

Risk Rx

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The July Effect

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The 'July Effect'. Everybody knows it exists, right? In July with all the new housestaff in a teaching hospital, patients admitted to the teaching hospital or cared for in its clinics are much more likely to be exposed to physicians who don't possess the appropriate skills or experience to provide optimal care. Thus (intuitively speaking), serious medical errors and worse outcomes are much more likely in July than at other times during the academic year. Nurses talk about the July experience all the time. Walking down the hall, I have commonly heard, "Oh, boy – another set of housestaff that we have to break in." Attending physicians remark "just when I get these housestaff to the point where I don't have to pay attention to every little detail, they leave and I have to start all over again." Even patients know about the July effect – especially when CBS News and similar organizations put up sensational headlines detailing this July effect. Quoting from a July 12, 2011 article from CBS News ¹:

'July effect' in teaching hospitals increases odds patients will die'

(CBS) It's summertime, and the living is easy - unless you need treatment from a teaching hospital. Then you might be lucky just to get out.

A new study reports that more patients receive worse-quality care or die at teaching hospitals during July

because experienced residents shuffle off to greener pastures, leaving untrained "newbies" to take their spots and learn the ropes.

The 'July Effect' occurs when these experienced physicians are replaced by new trainees who have little clinical experience, may be inadequately supervised in their new roles, and do not yet have a working knowledge of the hospital system, Dr. John Q. Young, associate program director for the Residency Training Program at the University of California - San Francisco School of Medicine said in a [written statement](#). "It's a perfect storm."

This news article was reporting on a September, 2011 article published by Dr. Sumant Ranji and colleagues in the *Annals of Internal Medicine*². The article, entitled "July Effect": *Impact of Academic Year-End Changeover on Patient Outcomes: A Systematic Review*, reviewed 39 studies involving inpatients only that looked at mortality, efficiency (length of stay, duration of procedures, hospital charges), morbidity, and medical error outcomes. Nearly all data came from US teaching hospitals. The authors noted great variability in the quality of the studies included in their meta-analysis. Higher quality studies that included larger sample sizes tended to show increased mortality and decreased efficiency around the time of changeover. Studies with smaller sample sizes looking at just morbidity and medical errors produced inconsistent results. The authors concluded "Mortality increases and efficiency decreases in hospitals because of year-end changeovers, although heterogeneity in the existing literature does not permit firm conclusions about the degree of risk posed, how changeover affects morbidity and rates of medical errors, or whether particular models are more or less problematic."

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As Ranji and colleagues point out, not all articles were able to clearly document a July effect. Articles focusing on patients at very high risk for medical errors, for example, commonly did NOT document significantly different outcomes in July. In an article from the Department of Surgery at Baylor University³, Dr. Bakaeen and colleagues looked at outcomes from cardiac surgery in July versus the remainder of the academic year in 70,000+ cardiac surgical patients. They did demonstrate that surgical procedure lengths were “slightly” longer, but risk adjusted outcomes were not related to the month of the year that the surgery was performed. Similarly, in a study published in 2011 by a group from the Faculty of Medicine at the University of Ottawa in Canada⁴, no July effect was able to be documented. This study looked at 259,748 encounters with 164,318 patients admitted to the medical, surgical and obstetrical services at a teaching hospital in Ottawa. The overall mortality rate was 3% and was not related to housestaff experience level. In addition, this lack of association of mortality with housestaff experience level did not vary by service or by whether the admission was elective, urgent or emergent. A study by Schroepfel *et al* published in the Journal of the American College of Surgeons focused on the trauma patient population, which is also considered at high risk for medical errors due to the need for rapid decision making. In this study⁵ conducted in a Level I trauma center, the investigators were unable to demonstrate a relationship between the month or quarter of the year and overall mortality, ICU days, or minutes in the resuscitation room. In another study focusing on the acutely ill medical patient with acute coronary syndromes or decompensated heart failure⁶, the investigators found no evidence of less optimal medical therapy for these patients in the early part of the academic year.

Finally, in a study published in the Journal of Perinatology⁷, the authors compared 26,546 women who delivered their babies in July to 272,584 women who delivered their babies in the remainder of the academic year. There were no statistically significant differences in the rates of cesarean delivery, urethral/bladder injury, third or fourth degree lacerations, wound complications, postpartum hemorrhage, transfusion, shoulder dystocia, chorioamnionitis, anesthesia-related complications, brachial plexus injury, or birth asphyxia between the two groups.

Well, where do these studies leave us? Is there a July effect, or not? Science suggests that there might be a July effect, but the available literature leaves many with that question still unanswered. I would suggest a more “spiritual” approach to this question and look at the question from the standpoint of the new trainee, the attending physicians, and the patient.

Without doubt, the July effect clearly exists in the minds of new trainees – particularly the PGY-1 residents fresh from medical school. As our Dean and Associate Dean for Clinical Affairs pointed out clearly in this year’s housestaff orientation, the Doctor of Medicine degree is nearly the only terminal degree where the recipients are clearly not ready to begin an independent career. Housestaff facing their first day on the inpatient wards or in the outpatient clinics have no idea what they will be facing – what diseases or disorders they will encounter, and worry whether their training has prepared them for their upcoming experiences. On top of that concern, new housestaff often know nothing about their community, have few or no friends in the area, and their personal support systems are often many hundreds of miles away. We

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are asking our new housestaff to take care of some of the sickest patients they have ever encountered in a strange and new work environment in a community where they have little or no support. Thus, there is, by definition and even by design, a July effect for new PGY-1 housestaff.

This July effect may also be seen in our more experienced housestaff who are now asked to take on more supervisory and more independent activities. While these housestaff know their work environment and their community and have hopefully developed personal support systems over the year (s) they have been here, taking on supervisory and more independent roles may certainly create anxiety and another type of July effect in our more experienced trainees. These more experienced trainees will also be expected to help their new PGY-1 colleagues overcome their 'July effect'.

Whether or not this July effect translates into less optimal patient experiences and outcomes depends on the attending physicians' response to their own 'July effect'. As noted previously, attending physicians sometimes bemoan the fact that their experienced housestaff leave and less experienced, as well as brand new trainees, appear on the scene. Fortunately, though, the University of Florida College of Medicine is blessed with many faculty who know that this process of growth, development, and "moving on" is why they are here. They rise to the challenge of making sure that the July effect, which clearly exists for our housestaff, does not translate into more frequent errors and bad patient outcomes.

Certainly careful, direct supervision is the cornerstone to preventing impacts of the July Effect. However, there is another important aspect to pre-

venting the July effect from translating into bad experiences and outcome. Attending physicians, more senior housestaff, their nursing colleagues, and the hospital administration must strongly endeavor to make the learning environment safe for new trainees. Our newest housestaff members, regardless of level, must feel safe to ask questions. They must not feel that they must do everything possible to avoid asking questions. I remember years ago during my intern training that it was very poor style to be constantly asking questions. Housestaff who did ask a lot of questions were quickly identified as weak and questions were commonly asked about "where did that person go to medical school"? So, I had to figure out a lot of things for myself – and commonly came upon answers and solutions that usually worked, but in retrospect were not optimal. At least, however, I didn't have to reveal my ignorance and endure ridicule from nurses, my housestaff colleagues, and my attending physicians. That approach to learning is clearly not optimal for either the patient or the learner. Sure enough, some housestaff do have deficits in knowledge and experience. The faculty and program directors are responsible for identifying those deficits and developing remediation programs to correct them. We are all (faculty, colleagues, nurses, administrators) responsible for making sure that our trainees feel safe while they grow in knowledge and experience. The best way, in my opinion, to lessen any impacts of the July effect, is to make the learning environment safe for our trainees – at all levels.

From the patient's standpoint, the media has made sure that they believe there is a July effect. The best way, in my view, to alleviate any patient anxiety about the July effect is communication. Housestaff must let their patients know who they are,

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their experience level, and what their role in the patient's care is going to be. One of our patients' greatest fears is that they have no way of knowing the experience level and skills of the doctors taking care of them. To the chronologically gifted patient (yes, I am one of them), all our housestaff tend to look very young. I certainly cannot tell the difference between a PGY-1 resident and a PGY-4 resident unless I know them personally. If patients and families know that a physician caring for them is a PGY-1 resident, I have found in many cases that they will bond closely with her/him and look to her/him as the "boots on the ground" advocate for them and their care. Equally important for the patient and the family is clear evidence that faculty and senior level housestaff are closely involved with the new trainees and are supervising them and providing them with the benefits of their knowledge, skills, and experience. If patients know their doctors and their skill and experience levels, they will come to realize that more sets of eyes looking at their health problems and needs are better than one set of eyes, and that in fact, the care they receive is as good as it can possibly be. They will feel like they are part of their own healthcare team. When we fail to communicate who we are, the July effect becomes very real to the patient not only in July, but in December and June as well.

To conclude, I would like to leave you with 3 major points to remember:

There is a July effect in the minds of all our housestaff but most importantly for our PGY-1 and PGY-2 housestaff just beginning their career in medicine or in their specialties. The design of our graduate medical education system, with its incumbent moves around the country for

training, adds further stress to the July effect.

Faculty and more senior housestaff have an obligation to make the learning environment safe for all trainees – especially for the PGY-1 and PGY-2 trainees. A safe learning environment leads to the asking of important questions – that are asked with the intent of providing good care to our patients.

Patients must know who their doctors are – their experience level and their role in their care. The patient can then become part of their healthcare team, and when they are part of their own team, fear is greatly lessened.

If we do all these things to the best of our ability, the July effect will have no effect on how well we care for our patients.

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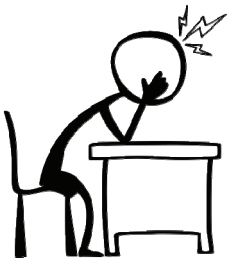
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COPING WITH A MEDICAL MALPRACTICE SUIT

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In this article, I discuss how and why physicians react to an accusation of malpractice and the range of strategies they use to diminish the emotional disequilibrium that accompanies this experience. Information presented here is based on survey and interview studies and extensive clinical experience.

Medical work is highly stressful, and physicians increasingly feel loss of control over their clinical decision making. Nonetheless, most physicians are competent and achieve a reasonable level of satisfaction in their personal and professional lives that serves as good preparation for managing the litigation experience. Physicians are especially challenged, however, when an unexpected outcome—such as an unanticipated death—occurs. If this event is followed by a charge of malpractice, they may feel suddenly overwhelmed and "out of control," with their ability to function temporarily compromised.

REACTIONS TO BEING SUED

The reaction to being sued often is prefaced by a period of emotional turmoil following the catastrophic event or negative outcome. The physician may feel unduly responsible or guilty, genuine sorrow for the persons involved, dread, anxiety, and fear of being sued. These feelings may

not resolve in any way until the statute of limitations expires or a suit is filed.

More than 95% of physicians react to being sued by experiencing periods of emotional distress during all or portions of the lengthy process of litigation.¹ This may begin immediately on being served with the complaint by a sense of outrage, shock, or dread about the personal and financial effects of the eventual outcome. This is the first reaction in a series that is similar to those that accompany any major life event.² Feelings of intense anger, frustration, inner tension and insomnia are frequent throughout this period.

Symptoms of major depressive disorder (prevalence, 27%-39%), adjustment disorder (20%-53%), and the onset or exacerbation of a physical illness (2%-15%) occur, although fewer than 2% acknowledge drug or alcohol misuse.^{1,3,4} A general internist, for example, described awakening with his first episode of atrial fibrillation after being served with his first malpractice suit the previous afternoon. This generated emergency medical consultation accompanied by profound psychological effects on the physician. Some two years later, it figured prominently in his decision to settle and to retire earlier than he had originally planned.

WHY DO PHYSICIANS REACT?

The more clearly we identify the sources of stress specific to our own case, the better able we are to cope effectively. Lawyers and insurers often advise: "Don't take this accusation personally; it is just the cost of doing business." Although each lawsuit—its participants, the nature of the injury, and particular circumstances—is unique, physicians share common feelings and reactions.

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These reactions are related to two major factors: the personality characteristics of physicians and the nature of tort law. Physicians are self-critical and, therefore, have a tendency to doubt themselves, be vulnerable to feelings of guilt, and to possess an exaggerated sense of responsibility.⁵ These personality features render them particularly vulnerable to the demands of tort law because fault must be established for compensation to be paid. In medical malpractice law, fault is based on a deviation from the standard of care that resulted in the injury. As a group, physicians are acutely sensitive to any suggestion that they have failed to meet the standard of care or are not "good" doctors. Their honor—that sense of personal integrity that most people cherish—is at issue, and the threat of its loss is devastating. This accusation of failure represents a personal assault: the central psychological event that generates the stress that gives rise to the symptoms and reactions described.

Other factors unique to each case, such as the physician's relationship with the patient, the nature of the patient's injury, and the amount of surrounding publicity, all play a role in generating stress. Last, litigation is intrinsically adversarial and creates an environment foreign to that in which most physicians work. This contributes to feelings of isolation, frustration, and dependency that threaten their usual feelings of equilibrium.

COPING WITH LITIGATION

The first step in coping is to obtain an adequate knowledge base about what can be anticipated psychologically and about the process in which the physician is now a participant, albeit an unwilling one.

Second, throughout the entire process, physicians

need to observe their emotional and physical reactions. If they do not have a personal physician, they should get one. If persistent symptoms of any kind—physical illness, depression, or substance misuse—occur, they should consult their physician. Physicians should not self-medicate even when bothered by the common symptom of insomnia. They also need to observe if their relationships with family or in their professional life have changed and take the appropriate steps to remedy these.

A feeling of being out of control pervades the litigation experience. Coping is a complex process in which regaining mastery is central. Clinical experience reveals that if physicians are shown strategies that they can apply "in their own way," regaining mastery by their own efforts, they feel better about themselves. Ideally, the more rapidly this is achieved, the better because chronic stress can lead to further disability. Rapid restoration of emotional equilibrium is suggested as a way of reducing further risk because risk for an additional claim doubles for physicians who have a claim in the previous year.⁶

These findings suggest that emotionally stressful events may play a role in a physician's vulnerability to being involved in critical claim incidents. A personal event, such as marital discord or practice disruptions, can occur both before and after such an incident, and the claim itself may be so psychologically disruptive that the physician changes in ways that affect his or her vulnerability to critical incidents.

Useful coping strategies can be conceptualized in three categories⁷.

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Social Support

As with any major life event, physicians' need to share their feelings and reactions with someone who is trustworthy, understanding, and sensitive to their concerns during what is, for some, the most stressful period of their entire life.⁸ Legal counsel will advise not to talk about the details of the case to anyone. This is good legal advice, based on fears that the physician may say something that will potentially jeopardize the case. It is not, however, good psychological advice. Most of us can derive comfort confiding in an associate, legal counsel, our spouse, office staff, or a respected senior physician, all of whom can appreciate the concerns of legal counsel.

Restoring Mastery

The entire process challenges physicians' feelings of mastery as it seeks to establish who was in control of, and therefore, responsible for, the events in question. Sued physicians often experience a "see-saw effect": up one week and down another with alternating feelings of confidence and low self-esteem, of assurance and doubt. They may not be able to control the pace or even the outcome of their case, but engaging in activities that make them feel in better control of both their personal and professional lives and participating actively in their defense will help restore their sense of balance.

Changing the Meaning of the Event

The malpractice charge suggests that we are incompetent and, therefore, "bad doctors." We need to change this perception and to develop inner peace and good feelings about ourselves. It helps to recognize that litigation is about compensation, not competence, that those who are sued are often the best in their field in working with the sick and

high-risk patients, and that most physicians are eventually vindicated.

CONCLUSIONS

An understanding of litigation stress and some anticipation of its potential psychological effects on physicians enable them to take steps to counteract the negative feelings and reactions that occur. The goal is to understand and diminish the effects of stress and regain a sense of emotional equilibrium to function as a good defendant and competent practitioner during the lengthy litigation process.

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