their preclinical training, or well-supported by their residents and attending physicians with regard to end-of-life issues. Finally, Ratanawongsa et al. (2005) used interviews to show the strong degree to which residents and attending physicians influence students' perceptions of end-of-life care, and called for further research into how responses to death are modelled to medical students.

No previous research has focused on medical students' first experience of the death of a patient in their care. A gap remains in the literature as to how medical students' experiences of death play out over time, and how their responses are affected by their peers and supervisors. This current study explores medical students' first encounter with the death of a patient in their care.

Methods

Twenty-nine final-year medical students at the Schulich School of Medicine and Dentistry at the University of Western Ontario, were recruited through email. Medical students who had experienced the death of a patient in their care were invited to share their experience in their choice of an interview, a focus group, or through email. The prompts given to the students through all data collection strategies were the same: "What happened the first time you were involved in the care of a patient who died?", "How did the event make you feel?", "How did you cope with the event?", "How did the other health care professionals around you react to the event?", and "Is there anything else important to you that hasn't been asked?". These prompts were designed to be open-ended, facilitating conversation that would make the participant comfortable, thereby eliciting a story from the interviewees without influencing the manner in which their story would be told.

Both telephone interviews and the focus group recordings were transcribed verbatim, including pauses and notes on the emotional tone of the spoken text. Where students chose to respond by email, their narrative text was used as it was written. The resulting data were transcribed and entered into Nudist N6™ (QSR, Doncaster), a software program designed to manage large quantities of text meant for qualitative research. In our study, this software was used to organize and search text, but all coding was done line-by-line by EK. Analysis was performed using three stages: open, axial and selective coding, with constant comparison between emerging codes and the original texts taking place throughout each phase (Strauss and Corbin, 1998). Theoretical sampling was maintained throughout the analysis, with the interviews continued as long as new themes and relationships were discovered in the data (so long as the data remained "unsaturated" (Morse, 1995)). For this reason, interviews continued beyond the class of 2005 to include the class of 2006. By using constant comparison between the emerging theory and codes with what had come before, as recorded in ongoing research memos, a grounded theory was generated, rather than a description of themes (Becker, 1993).

In order to determine consistency of coding generated from the interviews of the class of 2005 and applied to the class of 2006, the similarity of the two participant groups was compared. The saturation of the data was tested at the open coding level and the evenness of our data was tested at the axial coding level.

Results

Each stage of the coding process; open, axial and selective, provided a set of categories that could be used to explore the emerging themes of medical students' first experience with the death of a patient in their care. The open coding level and axial coding level are demonstrated in Figure B1. The axial level builds from the open coding level, incorporating some of the old categories while creating new ones. At the axial level, students' death experiences are conceptualized as (i) *preparation*; (ii) *death event*; (iii) *feelings*; (iv) *role of clinical clerk*; (v) *differential factors between death,* a category that includes data on how one death differs from another; (vi) *closure*; and (vii) *relationships* (Figure B1). Finally, at the selective coding level, the mature grounded theory is presented as a chronological model in five stages; (i) *preparation*; (ii) *the event itself*; (iii) *the crisis*; (iv) *the resolution*; and (v) *the lessons learned* (Figure B2).

Our total response from the classes of 2005 and 2006 was 29; 20 interviews, 5 students in a focus group, and 4 emails (Table B1). Both groups were in the same stage of clinical training; the final year of clerkship at the Schulich School of Medicine and Dentistry at the University of Western Ontario. The gender distribution of the two groups was analysed. Finally, the distribution of the services on which the deaths occurred was also investigated, in order to verify that the coding was being applied to similarly diverse death situations (Table B1).

In the open coding stage of analysis, 28 free categories were established (Figure B1). These categories were groups of similar phenomena, bound together by similar language or a similar context. Some examples of this level of coding in our analysis would be grouping together accounts of physically-expressed emotion, reference to biomedical details, or reference to learning processes. The next stage of analysis, axial coding, explored the relationships between these phenomena, and resulted in seven overarching themes. These were: (i) *preparation*; (ii) *the death event*; (iii) *feelings*; (iv) *the role of the clinical clerk*; (v) *differential factors between deaths*; (vi) *closure*; and (vii) *relationships* (Figure B1). In the final stage, called selective coding, a pattern by which the overarching themes interact with each other was revealed, generating a picture of the gestalt between the disparate phenomena revealed by earlier stages of the analysis. This pattern was reached by considering the encounter of a student with a dying patient as set out as stages in time: *preparation, the event, the crisis, the resolution*, and *students' conclusions.* This model is illustrated in figure B2.

Each of the elements of our grounded theory of medical students' first experiences with patient death; *preparation, the event, the crisis, the resolution*, and *students' conclusions* will now be explored individually.

Preparation was translated from the axial stage of coding without any alteration, and it denotes all the previous experience, including academic training, life events, and psychological structures that the student carries with them before their first encounter with the dying patient. At the earliest stages the memories of the physical signs of death are etched into the memory. The colour and rigidity of dying flesh or the sound of a family crying in the hallway, are some of the details that were depicted as standing out in students' minds.

The subsequent stages of the model we present here are *the event itself*, which encodes the narrative details of who the dying patient was and how they came to die, *the crisis*, which encodes how the student perceived the death in their own personal context, and *the resolution* which encodes how the student meshed the death experience into their broader personal and professional lives. These selective codes were formed by EK by observing how the axial codes could be reworked into new patterns that occurred over time. The axial stage codes of *feelings, differentials between deaths, the clerk's position*, and *personal relationships* are scattered throughout the selective stage codes of *the event, the crisis*, and *the resolution.*

In *the event*, deaths were separately arranged as "old", "young" or "unexpected". When students told the stories of the deaths they encountered, these variables greatly influenced the emotional tone in which the story was told.

Moving into *the crisis*, the way in which students perceived the death continued to follow the same broad patterns. "Old" deaths were frequently experienced as so routine as to be dehumanizing. "Young" deaths were often perceived as tragedies defying understanding and producing great emotional turmoil. "Unexpected" deaths often raised questions about how important control is to the professional role of physician. Many students reported ambivalence about their own responses to the death, especially their emotional responses.

Moving further into *the resolution*, that experience of routine, dehumanizing, "old" death was met with the coping strategy of rationalization. The tragic "young" death often aroused contemplation within students about their own life values. The "unexpected" death could be resolved by turning the event into a learning experience, which helped to offset the experience of a loss of control. These particular coping mechanisms have been identified in medical students coping with patient deaths before, with rationalization being more common amongst male students (Firth-Cozens, 1991).

The last selective code is *lessons learned*. This code reintegrates the separate strands of students' death experiences by the way in which the community around the student helped or failed to help the student to acknowledge their experience. This debriefing of the experience within a community, whether that community was personal or academic, returns the cycle to its origin again, *preparation* (Figure B2). This integration process occurred at all levels of the death experience process.

The service on which the death occurred, the emotions experienced as a result of the death, and coping mechanisms used to deal with the death are presented in Table 1. Critical Trauma Unit and Intensive Care Unit rotations were the most common on which to witness a death. This correlates well with the most common type (63%) of death encountered by the students: the "old" death. These deaths are anticipated events that come as the end stage of a long process. One quarter of deaths were separately categorized as "unexpected". These deaths occur across a spectrum of ages, but hold the common thread that they were unanticipated. The final category is the "young" death. These included deaths where the young age of the patient provoked responses that separate this category from the other two. The most common emotions encountered during first death experiences were sadness and shock. The most common coping strategies used by the students were to transform the death into a learning experience. Data are insufficient to comment on the significance of gender differences in emotional or coping responses.

At the open coding level, when checking the text of the interviews against the free nodes that were generated from them, only 360 of approximately 4400 lines of text did not contribute to any node. The uncoded text consisted largely of introductions, description of the study, and goodbyes. At the axial coding level, 71% of the interviews contributed to all seven nodes, while 92 % contributed to at least five. Finally, at the selective coding level, applying the grounded theory model to each of the interviews allowed each narrative to express its' individual potency while relating them to each other in a common framework.

Discussion

The findings of this study should not be generalized freely beyond the participants by whom they were generated; these being the medical students of the Schulich School of Medicine and Dentistry at the University of Western Ontario. The students' training in narrative expression and ethical thinking is shaped by the Medical Ethics and Humanities program which is part of the students' curriculum. Additionally, attention should be paid to the "insider" status of the investigators; EK as a medical student at the time the research was conducted, and JN as a physician-educator (Medical Ethics and Humanities), as opposed to the "outsider" status of researchers not trained in medicine (Collins, 1986). The fact that the information was given to a medical student by other medical students may shape the way in which the interviews proceeded and the nature of the information that was shared. However, it may also be a strength in that it potentially fosters greater depth of sharing by the participants in the expectation of sympathetic listening from the researcher.

This study fills gaps in the literature by both specifically addressing medical students' experience of their first death of a patient in their care, and exploring how medical students' experience of patient death evolved over time. This first experience of the death of a patient in their care includes a strong tension between medical students' highly charged emotional experience and the detached professionalism that medical students perceive is expected of good physicians. Fox (2006) draws attention to "medicine['s]" training doctors for detachment rather than concern, as emotion is believed to negatively impact the objectivity with which doctors must make life or death decisions (Fox, 2006). In our study, students who did not have any community members with whom to debrief seemed to experience emotion as inappropriate and detachment as appropriate in the professional context, more than students who had the opportunity for discussion with supervisors, peers or friends. This is in keeping with previous studies that have shown a desire to debrief death experiences, particularly between medical students and supervisors, as part of the process of shaping their professional identities. (Ratanawongsa et al. 2005) . Also, younger and women physicians may desire more debriefing to integrate the emotional impact of death (Redinbaugh et al. 2003).

Ambivalence regarding emotion and objectivity exists within many medical students before they begin their clinical training. Emotional memories of death of a friend or family member, media images, and fictional accounts, shape the way in which they will experience death in the clinical setting (Hull, 1991). However, students are also trained in detachment as a professional skill prior to their clinical experiences, being told that such activities as running a code or filling out death certificates requires dispassionate equanimity (Blumgart, 1964; Carlton, 1978). Furthermore, death itself is often regarded by medical curricula as a failure (Field and Cassel, 1997). This, in turn, can limit students' development of empathic understanding of their patients by promoting avoidance of reflection on end-of-life events as they constitute a medical "failure" (Branch et al., 1998). As students move through their medical training, the tension between emotion and detachment frequently goes unresolved, since a debriefing process is not encouraged by the death-denying attitude prevalent in hospital culture (Kubler-Ross, 1997). Medical students are reported to experience emotional turbulence, including sadness, anger, and vulnerability around the experience of patient death. (Ratanawongsa et al. 2005, Rhodes-Kropf et al. 2005, Williams et al. 2005). Students also relate their death experiences to their academic training, where death and subsequent debriefing are turned into clinical learning experience (Rhodes-Kropf et al. 2005, Pitkala and Mantyranta 2004).

Clinical student involvement with dying patients decreases as the patient's status declines (Bascom et al., 1999). There has been an increase in the time given to end-of-life issues in medical curricula across North America. Preclinical education in end-of-life issues has been shown to have a positive impact on the confidence levels of students working with dying patients (Fraser et al., 2001). However, the content and manner in which end-of-life education is delivered varies considerably (Dickinson, 2002), and attention to the emotional experience of patient death has not been emphasized. This lack of attention to the emotional experience may be due to the difficulty in communicating emotional understanding this experience in curricula and in coordinating the sharing of death experiences among those who have had such an experience (Wear 2002, Rhodes-Kropf, et al., 2005).

Although none of the students in our study recommended a method of resolution for this tension, our model encourages the examination of the different pathways in which medical students' experiences of the first death of a patient flow, and also shows that sharing this experience with a community, or debriefing with a supervisor greatly aids the integration process when death occurs. However, our research suggests that this is challenging as such debriefing is not all that common within the culture of medical training.

Conclusion

Tension between professional detachment and emotional concern and empathy is commonplace among medical students experiencing the death of a patient in their care. Students negotiate this experience differently depending on the variables in their preclinical preparation and in the patient's clinical circumstances. The support and role-modelling they receive from their peers and supervisors shapes their experience of future deaths. Ambiguity, but also great personal strength, characterizes much of this process, reflecting the complex relationship between the medical profession and death.

Figure B1

Open and axial codes of medical students' death experiences

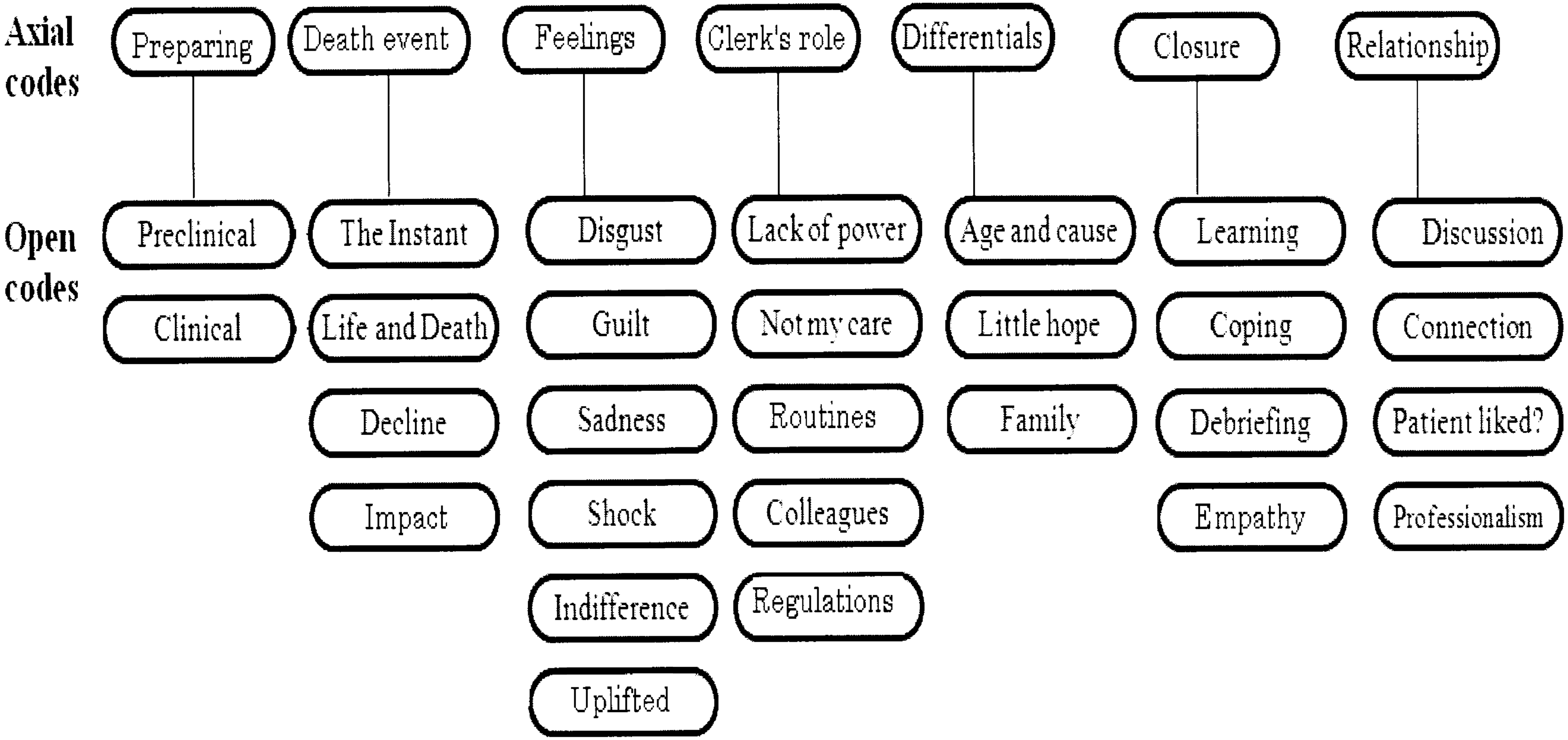
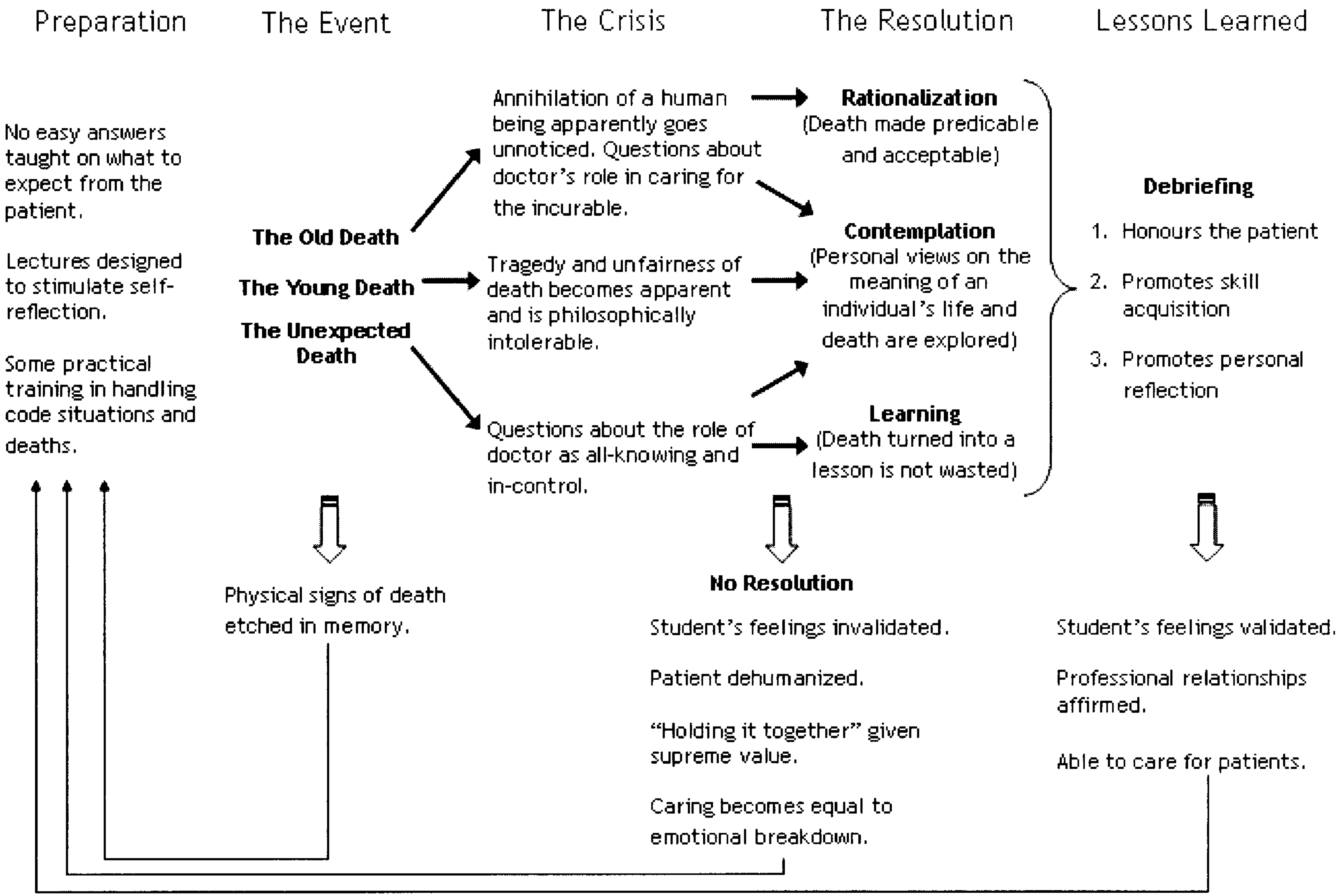


Figure B2
A model of students' death experiences



No easy answers taught on what to expect from the patient.

Lectures designed to stimulate self-reflection.

Some practical training in handling code situations and deaths.

The Old Death

The Young Death

The Unexpected Death

Physical signs of death etched in memory.

Annihilation of a human being apparently goes unnoticed. Questions about doctor's role in caring for the incurable.

Tragedy and unfairness of death becomes apparent and is philosophically intolerable.

Questions about the role of doctor as all-knowing and in-control.

Rationalization
(Death made predicable and acceptable)

Contemplation
(Personal views on the meaning of an individual's life and death are explored)

Learning
(Death turned into a lesson is not wasted)

No Resolution

Student's feelings invalidated.

Patient dehumanized.

"Holding it together" given supreme value.

Caring becomes equal to emotional breakdown.

Debriefing

1. Honours the patient
2. Promotes skill acquisition
3. Promotes personal reflection

Student's feelings validated.

Professional relationships affirmed.

Able to care for patients.

Table B1 Quantitative results

N= 29; 20 interviews
5 in focus group
4 emails

Type of death encountered

"Old"	63%
"Young"	13%
"Unexpected"	25%

Emotions felt as a result of the death

	Total *(n=24)*	# of males *(n=12)*	# of females *(n=12)*
Sadness	12	6	6
Shock	12	7	5
Indifference	8	7	1
Guilt	6	5	1
Disgust	5	4	1
Uplifted	5	2	3

Coping Mechanisms used to deal with the death

	Total *(n=24)*	# of males *(n=12)*	# of females *(n=12)*
Learning	14	7	7
Rationalization	9	8	1
Debriefing	9	6	3
Contemplation	7	5	2

Service on which the death occurred

CTU	37%
ICU	25%
Surgery	21%
Emergency	13%

References for Medical Students' First Clinical Experiences of Death

Ahmedzai S. Dying in hospital the resident's viewpoint. BMJ 1982;285: 712-14.

Bascom P, Vetto J, Osborne M. Clinical experiences of medical students in Oregon with dying patients. Journal of Cancer Education 1999;14: 137-139.

Becker PH. Common Pitfalls in Published Grounded Theory Research. Qualitative Health Research 1993;3: 254-260.

Billings JA, Block S. Palliative care in undergraduate medical education: status report and future directions. Journal of the American Medical Association 1997; 278: 733-8.

Blumgart H. Caring for the patient. New England Journal of Medicine 1964; 270: 449-456.

Branch WT, Pels RJ, Hafler JP. Medical students' empathic understanding of their patients. Academic Medicine 1998; 73:360-2.

Buss MK, Marx ES, Sulmasy DP. The preparedness of students to discuss end-of-life issues with patients. Academic Medicine 1998; 73:418-22.

Carlton W. In Our Professional Opinion: the primacy of clinical judgement over moral choice. London: Univeristy of Notre Dame Press, 1978.

Collins P. Learning from the Outsider within; The sociological significance of black feminist thought. Social Problems 1986; 33: 14-32.

DelVecchio-Good M, Gadmer NM, Ruopp P, Lakoma M, Sullivan AM, Redinbaugh E, Arnold RM, Block SD Narrative nuances on good and bad deaths; internists' tales from high-technology workplaces. Soc Sci Med 2004; 58: 939-953.

Dickinson G. A quarter century of end-of-life issues in U.S. medical schools. Death Studies 2002; 66: 635-46.

Field MJ & Cassel CK. Approaching Death; Improving Care at the End of Life. Washington DC: National Academic Press, 1997.

Firth-Cozens J, Field D. Fear of death and strategies for coping with patient death among medical students. British Journal of Medical Psychology 1991; 64: 263-71.

Fox J. "Notice How You Feel": An Alternative to Detached Concern Among Hospice Volunteers. Qualitative Health Research 2006; 16: 944-961.

Fraser HC, Kutner JS, Pfeifer MP. Senior medical students' perceptions of the adequacy of education on end-of-life issues. Journal of Palliative Medicine 2001; 4: 337-343.

Hatem D, Ferrara E. Becoming a doctor: fostering humane caregivers through creative writing. Pat Educ Couns 2001; 45: 13-22.

Hull F. Death, dying, and the medical student. Medical Education 1991; 25: 491-96.

Jackson VA, Sullivan AM, Gadmer NM, Seltzer D, Mitchell AM, Lakoma MD, Arnold RM, Block SD. "It was haunting...": Physicians' descriptions of emotionally powerful patient deaths. Academic Medicine 2005, 80: 648-56.

Kaye JM, Loscalzo G. Learning to care for dying patients: a controlled longitudinal study of a death education course. Journal of Cancer Education 1998; 13:52-7.

Kelly ER, Nisker J. Increasing bioethics education in preclinical medical curricula may predispose students to experience ethical dilemmas in clinical clerkships. Accepted at Academic Medicine Aug 6 2008.

Kubler-Ross E. On death and dying: what the dying have to teach doctors, nurses, clergy and their own families. New York: Simon & Schuster, 1997.

Morse JM. The Significance of Saturation. Qualitative Health Research 1995; 5: 147-9.

Pitkala HK, Mäntyranta T. Feelings related to first patient experiences in medical school. A qualitative study on students' personal portfolios. Patient Educ Couns. 2004; 54:171-7.

Rappaport W, Witzke D. Education about death and dying during the clinical years of medical school. Surgery 1993; 113: 163-5.

Ratanawongsa N., Tehrani A., Hauer K. Third-year medical students' experiences with dying patients during the internal medicine clerkship: a qualitative study of the informal curriculum. Academic Medicine 2005; 80 :641-7.

Redinbaugh E, Sullivan A, Block S, Gadmer N, Lakoma M, Mitchell A. Doctors' emotional reaction to recent death of a patient: cross-sectional study of hospital doctors. British Medical Journal 2003; 327: 185.

Rhodes-Kropf J, Carmody S, Seltzer D, Redinbaugh E, Gadmer N, Block S. "This is too awful: I just can't believe I experienced that...": medical students' reactions to their "most memorable" patient death. Academic Medicine 2005, 80:634-40.

Rothaupt J, Becker K. A literature review of western bereavement theory: From decathecting to continuing bonds. The Family Journal: Counseling and Therapy for Couples and Families 2007; 15 : 6-15.

Strauss AL, Corbin JM. Basics of Qualitative Research; Procedures and Techniques for Generating Grounded Theory, 2nd ed. Sage Publications; Thousand Oaks CA, 1998.

Wear D. "Face to face with It": medical students' narratives about their end-of-life education. Academic Medicine 2002; 77: 271-77.

Williams CM, Wilson CC, Olsen CH. Dying, death, and medical education: student voices. J Palliat Med. 2005; 8:372-81.

The Serpent God

In my garden are row on row of carrots. I've never tried growing them before. I like to have vegetables in my garden. They make me feel like Mother Earth making dinner out of air and water and dirt. They're still very small, bright green and feathery. It may be that none of them will ever make it to the fall to be pulled out of the ground as fat, red carrots. Too much heat would wipe out all of them at once. They're precious.

It's almost done. The research project that I started what seems like an eternity ago. How different am I now compared to when I first made that analysis of the student death interviews? Well, there is my spectacular failure to secure a residency spot coming out of med school. I'm not a successful prodigy no more. I'm a little shameful in fact. Do I look ridiculous taking the spot in family medicine that I turned down only a year before? Did I need that time to get over my anger at how clerkship played out? It had been rough for me. I'd had a lot of trouble with authority telling me how to work and how to feel. Letting me know how unlike other med students I was; so unenergetic, so bored. In the meanwhile, I had worked on my research, ferreting away stories and memoes and codes like a stash to keep me going in hard times.

I go to work at the hospital in the morning. I'm tired but not unhappy, driving out into the eastern sun, on the way to work. Life has demonstrated a certain amount of narrative synchronicity for me with the start of my residency. I'm on internal medicine Team One at University Hospital for the opening act of my residency training. This same team, even the same room, the same computer screens, the same bitter odor of patients unable to care for themselves, this is where I started life as a clinical medical student. This is where I met Mrs. M, the first patient who died in my care.

Today I pronounced a patient dead for the first time. I met him only once while he was alive. That was only a week ago. He was thin and confused then. His family said he'd been hiking in the woods only six months ago. That he'd been visiting family in another city only a few weeks ago. Now he was as thin as a rail and hard to comprehend. I don't remember why I was even in the room, as he wasn't my immediate charge and I had my hands full trying to learn the ropes and memorize the medications of my own patients. It was decided not long after that the lesion in his brain would be allowed to cause his death. We came by as a team to see him the day he died. Now he was a caricature corpse, only he breathed, gasping. His head bobbed for air while all of his rail-thin limbs lay exhausted and still beneath him. Our staff said it wouldn't be long. I stopped for a moment and prayed for a sweet death for this gentleman.

An overhead announcement over the hospital PA for the family to return to the room- they had stepped out for a coffee- was the announcement of his death. My pager went off a few seconds later. I went upstairs with the medical student on my team to pronounce his death. In fact, there really wasn't any reason to page me instead of any other resident. It was funny it turned out that way. His son was in the room on the phone. Mr S. was lying in bed with his arms folded, his mouth still wide open for breath, but with the gasping stilled. I listened to his chest. There was the astonishing sound of nothing. I opened his blue eyes, one pupil wide and black, the other small. They didn't move either. He was dead.

The trouble with growing carrots from seed is that, as long as your soil is right and doesn't dry out, you'll initially end up with way more seedlings than could possibly survive. They have to be thinned. My rows are getting untidy and crowded. I try to take out the weaker ones. But there are too many perfectly healthy sprouts, some of them have to go. And that's where I have the trouble with thinning carrots- it's necessarily so random. I love the little fern-like new plants. I grew them from seeds and dirt. How can I decide which one to take out?

Why was it Mr. S who developed the high-grade glioma instead of somebody else? My question rung echoes in my head. So many of the students I interviewed about death had asked the same question. If Mr. S had been someone else, I think the experience for me would have been the same. I never really knew Mr. S in life. His death was personal, intimate in the way only death can be. But for me his death was also a type, an abstract. It is as incomprehensible as trying to reason out which seedling to yank out of the garden dirt.

I went home to my garden and broke down in tears. I wanted death to be full of meaning. I wanted to guide family members through their loss with ridiculous poise and compassion. Just like I wanted my first death experience, or every med students' first death experience, to be meaningful and life-changing. But it turns out it doesn't always work out that way. My declaration of Mr. S' death seemed to me to be rude and irrelevant. Did any of the work I was doing, as a doctor, or a researcher, really matter at all?

A strange thing happened then. A long, lithe form slipped passed my fingers in the carrot rows. The serpent. Almost forgotten now as a medical symbol, because its' ubiquity makes it invisible. The creature that sheds its' skin when old to become young again. "What a fanciful story," I said.

Then it turned to me and started to speak. The world shifted.

"I am dry but not hot, coolness covers me. I move impossibly for so many bones. I know the secrets under the rock and I tell them to the sun. My skin tells the story, row and pattern. My eye tells the truth, lidless and sharp like a new star. I am the life surging up from the cradle of your pelvis. I am death striking your heel. Tell me why I should wind up your staff and tell you my secrets. For I am the Serpent, the God of all healers"

Where were the garden and the carrot rows? The space I am in now seemed massive, a great underground cathedral of stone columns. Before me stands the Serpent God. I can't tell you what I see, because I'm not sure. Before the Serpent climbed Aesclepius' staff though, it was wound around the arms of women. Maybe you've seen her, a lovely Minoan woman with her arms raised forward? Or maybe, like me, you've thought that Eve must be friends with that snake in Eden's tree?

"Why have you searched Me out?"

The words of the Serpent slam into me as waves of pure sound. They bounce off again, reflecting the truth from inside me. I spoke.

"I went looking for you, Serpent, in the land of the dead. They say that your home is under the ground with corpses and bones. They say you crawl down with the dead and leave your skin behind you. Well, surely the place where I labour is the land of the dead. The old and young pass through here without ceremony. Their meat is hung up for all to see. Their names tell no stories about their life in the living land. I am as dead as they when we meet in this place.

There is no water. No depth, no reflection, no assuaging of thirst, for we deny that any thirst exists. This is the dry land of the dead. Meaning is kept to a minimum. There is dust on my eyelids and tongue. My fingers fumble around the edges of their stories, dropping a live beating heart as soon as it's found. Fear and anger, theirs and mine. Who would dare to bring a heart into this place?"

In a different place, but at the same time, the Serpent's skin passes under my fingertips as it winds through the fern-like rows of young carrots. It is warm and soft. In the great cavern, the Serpent speaks.

"I leave you a token of my presence. It cannot be ignored. The heart lives for stories".

The Serpent's skin reveals the truth in a flash. Under the land of the dead where I labour with those who are afraid, in pain or in pieces, the great waters rush. A sound of living water carving the stony bones and the earth beneath our feet. We all hear it. The sound of stories, a hundred different meaning, feelings, expressions all at once. The terrible reverberation of one live heart beating to another. The drop of water striking my tongue, cracked and parched, teaching it to flicker out in search of life. A pathway cut along the dust of my face, a tear-track carving a path through the land of the dead. I become afraid.

"I dare not! No one dares! Let silence be kept! Let counting and medical mumbling go on unchecked. There are pieces only and no whole. Who would dare to connect, to relate, to risk the noise of many voices?"

The God did not relent. *"Join me where I am found, if you can name it."*

I breathe. Silence fills the air. Time passes as I consider the Serpent's command. Finally I am able to speak.

"You, Serpent God, live deeper than land of the dead. In the land of living water, of the rush of blood, of the caress of skin against soft grass and rasping stone. You are stories. You cut away the dust we have laid on you. You reduce our counting to ashes. Your colours are bright in their appearance, freshly opening as the old skin splits apart. Your scaly glory is our life and the death that cuts down to our own lonely bones."

The bite of the Serpent strikes me then, all lightning and fangs. I'm beaten clean like a rug. Dust and old skin fly off to the corners of the world. My weave aches and bends in the thrashing. I become the Serpent, the God of healers. I will keep faith and company with aching old bones. I will cry. My fingers will fumble at the edge of their stories, so precious, so fragile, bearing the water from the land of the living.

In the garden, the Serpent was gone. The sun shone down on my carrots, making light green filigrees against the soil. I had stopped crying. I sat for a long time on the ground. After a while, my thoughts turned again to Mr. S.

My inability to comprehend the reasonlessness of his death does not diminish the powerful impact it had on me. In a way, he let me watch death happen. His status was liminal when I entered his room. When I left it, he was dead. In the pronouncement, there was one moment between us where he permitted me to become death, inasmuch as I could say, "This has been one piece of your existence. Now it's over."

I'm amazed too, by all the stories I know about death, the ones the students shared with me while I was puzzling over qualitative methodologies and dodging wrathful consultants as a clerk. They too, let me watch death. I remain humbled by those stories, as well as by the carrots and serpents in my garden.

Conclusion

What I have shown in this research is that unspoken and overt attitudes of preceptors and students greatly influences the shape of medical student's clinical experience. Power issues, emotions, and questions of meaning shoot through all levels of student experience and go largely untouched by official curricula. The attitudes of the preceptor and the student towards a dying patient greatly influences how that patient's death will be experienced by the medical student. It is already known that intolerance of uncertainty influences the attitude of physicians towards dying patients in a negative manner [Kvale et al., 1999]. Added to this is the fact that death is widely conceived of as a treatment failure in medical culture [Field and Cassel, 1997]. Negative attitudes towards patient death discourage physicians and medical students from reflecting on death and dying. Simply put, doctors are less likely to dwell on an experience that is unpleasant or a failure, and this is largely how death is viewed in medical culture [Branch et al., 1998].

Physicians also do not enjoy feeling out of control of a clinical situation. Notice that in "Medical Students' First Clinical Experiences of Death", it is the unexpected deaths that provoke feelings of powerlessness. Some of the most pronounced emotional reactions came from students thinking back on unexpected deaths and wondering if they could have done anything differently, or feeling that they must have missed some important clinical clue that would have predicted the death. These students relied on their preceptors to tell them that, indeed, they hadn't missed anything and likely nothing could have prevented the death from happening. I believe this is the variety of post-death debriefing that is done the best in medical education. The review of a patient's clinical management by a preceptor with their medical student functions to restore order to the death situation, as the story of what happened to a patient is brought into the realm of the expected and the well-understood. However, this debriefing is far less likely to include aspects outside the purely clinical narrative of a patient's signs, symptoms and medical treatment. Whether or not a death was "good", which is a short hand for a complicated balance of the right degree of medical intervention, emotional support, and appropriate communication of relevant information to the patient and their families [DelVecchio-Good et al., 2004] seems to be a much more complicated matter than whether a death was well-managed medically. Consequently, debriefing of this less-tangible aspect of death is not performed as consistently.

The results of our study, however, indicate that this broader kind of debriefing is just as necessary for the optimal professional development of medical students. Questions about emotion, and about meaning are experienced by medical students who interact with dying patients [Ratanawongsa et al. 2005, Rhodes-Kropf et al. 2005, Williams et al. 2005]. In fact, these qualities differentiate the real experience of patient death from the more abstract case study that can be taught in a lecture hall in the preclinical years. When it is already known that real, direct clinical experience is viewed by medical students as the best kind of end-of-life education [Wear, 2002], it behooves medical educators to spend time with the aspects of clinical patient death that differentiate it from abstract case studies, and foremost of these are questions of emotion and meaning.

This theme is reiterated in “Medical Students’ Perceptions of Ethical Dilemmas in Clinical Clerkship”. There seems to be a mismatch between students' expectations of respect and compassion for themselves and for patients, and the real-world concern for these same issues as demonstrated by their peers and preceptors. I attributed the decline between moral judgment and moral motivation- between knowing what is right and being motivated to do what is right- to two factors. The first of these came down to role-model mirroring [Nisker, 2003]. If preceptors and residents did not model considerate, compassionate care, then students assumed that these qualities are peripheral to the real concerns of medicine. Of course, this is being too hard on the preceptors and residents. Each student narrative represents an exceptionally obvious case of ethical dilemma, and I am not arguing that medicine is full of callous, inconsiderate brutes with no concern for the emotional well-being of their students and patients. However, consider how many of the narratives were concerned with questions of respect and compassion, as opposed to "harder" ethical concepts of autonomy and nonmalfeasance, and the pattern becomes clear; emotion and meaning are modeled to students as being peripheral to medicine, not central to it.

The other reason medical students were likely to show decreased moral motivation and moral courage was the power differential between student and preceptor. Fear of negative evaluation, or of simply being excluded from the social relationships on a medical team prevent students from questioning the decisions of their peers and supervisors [Caldicott et al., 2005]. This reliance on a power-over, rather than a power-with [Berger, 2005] relationship begins to show how power issues are connected to medical education's exclusion of emotion and meaning from the centre of concern. Broadly speaking it is younger and women physicians who want more time for debriefing patient death [Redinbaugh et al., 2005], these are the physicians whose values are not best represented by power-over relations. I have argued that Schulich School of Medicine and Dentistry students are more likely to perceive ethical dilemmas involving emotion and meaning because of their training in feminist and virtues ethics [Sherwin, 1998] approaches to medical ethics. They more readily perceive the mismatch between concern for mutuality and equal sharing of power and the paradigm in which medical education now occurs. It makes sense that these same students are also more likely to incorporate reflection on the personal meaning and emotional experience of patient deaths into their professional development, whether or not that reflection is supported by debriefing with the rest of the medical team.

Where am I in this research? I began this study in the belief that the standard medical student's personal narrative included an important rite of passage involving their first experience of a patient's death. Of course, good grounded theory shouldn't start with any assumptions, but there it lies nonetheless. I discovered two important things. The first, also supported by my research into medical student's ethical dilemmas, is that there is no such thing as the standard medical student's personal narrative. The second, related point, was that not every medical student experienced their first death as an important rite of passage. To some students, although death might provoke emotional response or a review of the patient's clinical treatment, it wasn't really much of an event at all. My own experiences with death that I have shared in this thesis share some of that ambiguity. They seemed random, even rude. I wanted my own narrative to flow in a certain way, rich in meaning and relationships. My struggle, as I portray it in "The Serpent God", was to find meaning in the dry and unexpected, in the boring and painful paces in medicine.

But some of the impetus for this research is not just reflective, but activist. Why aren't more students getting the debriefing they deserve on the broader ethical and personal implications of death? Why did so many students' ethical dilemmas have lack of compassion or respect as their primary features? Why didn't I feel, during much of my time doing hospital work, like I was really doing any effective work as a healer? Couldn't things be different?

What may not be obvious from the final form of "The Serpent God",_is the great extent to which it was shaped by writing and reading a journal of my development as a resident and of the writing and publication process for "Medical Students' Perceptions of Ethical Dilemmas in Clinical Clerkship" and "Medical Students' First Clinical Experiences of Death. That journal is the record of my anger at medicine and medical education, as well as my delight at my own progress with becoming a more professional writer, researcher, and physician. It is the record of my "field work" [Jacobson, 1991] in studying medical education from the inside, and serves as a way to grant credibility to my self as a source of knowledge [Bass-Jenks, 2002]. The journal also portrays what I long for; a meaningful and enriching connection between the personal and professional, which I believe I evoked successfully in "The Serpent God". I was looking for that same connection when I conducted research into deaths and ethical dilemmas. This study has been an exploration of my own professional culture and into the potential places I might fit into it, and the places where I do not fit, connecting the personal to the cultural as Ellis and Bochner [2000] describe.

Finally then, what implication does this research have for medical students' education? Or for their educators? Or for myself? The grounded theory illustrated in "Medical Students' First Clinical Experiences of Death" could make an effective tool for introducing medical educators to some of the issues that their medical students are likely to face when patients die. It would lend itself well to a seminar setting, where it could be used as a springboard for a conversation between medical educators about how their experiences have been similar or different. More conversations about meaning and emotion in medicine are a good start. I suggest too, that this research is an entreaty to all of us, medical educators and students alike, to be patient with stories. Be patient in hearing stories from others, and most especially, be patient in listening to your own story. The narrative may not play out in the way that you would expect. Patients, students or preceptors may behave in unexpected or even shocking ways. Instead of turning a deaf ear to issues that threaten our control or power, try to listen. There is a remarkably deep power to be found in reflection.

References for Conclusion

Bass-Jenks E. 'Searching for Autoethnographic Credibility', in Ellis C and Bochner AP (Eds.) Ethnographically Speaking: Autoethnography, literature, and aesthetics. Oxford: Altamira Press, 2002.

Berger BK. Power-over, power-with and power-to relations; critical reflections on public relations, the dominant coalition and activism. J Pub Rel Res. 2005;17: 5-28.

Branch WT, Pels RJ, Hafler JP. Medical student's empathic understanding of their patients. Acad Med. 1998; 73: 360-362.

Caldicott CV, Faber-Langendoen K. Deception, discrimination and fear of reprisal; lessons in ethics from third year medical students. Acad Med. 2005; 80(9): 866-873.

DelVecchio-Good M, Gadmer NM, Ruopp P, Lakoma M, Sullivan AM, Redinbaugh E, Arnold RM, Block SD. Narrative nuances on good and bad deaths; internists' tales from high-technology workplaces. Soc Sci Med 2004; 58: 939-953.

Ellis C, Bochner AP. Autoethnography, personal narrative, reflexivity: Researcher as subject. In Denzin NK & Lincoln YS (Eds.), The Handbook of Qualitative Research (2nd ed.) Newbury Park CA: Sage, 2000.

Field MJ, Cassel CK. Approaching Death; Improving Care at the End of Life. Washington DC: National Academic Press, 1997.

Jacobson D. Reading ethnography. Albany: State University of New York Press, 1991.

Kvale J, Berg L, Groff JY, Lange G. Factors associated with residents' attitudes toward dying patients. Fam Med. 1999; 31(10): 691-6.

Nisker JA. Medical students mirror and hold mirrors. J Obstet Gynaecol Can 2003;25(12):995–999.

Ratanawongsa N, Teherani A, Hauer KE. Third-year medical students experiences with dying patients during the internal medicine clerkship: a qualitative study of the informal curriculum. Acad Med. 2005; 80 (7): 641-7.

Redinbaugh EM, Sullivan AM, Block SD, Gadmer NM, Lakoma M, Mitchell AM, Seltzer D, Wolford J, Arnold RM. BMJ 2005; 327: 185.

Rhodes-Kropf J, Carmody SS, Seltzer D, Redinbaugh E, Gadmer N, Block SD, Arnold RM. "This is too awful: I just can't believe I experienced that...":medical students' reactions to their "most memorable" patient death. Acad Med 2005; 80 (7):634-40.

Sherwin, S. A Relational Approach to Autonomy in Health Care in The Feminist Health Care Ethics Research Network, Susan Sherwin Co-ordinator, The Politics of Women's Health: Exploring Agency and Autonomy. Philadelphia: Temple University Press, 1998: 19-47.

Wear D. "Face to face with *It*": medical students narratives about their end-of-life education. Acad Med. 2002; 77: 271-177.

Williams CM, Wilson CC, Olsen CH. Dying, death, and medical education: student voices. J Palliat Med. 2005; 8:372-81.

Appendix A- Ethics Approval

Western

Office of Research Ethics

The University of Western Ontario
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Telephone (519) 661-3036 Fax: (519) 850-2466 Email: ethics@uwo.ca
Website: www.uwo.ca/research/ethics

Use of Human Subjects - Ethics Approval Notice

Principal Investigator: Dr. J. Nisker
Review Number: 10316E
Revision Number:
Protocol Title: The First Clinical Experience of Death in Final Year Medical Students and PGY1 Residents
Department and Institution: Obstetrics & Gynaecology, London Health Sciences Centre - University Campus
Sponsor:
Approval Date: 05-Feb-04
End Date: 31-Aug-04
Documents Reviewed and Approved: UWO Protocol, Letter of Information
Documents Received for Information:

This is to notify you that the University of Western Ontario Research Ethics Board for Health Sciences Research Involving Human Subjects (HSREB) which is organized and operates according to the Tri-Council Policy Statement and the Health Canada/ICH Good Clinical Practice Practices: Consolidated Guidelines, and the applicable laws and regulations of Ontario has received and granted expedited approval to the above named research study on the date noted above. The membership of this REB also complies with the membership requirements for REB's as defined in Division 5 of the Food and Drug Regulations.

This approval shall remain valid until end date noted above assuming timely and acceptable responses to the HSREB's periodic requests for surveillance and monitoring information. If you require an updated approval notice prior to that time you must request it using the UWO Updated Approval Request Form.

During the course of the research, no deviations from, or changes to, the protocol or consent form may be initiated without prior written approval from the HSREB except when necessary to eliminate immediate hazards to the subject or when the change(s) involve only logistical or administrative aspects of the study (e.g. change of monitor, telephone number). Expedited review of minor change(s) in ongoing studies will be considered. Subjects must receive a copy of the signed information/consent documentation.

Investigators must promptly also report to the HSREB:

a) changes increasing the risk to the participant(s) and/or affecting significantly the conduct of the study;
b) all adverse and unexpected experiences or events that are both serious and unexpected;
c) new information that may adversely affect the safety of the subjects or the conduct of the study.

If these changes/adverse events require a change to the information/consent documentation, and/or recruitment advertisement, the newly revised information/consent documentation, and/or advertisement, must be submitted to this office for approval.

Members of the HSREB who are named as investigators in research studies, or declare a conflict of interset, do not participate in discussion related to, nor vote on, such studies when they are presented to the HSREB.

Chair of HSREB (Expedited). Dr. Paul Harding

Faxed: [✓ Y]/N
Date: Feb 9/04

Western

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July 10, 2008

Dr. Jeff Nisker
Department of Obstetrics & Gynaecology
University Hospital
339 Windermere Road
London, Ontario N6A 5A5

Dear Dr. Nisker,

RE: HSREB Inquiry - Increasing bioethics education in preclinical medical curricula

As per the guidelines of the UWO Health Sciences Research Ethics Board (HSREB), the project you have submitted does not meet the criteria of research requiring ethics approval as defined in Article 1.1 of the Tri-Council Policy Statement: Ethical Conduct of Research Involving Humans. The textual analyses of student papers on an ethical dilemma experienced during clinical clerkship does not constitute research on or involving human subjects since the subject of the research is the de-identified *manuscript*.

Our records indicate that you sought the opinion of the HSREB prior to commencing this project and you were informed that review was not required at that time. This letter presents our confirmation to the journal editors that proper procedures were followed and that the study did not require the review and approval of the UWO HSREB.

Most sincerely,

Senior Ethics Officer