Medical Staff Conference

Stress and Medical Training

These discussions are selected from the weekly staff conferences in the Department of Medicine, University of California, San Francisco. Taken from transcriptions, they are prepared by Drs Homer A. Boushey, Associate Professor of Medicine, and David G. Warnock, Associate Professor of Medicine, under the direction of Dr Lloyd H. Smith, Jr, Professor of Medicine and Chair of the Department of Medicine. Requests for reprints should be sent to the Department of Medicine, University of California, San Francisco, School of Medicine, San Francisco, CA 94143

DR SMITH:* *House-staff training is now and always has been a period of stress. Medical schools do not graduate physicians; they graduate young men and women who are well prepared to learn to be physicians during years of increasing responsibility in our teaching hospitals. In this sense the years of residency are the real medical school experience. What we now designate as medical school is really "premed."*

Residency has its elements of Marine "boot camp" psychology, part of which is exhilarating (in small doses) and part of which is enervating. In this conference some aspects of the ecology of house-staff training will be examined. Those who are in the process will readily recognize the ambience being described. Those who have completed training will look backwards with a degree of nostalgia that bears a linear relationship to the time since they themselves served their years in this form of educational bondage.

DR ZIEGLER:† In this conference we address the many facets of stress in medical training. We define stress as a "perceived threat," the term incorporating both the stimulus (stressor) and the response (coping). Over half of human illness is related in some way to life-style and behavior.[1] Thus, all physicians are called upon in practice to counsel their patients to lead a life that avoids unhealthy practices or behavior. Physicians must learn about stress and coping and acquire skills in counseling behavior modification. In this process, physicians must also develop awareness of their own mechanisms of recognizing and coping with stressful issues.

Few training programs are more demanding than medicine. Medical students are "selected" for character traits of competition, obsessive-compulsive behavior and altruism—behaviors requisite to survive the rigors of medical school.[2] Upon graduation, however, physicians-in-training encounter the "real world" of incurable illness, irascible patients, death and dying, dispassionate bureaucracy, entrepreneurial realities and continued academic competition. These pressures compromise personal values of altruism, humanism and even integrity.[3,4] Thus the stresses inherent in medical training provide an environment in which physicians can examine their own life-style, values and coping skills.

We will address the following: the experience of stress in medical training as viewed by a chief medical resident, the profile of an impaired physician and the tragic consequences of maladaptive patterns of coping with the stresses of medical practice, some of the particular issues causing stress that were identified in a seminar for medical interns, myths and realities of medical practice in relation to the self-interest and well-being of its practitioners and guidelines for coping with stress for trainees in medical practice.

Experiencing Medical Residency

DR STRULL:* The issue of stress associated with residency training has received increasing attention in recent years for two very cogent reasons. First, fully 50% to 75% of the patients seen in practically all branches of clinical medicine have problems related either primarily or secondarily to life stress.[1] A substantial proportion of these patients has no detectable illness to account for their symptoms. In addition, there are many patients with diseases such as myocardial infarction and duodenal ulcer in which stress is a critical causative factor, an impediment to the healing process and a contributor to recurrence. The second and even more urgent concern is the profound and potentially dangerous, even life-threatening, effect of stress on residents in training. This is not to say that all stress is harmful. A distinction is often made between "eustress" and "distress." Eustress occurs in the setting of adaptive coping skills and support systems and becomes a stimulus to learning and growing. Distress occurs in the absence of adequate coping skills and can result in serious emotional impairment of a physician and improper patient care.

There is no clear dividing line on the continuum between eustress and distress, as persons vary in the pressures they can tolerate. The ability to cope with stress is further modified by the social support network inside and outside the hospital.

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Because of this variability, physicians must explore regularly how they experience and cope with the stresses in their life and develop a sensitivity to the detrimental effects of stress on health and well-being.

I readily recall my own recent experience as a medical resident. Internship was extremely demanding and stressful, albeit rewarding. During the first few months I felt I was "coping well" as I learned to stay up 36 to 40 hours in a row and to devote myself to taking care of patients. I remember vividly those long nights on call in the Coronary Care Unit, where I started my internship, when every monitor alarm or even ambulance siren from the street below would send a chill up my spine and my own pulse racing as fast as that of patients in ventricular tachycardia.

My most demanding patient was a young woman admitted to hospital for an exacerbation of her systemic lupus erythematosus affecting her brain, heart, lungs and bones. Moreover, her marriage was dissolving because of her illness. The complexity of her medical situation and the love-hate feelings she expressed toward a physician the same age as her husband proved extremely stressful to me. She would inevitably have a fever or seizure or heart failure would develop just as I was ready to leave the hospital on my nights off. Consequently, I became so involved with her medical and psychological needs during her two-month stay in hospital, in addition to those of my other patients, that I rarely left the hospital before midnight.

I suppose I was indeed "coping well"—but only later did I realize at what cost. I believe my patients received excellent care. Yet my own life and relationships became neglected to the point where little was left of my personal life outside the hospital by the end of the year. Since that time I have had to take stock of the situation and make very conscious choices about how to integrate my personal needs into my life as a physician. I now believe that greater sensitivity to myself and my needs has helped me become a better physician.

This personal anecdote is not uncommon. In fact, I consider myself one of the fortunate ones, for the stress of internship sensitized me to the larger issue of stress in life and to the development of ways to cope with it. Not everyone has been so fortunate, and I have seen the stress of residency take its toll in many ways. Several suicides and the dissolution of many marriages among house staff in recent years have been only the tip of the iceberg. The high prevalence of depression and dependence on drugs and alcohol in the medical profession attests to the widespread nature of the problem.

On the other hand, I feel that no one should have to tolerate the often overwhelming degree of stress inherent in the academic setting. Such stress interferes with the training experience itself and compromises the development of both medical and humanistic maturation during residency. Certain interventions that could reduce stress without diminishing the quality of care need to be considered seriously. These might include "every fourth night on-call" rotations, a "night float" system, one-to-one supervision of interns by residents, an expanded role for nurses and weekly meetings to discuss stress and well-being encountered during residency. Finally, I would advocate seminars for attending physicians that address the problem of stress and methods to foster humanistic development in medical trainees.

Impaired Physicians

DR LARSEN:* I shall discuss the demography and management strategies of impaired physicians. Over the past decade, the medical profession has finally acknowledged the concept of the impaired physician.[5] Medical society committees on impairment now exist in all states. The 1975 report to the American Medical Association estimated a 5% to 6% nationwide prevalence of physician impairment due to substance abuse, mental illness or both. In the California Diversion Program, alcoholism, drug abuse and other psychiatric disorders head the list of presenting problems.[6]

While impairment may develop at any stage in the professional life cycle, severe dysfunction is most prevalent in the mid-life years. In a review of 362 impaired physicians in six treatment programs, the mean age was 46.6 years (range, 41 to 54).[6] A middle-aged professional has considerable difficulty taking on the patient role. Impediments to successful treatment are a feared loss of status, decreased self-esteem and an appearance of being in need. For a person who has functioned previously with authority and decisiveness, assuming this role in mid-life presents internal conflicts. Additional resistance to treatment comes from the perception that the patient or sick role is a confirmation of waning physical and mental abilities.

The defenses of postponement and denial contribute substantially to the high prevalence of impairment in mid-life. Unmet professional and personal expectations following years of delayed gratification may lead to maladaptive functioning.[7] A gradual, stepwise process begins with dissatisfaction and frustration, progressing to disillusionment, maladaptive coping and eventually to impairment. The time frame for this process is congruent with a mid-life manifestation of impairment. The syndrome is undoubtedly aggravated by other mid-life changes.

One may rightly ask whether physician impairment is on the increase, or whether the profession is more sensitive to the syndrome. Both statements appear to be true. Physician disillusionment may result from a gradual erosion of authority and autonomy of the medical profession. Sophisticated medical technology, patient expectations, physician maldistribution and fiscal pressures from government and health insurance companies are changing the health care delivery system. In this environment a physician who is wedded to the notion of a traditional autonomous model of practice may be in danger. Practicing physicians have become increasingly dissatisfied with their careers, themselves and their patients. Maladaptive coping manifested by substance abuse, social withdrawal and suicidal behavior is an extreme reaction to this discontent.

The problem of physician impairment is not rare and may well be more prevalent than treatment programs estimate. Treatment programs alone will not, of course, eliminate impairment in the medical profession. Some persons will be helped, but early intervention and preventive measures must complement treatment of a disabled physician. As physicians, we have an obligation to identify and treat our impaired colleagues. It is equally essential to foster development of self-awareness and adaptive coping skills in the training of physicians.

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Stress in Medical Internship

DR ZIEGLER: In November 1981, Dr Nick Kanas (Assistant Professor, Department of Psychiatry, UCSF) and I started a weekly discussion group for UCSF medical interns during their eight-week rotation at the VAMC.[8] Attendance was voluntary, the meeting lasted one hour and beepers were turned over to residents. Participants were asked to discuss experiences that caused stress in their lives as interns, and group leaders (an internist and a psychiatrist) helped facilitate the discussion and focus on the issues. It was emphasized that this was not a psychotherapy group. The average attendance was five interns (out of eight on service) and we kept track of the major topics under discussion for the first 36 sessions. We also sent out questionnaires that addressed the experiences causing stress and attempted to evaluate the usefulness of the discussion group.

Generally, the interns' experiences centered on three major issues that caused stress: the consequences of high self-expectations, the loss of control over one's life and difficulties in regard to dependency.

The consequences of high self-expectations produced the most stress. The need to strive for perfection was particularly frustrating early in the internship because of inexperience and lack of knowledge. There was not enough time to accomplish all that needed to get done. Caring for very ill or dying patients was also very stressful. There was self-imposed pressure for high standards of professional competency in a setting of time constraints, difficult clinical problems and many demands. Inability to meet these expectations produced feelings of guilt, anxiety and frustration.

The second major issue for the interns was lack of control. There was a sense of being at the mercy of the "system," that the bureaucracy controlled their actions. The "scut list" and beeper also symbolized a loss of autonomy. The encroachment of work demands on social life was also a major problem. Discussions on this issue reflected both anger and resignation.

The third issue that provoked stress was an ambivalence over dependency. In dealing with demanding patients and their relatives, there was a sense of conflict over the interns' own anger at patients and their need to provide nurturance. The interns' awareness of the stress they were under and their own need for nurturance and support also conflicted with their desire for independence and autonomy.

The coping patterns adopted by the interns varied. Most found support from personal relations outside the hospital and co-workers on the house staff. Two thirds also felt that appreciative patients and diagnostic and treatment successes offset the effects of stress. In all, 55% of the discussion group participants felt that the group helped them deal with stress, generally through sharing experiences and venting emotions.

We infer from these observations that high self-expectations are the result of the popular image of physicians as heroes and an expectation by society of a "larger than life" performance. High self-expectations come into inevitable conflict with the real world. Experiencing a gap between an idealized performance and what is realistically attainable produces guilt and frustration. Physicians often impose this heroic fantasy on their families, leading to marital discord and strained relationships.

The second issue causing stress—lack of control—may derive from the needs and behavior patterns of the so-called type A personality. This time-compulsive, achievement-oriented and approval-seeking behavior is almost essential to get through the rigors of premedical and medical training. In medical school, this behavior is rewarded with good grades and evaluations. In the more unstructured world of clinical medicine, type A persons become frustrated by an uncaring, inefficient hospital bureaucracy and by ungrateful, demanding patients.

The final issue is the phenomenon of dependency. Many of the professional rewards in medicine are the satisfaction of needs to nurture, to receive approval and to excel. These needs may come in conflict with more hedonistic needs such as relaxation, a reasonable social life, recreation or extracurricular pursuits. Dr Albert Jonsen portrays this conflict as a contest of altruism versus self-interest.[9] The dependency needs of physicians are usually kept secret from themselves. We like taking care of other people but would seldom admit that we need their dependence on us. Dr Peter Jensen, a psychiatrist, aptly describes the inherent dangers of this posture:

> As physicians, we must be aware of the pitfalls of what might be termed the *"omnipotence/dependency" doctor-patient relationship*, wherein the patient unconsciously assumes that the doctor not only can cure his or her illness but also can magically gratify other unfilled needs, such as love, acceptance, happiness, or security. The unwitting doctor who needs this respect and admiration may encourage these unconscious fantasies. Such fantasies are difficult to maintain, however, and usually one party becomes disenchanted, resulting in a spiraling drama of hurt, anger, and disappointment.[10]

Myths and Realities in Medical Practice

DR MARTIN:* Physicians unquestionably deal with many stressors such as long hours, fatigue, uncertainty, pain, fear and death. As physicians we generally do not consider the possibility that we carry around a set of myths about ourselves that makes the stresses more difficult. We construct medical training as a breeding ground to perpetuate the same myths in future generations of physicians. The following are five common myths held by physicians.

Physicians Should Be All-Knowing

In our highly competitive environment, the skills that are rewarded and that lead to excellent grades, choice house officer positions and popularity as attending physicians are the ability to produce facts in abundance and to outquote, outreference and outthink our colleagues. Few physicians actually believe that they know enough or read enough, even though they accumulate prodigious amounts of information. Given the scope of a field like medicine and the sieve-like fallibility of human memory, facts should not be a determinant of a physician's sense of self-worth, and mastery should be approached with more realistic goals.

The skills most likely to be valuable to a practicing physician are a framework to think about problems, a good filing system, the knowledge of whom to call upon for help and the sense to know when the problem goes beyond the bounds of our knowledge. As Oliver Wendell Holmes said, "The best part of our knowledge is that which teaches us where knowledge leaves off and ignorance begins." Medical training should create an environment in which the willingness to learn and discover is considered as valuable as the ability to recall.

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Uncertainty Is a Sign of Weakness

It has been said that medicine asks one to become old before one's time, to have the wisdom of grandparents and to act rationally in the face of irrational feelings and behavior. Though we carefully prepare ourselves for this goal, there are many situations for which there is no preparation. We deal frequently with patients in difficult and extreme circumstances who have problems that are insolvable. And yet the ideal, mythical physician always operates with certainty and has a ready answer to any situation. Denial of uncertainty is a natural response to being confronted with problems beyond our knowledge and experience. Unfortunately, it leads to decisions that are oversimplified and to frustration with a patient for not fitting a familiar solution. Not acknowledging our limits breeds a kind of self-protective arrogance or overconfidence that actually walls off help from the outside. For physicians in training, it is important to learn that availability of assistance requires the acknowledgment of uncertainty, and this will best come by example from faculty and older physicians. Given our current myths, it is not something we provide very easily.

Patients Should Always Come First

Physicians' behavior with regard to their own health is often a parody of the age-old patients' comment, "I didn't know that doctors got sick." We are a profession of helpers and are subject to tremendous demands to give to others, unfortunately denying our own needs to receive. Internship and residency training initiate the process of denying our own needs in order to be always available to patients. Following on this initial training in unhealthy behavior, the pattern of neglecting physical, emotional and social needs is often carried into one's career. Many physicians have health habits they would never prescribe for their patients. Most do not have a regular personal physician, do not take time off when they are sick and sometimes prescribe for themselves. Physicians' family and social relationships suffer notoriously at all stages of their careers. Medicine is inherently interesting and distracting, and we may not realize that we or our families are in trouble until serious problems occur. The fact that all of us have physical and emotional limits may be recognized too late when ill health and impairment have already developed. In many instances patients must come first, but not always.

Technical Excellence Will Provide Satisfaction

When one thinks about it, clear-cut technical success is uncommon in medicine. Though all of us like those instances in which we can make incisive diagnoses and prescribe curative therapy, we deal more often with problems or illnesses that are unlikely to be cured. If one uses cure as the only criterion for success, medicine becomes a series of failures. Ultimately, all of our patients age and die and, at best, we wage only a holding action. In our attention to technical expertise, it is possible to forget that much of the gratification in medicine comes from just being a caring human being. I don't know how to measure its effect, but the sense that there are caring people around not only makes illness endurable, but perhaps is a factor in recovery. If nothing else, it provides a purpose to our role as physicians that is much deeper and permanent than whatever temporary success we might have.

As George Bernard Shaw suggested in *The Doctor's Dilemma,* we should "make it compulsory for a doctor using a brass plate to have inscribed on it, in addition to letters indicating his qualifications, the words 'Remember that I too am mortal.'"

Patients, Not Physicians, Need Support

This myth may underlie all the rest. As a group, physicians have great difficulty asking for help or sharing discomfort, even among themselves. It is uncommon for physicians to admit that certain patients or situations give them difficulty or that they are simply having trouble coping. As physicians, we may voice complaints about external problems but rarely acknowledge the unique and personal way in which we are hurt.

Emotional withdrawal is unfortunately a natural defense in a demanding and isolating profession. This defense makes it all the more imperative to seek support from family, friends and, most important, each other. Because all physicians have times when they feel pressed, frightened and overwhelmed, to deny this is to wall off a large portion of one's life.

Coping With Stress

DR COATES:* Stress is a single word that describes a complex phenomenon. Stress management or "coping," the catchword of the day, is even more complex. The management of stress implies self-awareness so that a person can recognize the signs and symptoms of stress and act before it gets out of control, commitment to managing stress as a priority for enhancing mental well-being and preserving physical health and learning a variety of strategies for preventing and reducing stress.[11]

Becoming Aware

Stress affects persons cognitively, physically and behaviorally. Cognitive effects include stereotyped or disorganized thought. Physical effects can include sympathetic arousal and associated rises in heart rate, blood pressure, gastrointestinal distress and muscle tension. Behavioral effects include anger, avoidance or frantic, hyperactive behavior.

A person needs to recognize the build-up of stress early in the stress-response cycle. This process is learned through formal training and practice in hypnosis, yoga, relaxation, meditation autogenics or biofeedback. These sensitizing techniques teach a person what it feels like to be relaxed and "centered" so that contrasting states of tension and anxiety can be discriminated more readily. Self-monitoring, the systematic observation and recording of thoughts, behaviors, physical states and emotions, is also a useful technique to identify stressors. Detailed records of daily activities can enhance awareness of stress and tension and the circumstances most likely to elicit these responses.

Commitment to Stress Management

Stress is the evil of the age and no one can find fault with the need to engage in stress management. However, serious effort at managing stress requires establishing as a priority the need to keep it within reasonable bounds. It means giving stress reduction a higher priority over other competing activities such as prestige, money, peer adulation, more or larger

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research grants and participating in more committees. Personal decisions requiring allocation of time and energy must place a premium on stress and adaptive coping.

The type A behavior pattern referred to earlier is typified by time urgency, hostility and polyphasic activity such as doing or thinking about two to three things at the same time. A type A person places a premium on external accomplishments and gets frustrated and angry when faced with obstacles. While this is not an easy pattern to break, the commitment to stress management demands a commitment to *quality* instead of quantity. This does not preclude achievement, but rather encourages the achievement of quality.

Preventing and Reducing Stress

Flexibility is the hallmark of effectively managing stress. Stress can be prevented or minimized by clarifying personal values and goals, determining means to reach these goals and evaluating behavior in terms of these objectives. Stress can be managed, when it arises, by effective actions to solve problems as they occur. Three major sources of stress are failure to acknowledge stress when it arises, failure to evaluate the sources of stress and procrastination or lack of effective action. Although I shall deal in brief generalities, Table 1 shows some suggested ways in which house staff can reduce job-related stress.

Time management is key. Define the most important tasks to be accomplished, allocating a reasonable time to get them done. New opportunities or demands can be accepted or rejected as they fit in with one's priorities, objectives and current activities. Become aware of disproportionate amounts of time spent on trivial as opposed to priority tasks. Be selective and judicious in allocating time. Save out a few minutes regularly just to relax.

Despite the best of plans, no one can avoid stress completely. Available methods for reducing stress vary considerably. Again, the various forms of relaxation may provide one

TABLE 1.—*Suggested Ways for House Staff to Reduce Job-Related Stress*

Goal	*Suggested Methods*
Recognize Stressors	Make a commitment to identify and reduce stress in your life.
	Be sensitive to emotional responses to stressors—feelings of guilt, frustration and anger, depression and hopelessness, tension and anxiety.
	Try to identify major stressors using systemic self-monitoring.
	Take *early* action to reduce stressor and initiate coping before emotional response takes over.
Time Management	Negotiate tasks with colleagues.
	Delegate responsibilities to others.
	Reduce beeper interruptions, such as, be available on ward for questions at set times; instruct callers to leave messages and indicate "stat" or "at your convenience" for return calls.
	Set aside an hour as inviolate and relax, walk, run, meditate or otherwise get it together.
	Be selective in choosing what you read and learn. You remember best what interests you and what applies to your patients.
Behavior Modification	Learn to be appropriately assertive (as opposed to aggressive).
	Learn techniques of active listening, imagery and constructive criticism.
Social Support	Establish as a priority spending quality time with friends and family. Structure the time so that you are not called away and are rested and relaxed. Seek out relationships with colleagues. Join support groups, community organizations or team sports.
Environment	Take steps to establish as relaxing and esthetic an environment as possible, such as a radio or tape recorder in your office, pleasant art work or a carpeted floor.
	Inform colleagues or co-workers of your favored work habits so that you will not be interrupted needlessly.
Relaxation Techniques	Explore various techniques such as yoga, meditation or biofeedback.
	Ensure adequate diet and exercise regularly.
	Engage in self-awareness techniques to discover "highly prized beliefs" (myths) that may not work for you.
	Cultivate relaxation habits with the same energy and commitment that you apply to your work.

approach to the problem. Physical and recreational activities provide an important form of relaxation.

Social support and attention to interpersonal relations are important in reducing and preventing stress. Social support buffers the impact of stress by allowing us to share uncertainty and discomfort and to rely on colleagues to help us to solve problems.

Preventing and managing stress demands that we take stock of the physical and social environments to which we are subjected. Stress is increased by environments that are noisy, crowded, hostile, too hot or too cold. Environments need to be examined carefully for their qualities and consequences.

Examining and modifying behavior that predisposes to stress can be an achievable goal. For example, learning to act assertively (as opposed to aggressively) usually gets favorable results. Other techniques such as active listening, imagery and constructive criticism provide a useful repertoire for preventing stress.

Finally, more and more decisions about medicine and medical practice are driven by economics. The number of physicians available and the number of patients who need to be seen within given amounts of time are dictated by financial as much as medical reasons. While this may be a necessary and inevitable part of contemporary medicine, there are no simple solutions to the problem. However, if we take seriously the importance of stress management, then the issues related to stress deserve to be weighted equally with financial and medical issues.

Concluding Remarks

DR ZIEGLER: I shall conclude with some reflections on tradition in medical training. Seasoned physicians readily recall the arduous years of house-staff training when interns literally lived in the hospital, received only their uniforms and meals in payment and devoted virtually all of their waking hours to patient care.

The Fourth Medical Division regarded itself as the top service at the Boston City Hospital, the elite in the sharpest and brightest of all the teaching hospitals in town. We were the iron men, we told ourselves. The lights in the laboratory on the top floor of the Peabody Building were never turned off at night; the house staff never slept.[12]

These same physicians may now look at the generous on-call schedules and ample salaries of today's house staff and wonder whether training programs are sufficiently rigorous. The time-honored tradition of medical internship is regarded as a rite of passage to physicianhood. Today's house staff, however, complain bitterly about the time pressures, menial tasks and multiple demands in their experience as interns. They wonder seriously why the system cannot be changed. They may become cynical, embittered, disillusioned and angry.[13]

Psychiatrists and educators have wondered openly about the means and the goals of medical internship because this form of arduous training has not been subjected to critical analysis of the attainment of its goals. The issues we have examined in this conference bear directly on the wisdom of traditional medical training. Times have changed, as our participants have pointed out. Despite severe economic pressures, it is time to change house-staff training to provide more leisure time, to value process skills over memorization, to foster self-awareness over denial and to reward humane behavior over technical competence.

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