

# Teaching and Learning at Morbidity and Mortality Rounds: An Ethnographic Study

Ayelet Kuper, Natalie Zur Nedden, Edward Etchells, Steven Shadowitz, Scott Reeves

## **Abstract:**

### **Introduction:**

In keeping with the current emphasis on quality improvement and patient safety, a Canadian Division of General Internal Medicine began holding weekly Morbidity and Mortality Rounds with postgraduate trainees. Grounded in the medical education and social sciences literatures about such rounds, we sought to explore the teaching and learning processes that occur at Morbidity and Mortality Rounds in order to understand their role and contribution within the current medical education context.

### **Methods:**

We conducted an ethnography of these Morbidity and Mortality Rounds. We observed the rounds, conducted interviews with both staff physicians and residents and triangulated the resultant data. Concurrent, iterative data collection and analysis enabled sampling to saturation.

### **Results:**

Staff physicians had differing understandings of the role of Morbidity and Mortality Rounds and valued different kinds of teaching. They did not think they were teaching medical content knowledge at these rounds, but rather that they were role-modelling six skills, attitudes and behaviours including ‘identifying and addressing process and systems issues affecting care’. Residents primarily wanted to learn content knowledge and tried to extract such knowledge out of the rounds. They did recognize and value that they were learning about process and systems issues. They also agreed that staff physicians were

role-modelling other things but had varying perceptions of what those were; most did not value this role-modelled learning as much as they valued the acquisition of content knowledge.

**Discussion:**

These Morbidity and Mortality Rounds were an effective forum for addressing patient safety and quality improvement competencies. They carried none of the negative functions attributed to such rounds in the sociology literature, focussing neither on absolving responsibility nor on learning socially acceptable ways to discuss death in public. However, this study revealed a marked dysjunction between the teaching valued by staff physicians and the learning valued by their trainees.

# Teaching and Learning at Morbidity and Mortality Rounds: An Ethnographic Study

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## **Introduction:**

In keeping with the medical profession's renewed emphasis on quality improvement and patient safety, in January 2008 the Division of General Internal Medicine (GIM) at a large Canadian academic health sciences centre began holding weekly Morbidity and Mortality Rounds (M&MRs) as part of its regular educational schedule for postgraduate trainees in Internal Medicine. Although M&MRs, at which patient deaths and adverse events are formally discussed, have a traditional place in the lore of medical education and medical practice, such rounds (educational meetings) have not been a regular feature of our Internal Medicine training program for many years; more importantly, their role in residency training has not been well-defined in the literature. Grounded in the limited medical education and social sciences literatures about M&MRs, we sought to understand the teaching and learning occurring at these rounds and the implications of these processes for the role of M&MRs in medical education.

## **Review of the Literature:**

There are numerous publications in the medical, medical education and health services literatures describing M&MRs at particular institutions (predominantly in the United States), some written after changes had been made in order to improve their educational quality<sup>1-4</sup> or to conform to ACGME Outcomes Project<sup>5</sup> guidelines.<sup>6-9</sup> A few of these only document reasons that their authors believe that their M&MRs were useful educational interventions,<sup>8,10,11</sup> while others also report local and national survey data showing that participants liked the rounds, believed them to be useful<sup>2,6,7,12,13</sup> and/or believed they had

learned about practice-based learning and improvement (PBLI) and systems-based practice (SBP).<sup>9,14</sup> Other authors use their local programs to try to identify variables that contribute to educationally sound M&MRs.<sup>1,3,4</sup>

In contrast, two studies from this body of literature reveal concerns about M&MRs. Pierluissi *et al*<sup>15</sup> noted that having regular M&MRs did not ensure that error would be discussed nor that acknowledgement of error would be modelled by group leaders. A survey of American Medicine training programs indicated that while 90% included M&MRs, these were often infrequent, limited, not focussed on medical error and had ill-defined processes and goals.<sup>16</sup> What becomes clear reviewing the medical, medical education and health services literatures is that, as far as the medical community is concerned, the structure and function of M&MRs remain undefined. Indeed, this was the conclusion of a review of the area published in *Academic Medicine* in 2002 (and little appears to have changed since).<sup>17</sup> There is, however, a separate body of literature from social sciences<sup>18</sup> that provides a different, more in-depth perspective on the educational function of M&MRs.

Millman's<sup>19</sup> 1977 study, for example, portrays medical M&MRs as being ostensibly about reviewing deaths which are controversial or which might have been avoidable, and as officially being educational sessions. She describes strategies by which these rounds functioned to neutralize and/or share responsibility and to make errors seem inevitable or inconsequential, with the rounds being "built upon a simultaneous admission and cover-up of mistakes"<sup>19</sup> in order to "absolve the doctors from responsibility and guilt and provide the self-assuring but somewhat false appearance that physicians are monitoring each other and their standards of work."<sup>19</sup> Arluke,<sup>20</sup> also writing in 1977, posited instead

that medical M&MRs could not accomplish what he perceived to be their official task – that of achieving “indirect social control over professional performance by pedagogy”<sup>20</sup> – but that by attending them trainees learned the appropriate way to discuss death in order to be accepted as part of the medical community. In 1979, Bosk<sup>21</sup> delineated the function of surgical M&MRs as moments when senior attending surgeons could claim and consolidate authority by taking public responsibility for the actions of their trainees, and from which their trainees and more junior colleagues could learn the moral qualities of senior clinicians.

All of these social science studies were conducted long before clinical governance,<sup>22</sup> the patient safety<sup>23</sup> and quality<sup>24</sup> movements, the rise of the accountability agenda in medical education<sup>25</sup> and the development of the CanMEDS roles<sup>26</sup> and the ACGME Outcomes Project,<sup>5</sup> all of which have dramatically shifted the context of M&MRs in academic medical centres. All of the studies of M&MRs since that time have come from the medical, medical education and health services literatures and so have answered different types of questions than these social science studies. As researchers within the sociological tradition, we wanted to understand how the function of M&MRs had changed since the 1970s, when the last social science research in this area had been published. We therefore asked: within this new safety and quality context in which M&MRs occur, what are they now teaching our trainees?

**Research Aim:**

Our research aim was to use sociological methods to explore the teaching and learning processes that occurred at contemporary M&MRs in order to understand their role and contribution within the current medical education context.

**Background:***Description of M&MRs:*

Weekly M&MRs began at the study site in January 2008, at which time they were new to the hospital's and the University's Division of General Internal Medicine (GIM). These rounds include a systematic discussion of every death occurring on the GIM service during the previous week. Staff physicians (consultants), hospitalist fellows, senior medical residents and interns (registrars and senior and junior house officers) on the general medicine clinical teaching units were all allowed and encouraged to attend and participate in these rounds. Each individual patient's admission, course in hospital, and death was described by physicians involved in the care of that patient, following which there was a discussion which was explicitly intended to focus on process issues affecting that patient's care. Process-of-care issues noted to have had a negative impact on patient care in a particular case or to have potential for such a negative impact in future cases were brought forward by the Division Head to other appropriate leaders; the results of these discussions, including changes in processes of care, were fed back to the group at a subsequent M&MRs. The rounds routinely included such difficult issues as potential medical errors and critical incidents, which are key components of patient safety and quality improvement education; they also addressed other processes of care surrounding death without the explicit goal of imparting medical expert knowledge. Beyond that, no formal learning objectives were established or disseminated for these rounds.

*QCIPA Policy*

Opinions expressed at M&MRs were formally protected from medico-legal discovery under Ontario's Quality of Care Information Protection Act, 2004 (QCIPA).<sup>27</sup> Due to QCIPA policies, other participants were otherwise forbidden from discussing details of

the cases presented at rounds except during the rounds themselves or in the context of our study. The official reason for M&MRs within the QCIPA framework that governed them was to address process and systems issues affecting care. The mention of QCIPA at the beginning of each week's rounds, often accompanied by an explanation for new residents, highlighted the relevance of process and systems issues to M&MRs.

## **Methods:**

### **Methodological Framework:**

We conducted an ethnographic study of the Morbidity and Mortality Rounds (M&MRs) conducted the Division of General Internal Medicine (GIM) at a large Canadian academic health sciences centre. Derived from the anthropological tradition and further developed within sociology, ethnography is the study of actions and interactions within and social groups. While the most commonly used method within ethnography is participant observation, this is often triangulated with other sources of evidence in order to provide a more detailed and informative description of the phenomenon under study and to compare and contrast participants' expressed opinions with their actual behaviours. Results are analysed inductively, allowing key themes to emerge from the data.<sup>28-31</sup> Ethnographic work continues to strongly inform sociological research, including both the sociology of medicine<sup>32-34</sup> and of medical education.<sup>35,36</sup>

### **Data Collection:**

Our first data-gathering method was participant observation. A non-medical observer (\*\*) trained in ethnographic methods attended weekly M&MRs for three months prior to the initiation of data collection in order to gain an understanding of the context and contents of the rounds as well as to mitigate the Hawthorne Effect.<sup>37</sup> We then formally gathered data beginning in September 2008. During the data collection phase of the

study, both the non-medical observer (\*\*) and an observer (the study PI) who is also a staff physician in the Division of GIM and already a regular participant at M&MRs (\*\*) attended the rounds every week. These hour-long rounds were audiotaped in their entirety. The non-medical observer also took extensive anonymised field notes during the rounds which captured the flow of discussion, body language, the physical geography of the room, interpersonal dynamics, the presence or absence of tension during a discussion, and other aspects of the conversation which might be lost in the taping and transcription process. The non-medical observer and the physician observer (\*\*, \*\*) debriefed immediately after the rounds, clarifying and consolidating their understanding of the events of the previous hour, and either wrote or dictated brief memos as needed about their discussions.

After the first month of observations we also began to conduct semi-structured interviews with participants in the M&MRs (both staff physicians and trainees). The non-medical observer (\*\*), who conducted all interviews, interviewed all willing trainees who had been on the general medical service and attended M&MRs for at least one month during the study. She also interviewed all staff physicians who attended the rounds at least three times over the duration of the study (except \*\*, who was the study PI); this group included the three staff physicians who took turns formally leading the discussion at rounds. The trainee and staff interviews were between 15 and 75 minutes long. Interviews were audiotaped in their entirety. The interviewer also gathered anonymised field notes during the interviews. We based the initial interview scripts for trainees and staff on our research question and the analysis of the first month of observations. We then



adjusted this script iteratively throughout the study period based on our concurrent analysis.

### **Data Analysis:**

The audiotapes of rounds and interviews were transcribed and anonymised prior to analysis. Our analysis occurred concurrently with data gathering, informing the observers' attention to specific issues during M&MRs as well as adjusting the interview script in an iterative manner. This concurrent analysis was carried out by the primary research team (\*\*, \*\*, \*\*). All three of us read and coded all the transcripts as they were transcribed and we met regularly in person and by telephone to compare our findings and to discuss emergent themes. We triangulated observational and interview data, including both transcripts and field notes, comparing opinions expressed in the interview setting with words and actions documented during the observations. We took notes during our meetings; we audiotaped longer and more complex meetings and had them transcribed, adding to our audit trail. In our analysis we took care to be reflexively mindful of our own subject-positions in the research context and of potential power dynamics between our team and study participants.

Concurrent analysis allowed the research team to use theoretical saturation in the observations and in both staff and trainee interviews to determine sample size. Initially the project was only to be terminated once saturation had occurred in all of these areas. After four months of observations (September – December 2008) wherein we observed ten M&MRs, as well as eight trainee interviews (PGY-1 to PGY-4), the research team was confident that we had saturated in those two areas. We continued staff interviews for two weeks longer, into early January 2009. However, we then had to stop without

reaching saturation because we had interviewed all fourteen physicians then on staff who could meet our inclusion criteria.

Out of those fourteen staff physicians we had two physician collaborators who attended M&MRs regularly as they were usually responsible for moderating the rounds (\*\*, \*\*). At the end of the study period all three primary investigators (\*\*, \*\*, \*\*) met as a group with both collaborators and presented the entirety of our results. Their responses to this member validation confirmed our understanding of the data.

### **Ethics:**

This study was formally approved by the Research Ethics Board of the academic health sciences centre where this study took place.

### **Results:**

Both our observations and our interviews revealed sharp differences in perspectives on the educational process at M&MRs between staff physicians (consultants) and trainees (registrars and senior and junior house officers). There were also more subtle differences among the staff physicians. We focussed our analytic attention on achieving an in-depth understanding of each group and as well as exploring the contrasts between them.

### **Staff Physician Perspectives:**

#### *Staff Physician Understanding of the Role of M&MRs:*

Through our data we identified three subgroups with three different sets of beliefs about M&MRs among the staff physicians. The two staff physicians who had initiated and frequently moderated these rounds, and thus expected to set the agenda, had a quality improvement purpose for running M&MRs; they were also committed to systematically integrating patient safety and quality improvement into the residency curriculum and saw

M&MRs as a means to achieve this. These physicians also made reference to a number of non-Medical Expert CanMEDs roles (e.g. Communicator, Manager) which could be addressed at M&MRs.

A second small group of staff physicians attended M&MRs at this institution having had previous experience of other medical M&MRs, sometimes decades previously. These physicians made explicit reference to M&MRs being historically grounded in autopsy reviews; they had clear pre-existing expectations of M&MRs as rounds that would allow them to correlate pathology with other clinical material in order to determine the ‘true’ cause of death. They believed that valuable medical expert knowledge could be gleaned from such correlation and felt that M&MRs that focussed on systems issues and sources of error wasted an opportunity to learn ‘content’. They recognized that, given the very low numbers of autopsies performed on patients at their institution, there would rarely be pathology to discuss, and that “the logistics of that [here] seem to be insurmountable” (Staff7). Nonetheless, they believed that “exposing resident staff to process issues that can impede care” (Staff7) only partially made up for this identified deficiency.

The third and largest group of staff physicians also noted the loss of the particular educational benefit of traditional clinico-pathological correlations previously associated with M&MRs. However, they felt that this absence was more than compensated for by other educational factors. For example, they identified as important that the rounds allowed them to show the residents that staff physicians “take patient safety seriously” (Staff2). They also valued the opportunity the rounds afforded staff and residents to commiserate with their colleagues, to receive emotional support and affirmation, and they

appreciated the chance for staff and trainees to share the impact that patient outcomes had on them as physicians and as people. They felt that:

having this avenue, which is confidential, which is supportive, is very valuable, not just from a scientific point of view but from an emotional point of view as a physician working with death all the time. (Staff9)

*Staff Physician Perspectives on Teaching at M&MRs:*

Whatever their beliefs about ideal M&MRs, there was a general consensus amongst staff physicians that there was little didactic teaching going on at M&MRs as they were carried out at this academic health sciences centre. Reviewing deaths did provide opportunities for some spontaneous teaching of medical knowledge related to the care that had been provided prior to a patient's death:

there are individual explicit teaching points...if somebody has had a cardiac arrest or a procedure or something, what worked and what didn't work is always asked and what could have been done better (Staff4).

Nonetheless, the staff physicians did not see M&MRs as major venues for the conveyance of medical expert knowledge.

Instead, the staff physicians understood M&MRs to be venues in which they modelled certain skills, behaviours and attitudes for the educational benefit of their residents. In the absence of formal learning objectives beyond an emphasis on process and systems issues affecting care, they formed their own understanding of what was being taught by them, as a group, at these rounds. Their beliefs about the intrinsic importance of these objectives varied along with their beliefs about M&MRs. In particular, many staff physicians, noticeably those in the third group outlined above, perceived these objectives to be intrinsically valuable, important elements of the medical curriculum. Others saw them as something to teach in the absence of the opportunity to teach the content they really

wanted to teach. A few went so far as to limit their definition of medicine, or at least what could be taught as such, to content knowledge, excluding the learning objectives they assigned to M&MRs from real medical teaching and from having value:

Staff7: They're certainly not being taught any medicine, which is, again, where it differs from every other M&M Round I've been at.

Interviewer: So, would you say that the fact that they're not being taught any medicine is a weakness?

Staff7: Yes, although the weakness is offset by the inclusion of this other learning, which I guess would be a strength if one values that type of learning. So I'm deliberately not calling it a strength but I'll say that, if one values it, then it's a strength. So, you lose the clinical medicine teaching but you gain this other type of teaching.

Interviews revealed six major categories of objectives that the staff physicians believed could be taught, and were being taught, at the M&MRs through their own role-modelling. These categories were, by our observations, modelled during the rounds. For example, we noted that staff physicians frequently identified flawed processes of care, worried aloud about medical errors, publicly took responsibility for patient outcomes, discussed and modelled communication skills and expressed their sadness and frustration around difficult patient cases. The staff physician's categories are summarized, with representative quotations from interview transcripts, in Table 1.

### **INSERT TABLE 1 HERE**

#### **Resident Perspectives:**

##### *Resident Understanding of the Role of M&MRs:*

Most of the residents (house officers) in our study were at least one generation younger than the majority of the staff physicians. Very few of them had experienced M&MRs before in any context and none of them had attended previous non-surgical M&MRs. As

opposed to the staff physicians, they did not espouse any particular beliefs specifically related to M&MRs.

*Resident Beliefs about Learning:*

However, our data revealed that the majority of residents did bring another specific expectation to these rounds as, they explained, they brought to all rounds: that of being taught medical expert knowledge. Whereas a majority of staff physicians felt that observing and interacting with role models could yield valuable learning in multiple domains, most residents explicitly equated ‘learning’ with acquiring content knowledge and sometimes, in addition, with learning about process and systems issues affecting care. Several residents therefore wanted M&MRs to include more explicit, didactic teaching of content knowledge. One resident, who justified this approach by pointing out how busy residents were, called this approach “high yield” learning (Resident1): “just a good quality teaching session” (Resident1) like many other educational rounds he experienced regularly.

Most residents did sense that something was being modelled for them at M&MRs by the staff physicians who were present; however, a few did not consider exposure to staff role-modelling to be real ‘learning’. The residents also did not seem aware that staff physicians had any particular educational objectives in mind beyond discussing clinical cases as well as process and systems issues. Although they were all polite and even engaged during our observations of the rounds themselves, it became clear during the interviews that several residents used the provision of content knowledge in an easily-absorbable manner as the basis on which to judge the utility of educational rounds; indeed, two went so far as to imply that anything less, including M&MRs, was a waste of their valuable time.

### *Resident Perspectives on Learning at M&MRs:*

Despite their various beliefs about the nature and relative importance of what was being learned, most residents were able to identify several things that they did learn from M&MRs. In contrast to the predominant staff physician perspective that they were not teaching medical content during these rounds, many (but not all) residents still perceived the clinical expertise present in the staff discussions at M&MRs to be a valuable source of knowledge acquisition. The other learning that the residents felt to be especially valuable, to be the “sort of things that you would use to be a better doctor” (Resident1), related to the overt reason for the M&MRs: the identification and management of process and systems issues. While many residents were able to endorse one or more other skills, behaviours and attitudes as being modelled by staff physicians, some felt that these were “not the most valuable thing that people would want to come away with.” (Resident1)

The residents’ perceptions of what was being learned at M&MRs were summarized by category and are presented, with representative quotations from interview transcripts, in Table 2. Note that, in comparison to the staff physician perspective, there is one new category. Our data also revealed two categories (‘presenting cases well to staff and colleagues’ and ‘dealing with the emotional impact of patient deaths’) which were explicitly described by the residents as having *not* been taught or role-modelled, in contradistinction to the perspective of their staff physicians (see Table 3). The resident perspective here also contradicts our own observations of the rounds, wherein our data revealed many examples of role-modelling related to both of these categories. Finally, there was one category identified by staff physicians (‘tolerating ambiguity’) that was not

identified by the residents at all. It is thus clear from our data that staff physicians and residents had quite divergent perspectives of the same educational encounters.

### **INSERT TABLEs 2 & 3 HERE**

#### **Discussion:**

##### **The Role of M&MRs:**

It is clear from our data that the staff and residents shared an important understanding of at least one aspect of what was being taught and what was being learned at M&MRs. The formal quality improvement and patient safety focus of the rounds was evident to all participants. There was general agreement that the rounds were a forum for addressing system-wide problems as well as for identifying, learning from and, if necessary, planning responses to medical error. In that sense the rounds met their stated goals and provided an effective educational experience.

Despite concerns in the patient safety literature about ‘a culture of blame’<sup>23</sup> when discussing adverse events, nowhere in our data was there any mention of blame related to these rounds, nor did the data indicate much fear or discomfort in the rounds that we observed. Residents also seemed to value the patient safety and quality improvement aspect of the rounds more than other aspects which also did not include explicit medical content knowledge. These findings suggest that the rounds may indeed represent a shift in the culture of this academic health sciences centre, or at least this clinical Division, towards the ‘non-blaming, non-shaming’ culture of the patient safety movement.

These rounds seem to carry neither of the broad functions assigned to M&MRs in the previous sociology literature. In contradistinction to Millman’s assertions, for example, it is evident from the data presented above that both the teachers and the learners perceived



the rounds to be about taking, rather than absolving, responsibility; as we have also discussed, this perception on their part is also supported by our observational data. Similarly, the rounds do not seem focussed on learning appropriate ways to discuss patient deaths in public fora, but rather on learning *from* these deaths in order to improve care for subsequent patients.

In many ways, these rounds have been remarkably successful. However, even a cursory reading of our data shows a marked disjunction between staff and resident perceptions. In the absence of formal learning goals outside of the domain of quality improvement and patient safety, it is not surprising that these two groups have not spontaneously generated identical learning objectives, or that they disagree on the specifics of whether and what they have been teaching or learning. What is most striking are the stated values that underlie their views of what should be taught and learned both at M&MRs and, by extension, throughout the medical curriculum.

### **What Kinds of Teaching and Learning are Valued?**

As we have shown, the majority of staff physicians in our study value many kinds of teaching and learning. As experienced educators as well as clinicians, they value different ways of conveying information, including didactic learning and role-modelling. The majority of them also place importance and value on multiple different kinds of knowledge, skills and behaviours. These include clinical expertise but also extend to many other aspects of being physicians such as communicating with each other and with patients, caring about patients and addressing the emotional impact of their jobs.

In contrast, a small group of staff physicians as well as the majority of the residents in this study have a much more limited view of what should be taught and learned in

medical education. For this group, valuable teaching and learning consists of the imparting and acquisition of content knowledge. Other aspects of being a physician appear to either not be important or, at least, not be important enough to take up valuable and limited teaching time. Of these less important aspects of being a physician, patient safety competencies related to process and systems issues stood out as more valuable than others. As these views contradict the formal curriculum (largely governed by CanMEDs<sup>26</sup>) at the medical school where this study took place, they may represent a glimpse into this institution's hidden curriculum.<sup>38,39</sup>

**Limitations:**

We conducted this study in the context of a large Canadian academic health sciences centre in a large medical school with a significant research focus on patient safety and quality improvement and a formal commitment to competency-based education. Given the multiple specificities of this context, our findings may prove difficult to transfer to other settings, although the assessment of such transferability must be left to the reader. As well, this first phase of our study was intended only to understand the phenomenon of M&MRs and the teaching and learning taking place therein. We now intend to explore possible pedagogical changes to address the dysjunction between teacher and learner perceptions and thereby elucidate its practical implications for medical education.

Table 1: Staff Physician Perspectives on what was Being Taught at M&MRs	
Categories	Representative Quotations from Staff Interviews
Identifying and addressing process and systems issues affecting care	It's really a reflection of the deaths on the team...the processes of care...to look at things that went well, in some cases, unexpectedly. Or, to look at things that didn't go as well...in the hopes that we can learn from that so that other situations are avoided. Or that we can implement changes if necessary in the system. (Staff8)
Taking responsibility for the consequences of one's medical decisions	<p>So I think what the trainees see is faculty willing to be introspective about their own care. The first thing that is...we're not perfect. We make mistakes and we feel comfortable talking about management issues that we have. To me that's a very important thing. (Staff5)</p> <p>I think when we have these morbidity and mortality rounds, I hope that by having physicians who own the responsibility of the patient's course in hospital, and are tied to the responsibility of this patient's care, that the resident seeing that now would take more ownership or responsibility or feeling for those patients who are dying under their care. (Staff9)</p>
Tolerating ambiguity	Tolerance of uncertainty...is a really important part of medical practice. You have to often take action where a lawyer might require 99 percent certainty to find somebody guilty of something, medical staff often have to proceed on not much better than 50 or 60 percent odds that that something is a diagnosis and therefore they often get things wrong and have to tolerate that. So learning tolerance; I think for residents learning how senior staff cope with that uncertainty and learning that toleration of certainty and how to best deal with that situation...is...important. (Staff4)
Communicating effectively with patients/families	I think communication is a very important theme that comes up again and again and again; either communication between staff or communication with staff and families and patients...it's a very important thing for residents to learn how more experienced staff handle these communication issues that come up. (Staff4)
Presenting cases well to staff and colleagues	The whole mode of existence in a teaching hospital is that the Residents...present the cases. Whereas, at M&M Rounds, with a few exceptions, the cases are presented by staff physicians, so it's a chance for the Residents to see that we actually have to present also. And they probably learn from it. I've always felt that, by watching a senior or a seasoned person present the case and hear what he or she thinks is important enough to include in a two minute presentation is education. You'll see what the presenter, the experienced, wise, senior physician choose to include in the limited amount of time he or she has available. So you can learn what they think is important. (Staff7)
Dealing with the emotional impact of patient deaths	<p>It's clear that there's a psychotherapeutic part. There's a part where people come having had extraordinarily difficult cases and they've been really frustrated with the course of events. (Staff10)</p> <p>I think a lot of people, staff and residents, have a lot of emotional involvement with patients, especially when things don't go well, and I think it's a time to share that and in some cases for the staff to even model that that's normal and they feel as equally bad or difficult about the situation. So, I think it's to learn and to reflect. (Staff8)</p> <p>When we have these rounds around death and we talk about the process, sometimes we hear some of the emotional experience of the physician faced with the dying patient and I think that that's valuable for these residents to actually communicate that or share that because it's an important part of being a physician. It's not just having a recipe about process of care or a recipe about what needs to be given, there is something, the qualitative about the relationship with the dying patient or with the family that can influence the care. And I hope that can be shared there, the experience of treating the dying patient and the demands of family. (Staff9)</p>

Table 2: Resident Perspectives on what was Being Learned at M&MRs	
Categories	Representative Quotations from Resident Interviews
Knowledge about disease processes, diagnosis and management	<p>some of them were excellent in terms of learning about just management issues. (Resident1)</p> <p>You know, if somebody died of a, b, or c, or something happened because of a, b, or c and I think you pick up little aspects of – okay, well this was somebody on this drug and I didn't know of a complication like that. So I sort of can pick up on that. I think that's really mostly what I find I get out of it in practical things. That's what I can identify that I get out of it. (Resident8)</p>
Identifying and addressing process and systems issues affecting care	<p>I see it as a chance to learn about basic medical care and problems that people are having and how the system works at this hospital. And then there are other things that come up that are bigger than just the hospital, sort of system issues that come up. But everyone in the room probably learns something. I think a lot of times the staff are surprised by how things are working when certain errors or certain issues come up that people just haven't encountered before. And so there's quite a few times when things have come up that were very new. (Resident1)</p> <p>it's more of what went wrong with the system and how can we fix it (Resident3)</p>
Taking responsibility for the consequences of one's medical decisions	<p>I thought it was very interesting actually because I thought it instilled a sense of accountability not just to the patient but to your peers. I guess as much as we have a lot of patients that are palliative or that might be carrying terminal diagnoses, you're aware that once they pass away, you have to have a sense of what went on and why. You know what I mean? I think M&amp;M Rounds is sort of a good measure to keep the checks and balances in place. (Resident2)</p> <p>...find it really interesting to see staff talk about errors. It's just that it's sort of a vulnerable time for staff when things have happened to their patients. (Resident1)</p>
Communicating effectively with patients/families	<p>So I think I've learned a lot about sort of communication tips, like how to bring up code status with families or tips for discussion of certain things, communicating with other health professionals, team members, and things like that. It's always nice to, from an actual medicine perspective, (Resident6)</p> <p>it is something I mean crucial here in the system. I mean a physician must know these things by heart. For example, how to do family meetings. (Resident7)</p>

Table 3: Resident Perspectives on what was <i>not</i> Being Learned at M&MRs	
Categories	Representative Quotations from Resident Interviews
Presenting cases well to staff and colleagues	I think maybe it was a bit more brief than it could have been if the Intern or whoever that was seeing the patient every day. Because the Staff comes but they generally come and it's sort of like a supervisory mode that they're in, right. One, two ... yeah, I didn't think I got a good sense. Like I find when the Staff present, you don't get as much of a holistic sense of the patient than when one of the junior people present because maybe they give more, too much information. (Resident2)
Dealing with the emotional impact of patient deaths	<p>I think everyone has an equal opportunity but if I think of examples of times that I heard someone make sort of a genuine emotional comment about something versus the time when people just are complaining about people they didn't like or didn't agree with, I think of more examples of the staff doing the latter. (Resident1)</p> <p>Sometimes they seem a little bit lacking in empathy for the patient based on things they describe but I know it's a confidential setting and it's all physicians so I guess that's maybe normal or allowed or whatever. (Resident2)</p> <p>R4: if they've had a case where they've been touched emotionally or, for example, they need support from their colleagues to come to grasp with what has happened. I think that would be a good ... It's not often stated as one of the purposes. Maybe that could be stated as well. I haven't really grasped that as one of the features of it, but it could be a good use of it.</p> <p>Q: Have you witnessed that at all in the rounds thus far?</p> <p>R4: Not really.</p> <p>Q: So, you haven't seen the rounds as being an opportunity for it, to be an opportunity to get support from your peers.</p> <p>R4: Not really, no. (Resident4)</p> <p>Personally, I never saw that [support] as a big, or I don't see that as a big component of it. (Resident8)</p>

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