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Information for Contributors
More than 40 years ago Chester Barnard wrote, "Leadership has been the subject of an extraordinary amount of dogmatically stated nonsense" (1). Unfortunately that statement would still be true today. Not everything that has been said on the subject is nonsense, however, and I would like to review some of the more useful writings, particularly as they relate to academic departments of psychiatry.

Leadership is a quality that is easy to recognize when you see it in someone but hard to define as an abstract concept. But I would like to try, because I believe that the more highly organized academic medicine becomes, the more it will be run by those who can take charge and lead; and because I also believe that management skills, with leadership being among the most important, can be learned.

In regard to the first point, all of medicine is becoming more organized, whether it be in HMOs, hospitals owned by for-profit chains, or in the hypertrophying academic health centers in which most psychiatric educators work. The distinctions between a profession and a business have become less clear, and the differences between organizations that provide services and factories that produce products grow smaller. To be specific, the psychiatrist who chairs an academic department today must operate within the same general framework as the executive in an insurance company or a computer manufacturing plant.

It has not always been so. Even now,

the language of this discussion will alienate many faculty members. The language of economic enterprise, the language of organization and management, the language of program planning and program budgeting, the language of governance and of power structures will seem exceedingly inappropriate to the art of teaching, the expectations of research, the excitement of creative activity, the benefits of public service, the pursuit of educational justice, the commitment to academic freedom. (2, p. 198)
This statement was made by Dr. John Millet in his book, Management, Governance and Leadership: A Guide for College and University Administrators (2). Like it or not, we live in a competitive environment, and if we are to compete successfully, we must have the best leadership available, and it is up to us to develop it.

It is my belief that academic psychiatrists can benefit from exposure to the concepts that have been developed by others and that we can generalize from our own experiences in developing leadership skills. Furthermore, we can use these skills in whatever roles we may have that involve managerial responsibilities, not only in the position of departmental chairperson but in other leadership positions such as training director, ward chief, and clinic head.

DEFINITIONS OF LEADERSHIP

Several authors attempt to define leadership. They approach it in very different ways, which is but one illustration of its many dimensions.

James Cribbin defines leadership as "the ability to gain consensus and commitment to common objectives, beyond organizational requirements, which are obtained with the experience of contribution and satisfaction on the part of the work group" (3, p. 12). He makes a distinction between "successful" leadership, in which the job gets done and the leader’s needs are met but those of the workers are ignored, and "effective" leadership, in which the performance of the work to be done is also the path to satisfaction of the workers’ needs. It is the effective leader who can best sustain the continuing productivity of his or her followers in the collegial atmosphere of an academic setting.

Alfred Cooper defines leadership by the qualities that a leader must possess in order to get results. The qualities he lists are "intelligence, integrity, loyalty, fairness, forcefulness, judgment, kindness, knowledge of work, health, and ability to cooperate" (4, p. 50). He is not talking about these qualities in some passive, possessive sense; he means using them in an active way to get results through others. The Nobel Prize in Medicine may be given to research scientists who work alone or in pairs, but someone in a position of leadership must provide the resources that allow these researchers’ genius to flourish.

James Hayes defines leadership by its functions:

The achievement of the purposes and objectives of the organization and the achievement of harmony both within and outside the organization. The first of these requires a hard drive toward favorable bottom lines, larger markets, and greater productivity and efficiency. The second requires sensitivity to people-problems, a tolerance for the time development takes, and a real concern for social responsibility. (5, p. 7)

Hayes notes that the ability of a single individual to carry out both of these responsibilities may be limited and suggests that, in some situations, management teams should occupy the leadership position rather than an individual. More and more companies are using management teams to run their businesses. One is Corning Glass, which has a management committee known familiarly as "The Six-Pack" (6).

Hayes believes that everyone in a position of leadership, whether he or she leans more to the first or second of the above descriptions, must have certain qualities, several of which I’ve enumerated. I will comment on one that Hayes calls jingshen, a Mandarin word that means spirit or vivacity. He sees this quality as setting apart the leaders of those organizations that will grow and thrive from those that will wither and die. A leader must bring an action orientation to the job that will inspire others to act—and to act not in just any random way, but directed toward clearly defined and mutually accepted goals.
Auren Uris (7) defines leadership by its methods or styles. He describes three types:

1. **Autocratic**: “The leader mainly seeks obedience from his or her group. The autocratic leader determines policy and considers decision making a one-person operation—he or she being that person.”

2. **Democratic**: “The leader draws ideas and suggestions from the group by discussion and consultation. Group members are encouraged to take part in setting policy. The leader’s job is largely that of a moderator.”

3. **Free-rein or laissez-faire**: “The leader is more or less an information booth. This type of leader plays down his or her role in the group’s activity. The leader is on hand mainly to provide materials and information, but exercises a minimum of control.”

Although Uris describes these styles in rather stark terms, he does not see them as fixed approaches, merely reflecting the personality of the leader and not subject to modification or variation. Rather he considers them to be the tools of leadership, to be used flexibly as the occasion demands. Other authors (3,8) describe variations of these three approaches. They all stress the need for their selective and flexible use in dealing with people.

A psychiatry chairperson, for example, may direct a junior faculty member on the proper way to prepare a grant application or a budget; he or she may simply lead a discussion of how to prepare for an upcoming visit by an accrediting agency; and he or she may leave a self-starting researcher to work alone. In each case the chairperson does what is best to achieve the desired results.

Abraham Zaleznik, a psychologist who studies organizational behavior, looks at the issue from a different perspective. He states that “the personalities of leaders take on proportions which meet what subordinates need and even demand” (9, p. 328). It is his opinion that this may be just as important in developing a bond between the leader and subordinates as any other factor in the interpersonal equation.

**CHARACTERISTICS OF LEADERS**

Most writers offer a list of characteristics that leaders must possess in order to be effective. These characteristics include such essentials as decisiveness, tenacity, courage, and other variations on the group of leadership qualities enumerated by Cooper (4). Three of the characteristics proposed by Thomas Horton (10) are basic: 1) perception of reality, 2) team-building skills, and 3) integrity. I would add a fourth, management of change.

**Perception of Reality**

Perception of reality refers to the leader’s ability to grasp what is happening and an ability to realize its significance. To do this a leader must have information networks (internal and external), must not wait for information to arrive passively but must seek it aggressively, must be alert to signals from any direction that affect the leader and the department, and must constantly be aware of both the economic imperatives and the moral mandates within which the leader operates. Furthermore, the leader must take the time to reflect on how these realities affect the leader and the subordinates, not only in the restraints they impose, but also—indeed, especially—in the opportunities they offer.

A leader must have the capacity to view the world through a wide-angle lens and must also be able to examine a situation through a microscope. The leader must interpret what is seen with as much acuity and insight as a surgeon assessing a life-threatening lesion. Otherwise the leader’s perceptions will be incomplete or badly distorted.

The issues that confront an academic leader are many: personnel problems with faculty, students, or residents; political is-
sues at all levels within the university, the medical center, and the profession at large; financial questions that often involve the viability of the enterprise; and (need I add?) academic issues such as curriculum, research, and the quality of patient care. The leader must be on top of all of these things all of the time. That is a tall order, but that is what is required.

Academic psychiatry places extraordinary demands on its leaders above and beyond the norm for chairpersons or training directors in other specialties. We psychiatrists are reputed to be experts in human behavior, and we should be. We are also supposed to be good listeners. These perceptions affect how we are treated and how we are expected to behave, particularly by those in our own departments.

Members of a department of surgery may grumble among themselves about a change in operating room procedures or schedules and leave it at that; residents in pediatrics may gripe for a while about changes in on-call schedules or assignments to the neonatal nursery, but the dissent typically stops there. On the other hand, psychiatrists (including psychiatry residents) who are faced with similar unpleasantries usually want to “talk about it,” and they want the chairperson or training director to “listen.” This means that there is an expectation that the leader is willing to negotiate, even if he or she participated in earlier discussions with those involved and must consider the issue already resolved.

The ensuing discussion may not lead to further revision of the schedules or whatever is being contested, but it invariably taxes the leadership skills, not to mention the patience, of the one in authority. The particular issue may not seem very important to the leader, but he or she cannot appear to take the concerns of the faculty or house staff lightly.

Then there is our knowledge of transference and countertransference (11). It is certainly a necessity in clinical practice, but it is a mixed blessing in dealing with administrative issues. On balance I consider this knowledge to be a distinct advantage, as long as we are clear about the differences between how we deal with those who work for us and those who employ us to care for their emotional problems. With our patients, we deal with transference distortions in ways that promote the health of the patients; with faculty and residents, we must focus on the job to be done. Our own emotional reactions to individuals must be carefully monitored in both situations. This is particularly important when others provoke our anger: a leader must be as fully in control of retaliatory impulses as a psychotherapist.

Team Building

It is axiomatic that organizations run by well-managed teams function well, and those without good team-work usually do poorly. It is therefore an important part of leadership to engage in team building. According to Horton (10), the skills and attributes the leader needs are these:

1. “An uncommon ability to judge talent.” Success in any endeavor can depend on selecting the right people to carry it out.
2. “A positive regard for team members.” This must be a genuine valuing of them, not just a bare tolerance, which can never be completely disguised.
3. The ability to communicate the organization’s mission both within and without. To all of the many audiences, a leader must speak with clarity and conviction.
4. Encouragement of free and open communication with subordinates—and it must go in both directions.
5. “Willingness to remove team members who are judged to be deficient—and to do it cleanly and humanely.” This is not always acknowledged even by managers who possess all of the other requisite skills. But a leader who handles this
issue poorly or ignores it altogether damages the organization and himself or herself.

If the above requirements are true, it is clear that, even with the finest available talent, teams and teamwork do not develop on their own. They are created by the skill and hard work of the man or woman at the top. How this is done will vary depending on the situation. For example, the chairperson of a newly formed department has a different task from one who takes over a department with a number of tenured faculty members. The former's major task is one of recruitment, orientation, and, very likely, on-the-job training, while the latter must begin to mold a team from the nucleus that is already in place, using negotiating and diplomatic skills as well as leadership.

In an academic psychiatry department, several individuals besides the chairperson have important leadership roles. The chairperson's role, of course, is primary, but others, such as the chiefs of the major services and the director of residency training, are nearly as important.

The training director's leadership role is vital. The training director is at the fulcrum of many forces at work in an academic department. He or she holds the reins of a program that embraces a broad range of teaching, service, and research activities and is the administrative leader of a sizable portion of the department's professional staff. The training director must juggle the demands of many constituencies: service chiefs, seminar leaders, his or her own and affiliated hospitals, and residency review committee requirements. In many institutions the training director must also mediate the conflicts that arise from a diversity of philosophies: psychoanalytic, biological, community, etc. The training director represents the department and its chairperson when dealing with trainees and must espouse the needs and interests of trainees in many of his or her dealings with the chairperson. The training director must also be able to take a firm position on any number of issues every day.

For leaders at all levels to be able to fulfill their responsibilities, help is necessary. I have found that there are two particularly valuable aids in coping with the incessant pressures that go with leadership positions. One is a reliable deputy, the other an outside confidant.

The most important member of the leader's team is one in whom trust can be placed, one whose loyalty is unquestioned, whose judgment is respected, and who can be relied on to speak for the leader and carry out the details of many of the leader's responsibilities. This position is often called vice chairperson or assistant director of training. It may be filled by someone who has other assigned duties; for example, a training director may be a vice chairperson as well, and a chief resident can serve, up to a point, as the training director's assistant. Whatever else this key team member does, the deputy becomes an extension of the eyes and ears—and voice—of the leader. The deputy also serves to insulate the leader from some of the stresses to which he or she would otherwise be subjected.

Just as presidents have their "kitchen cabinets," leaders with less global responsibilities need to have their own sounding boards. Such consultants should possess a knowledge of the institution but not have any authority above or below the leader. A colleague in another institution, or not in academia, may serve. Some spouses are good at this, but some decline the role, and as I have learned, one's grown children can be remarkably effective in helping a leader to keep things in perspective.

Integrity

The third basic leadership characteristic is integrity. Horton (10) calls it "that indispensable ingredient." The leader with integrity is open and honest with subordinates.
and communicates a consistency of values that reflect an inner moral compass. This is something quite different from merely mouthing pious platitudes.

It is the quality of integrity rather than trust or credibility that is basic. Without question trust and credibility are essential if a leader is to be effective, but clever liars can be credible and scoundrels can engender trust—at least for a while. If the leader has integrity, however, trust will be earned and credibility will develop, and both will survive the inevitable crises that arise in the course of time in every organization.

Bennis and Nanus (12) list two conditions for the trust that is necessary for the leader to achieve goals: 1) in respect to the leader’s vision, “it must be clear, attractive, and attainable,” and 2) the leader’s positions must also be clear, i.e., where the leader stands on important issues should be unambiguous and consistent. It is only when the leader is able to inspire others to share a vision and motivate them to make a commitment to pursuing an agenda that he or she can be really effective. Furthermore, the leader must not only communicate this vision, he or she must personify it. Emerson’s widely quoted line sums it up very nicely: “What you are thunders so that I cannot hear what you say to the contrary.”

The chairperson who exhorts the faculty to work harder but offers nothing but excuses when it’s time for a raise soon loses their confidence. The training director who awards the position of chief resident on the basis of personal favoritism should not be surprised when junior residents spend more time curry ing favor than carrying out their duties. Leaders at every level who lie to their colleagues on significant matters soon gain a reputation of untrustworthiness, the consequences of which are not hard to imagine.

Management of Change

A final challenge of leadership is the issue of change. It is a constant in all organizational life. It cannot be avoided, but it can be managed.

Many changes confront leaders in academic psychiatry. I will focus on just one of them—the relationship between the chairperson and the junior faculty—because it involves so many of the issues of leadership that I have described. Furthermore, no single question bears so heavily on the future as how the best of our young colleagues can be recruited and nurtured in academic careers.

Why do I place this subject under the heading of “change”? I do it largely because of two simultaneous developments: the increasingly rigorous requirements for promotion and tenure in many universities that are occurring at the same time that funding for research, training, and other academic pursuits is becoming less and less available. This is a general problem in academic centers, but it is a particular problem in psychiatry for a variety of historical and practical reasons.

For one, no other specialty has depended so heavily on federal training grants that have all but vanished. Furthermore, few if any fields of medicine are so confined by time-related income potential from practice, which limits our capacity to subsidize education with fees from clinical work.

For a young faculty member to achieve tenure in the seven years prescribed by many institutions is a major challenge. To achieve it at all is often difficult. The usual stumbling block is euphemistically referred to as “scholarship.” What is meant is the requirement for funded research resulting in publication in peer-reviewed journals, sustained over a period of time. (The italicized terms above are significant, at least in some institutions, including my own.) The chairperson must play several roles in overcoming this block.

Initially he or she must inform the junior faculty members of the institution’s demands. Tenure requirements usually include teaching and service obligations, but these are more easily met than the expecta-
tions for research productivity. Together with a mentor, who may be the chairperson or another member of the senior faculty, the junior faculty member must plan a course of action which will lead toward tenure, and the plans must be reviewed and brought up to date on a continuing basis.

Over the next three to five years, the chairperson must be a facilitator, suggesting topics for study, identifying potential sources of funding, and helping the faculty member in attempts to get papers published. The chairperson must also be a cheerleader, providing encouragement when, to the junior faculty member, it all seems hopeless. ("The grant was approved but not funded" or "The paper was not accepted for publication.") At the same time, the chairperson must be a sort of mine sweeper, cutting through obstructions and identifying alternate directions to take when a course correction is indicated.

Finally, the chairperson must be a bulldozer, getting the tenure application ready for the tortuous and often torturing process ahead; and throughout the process he or she must use persuasion and persistence to see the candidate through.

Robert Waterman, in his book The Renewal Factor, sums up the issue of change and how to manage it very well:

"Change breeds opportunity. The renewal factor is the opportunity that transforms threat into issue, issue into cause, cause into quest. The complacent manager merely presides. The renewing manager is engaged in a daily effort to fight corporate entropy, to welcome change, to uproot habits, and to use renewal to build the future. (13, p. 338)"

CONCLUSION

Academic psychiatry faces challenges that go beyond the familiar triad of teaching, research, and service. They lie in the increasing size and complexity of our institutions and the need for our faculties to develop skills that will enable them to effectively manage the systems within which they operate.

Leadership skills are among the most important that must be mastered. How can this be done?

First, we should recognize that there are many distinguished leaders among our own ranks. We should tap their brains more than we do. We rarely ask the leaders in psychiatric education how they became proficient in managing the affairs of their institutions. We seldom ask them to explain how they inspire others to follow, or, better yet, to become leaders themselves. We need to hear from those who have success stories to tell so others can learn some of the lessons of successful leadership in our own field.

We can also learn from experts in other fields. The references in this article are a good place to begin for anyone who wants to improve leadership abilities. Books on every aspect of management fill the bookstore shelves. They are a rich resource as well.

Finally, academic departments should identify the development of leadership skills among its faculty as an institutional goal. A systematic approach to the subject is needed. With the chairperson as role model, the subject can be approached as an integral part of faculty development: seminars can be offered to junior faculty and residents, and a series of supervisory and consultative sessions can be given to all who have administrative responsibilities. This is done in some departments, but it is far from universal (14,15). Much more is needed. I have found that junior faculty and about-to-be chief residents respond readily to the opportunity.

Academic psychiatry is capable of accelerating the development of its own leadership and improving its position in competing for the resources needed to pursue its goals. What is needed is the commitment to do it.
References

A Leadership Perspective:
One Year After Becoming Chair of a Department

Troy L. Thompson II, M.D.

The appointment of a new chair of a department of psychiatry ushers in a period of major transition for the appointee; the department's faculty; the chairs, faculty, and administrators of other departments; and the school at large. The residents, students, and staff members in the department can also be expected to react in a variety of ways and in widely divergent degrees to the realities and fantasies that come with the arrival of a new chair.

The overt and covert power structure and lines of authority almost always change to some degree with the arrival of a new chair. Some degree of reorganization or realignment also is associated with the arrival of a new chair. This may arouse hopes for advancement as well as concerns about being bypassed by other faculty. The chair often will bring along new faculty or recruit people into key positions. These new faculty may be viewed as the "favorites," and this may arouse envy, jealousy, fears, and other reactions in the department.

I will review the major reactions that I, as well as many of the faculty, residents, and staff, experienced during my first year as a new chair. Many of these experiences resonate with reports I have received from other chairs about their initial year in that position. This article is not intended to be comprehensive but to report on frequent reactions that I and others have observed during this usually stressful but, hopefully, also exciting year of transition.

HUMOR AS AN INDICATOR OF SOME INITIAL REACTIONS TO A NEW CHAIR

In thinking back over my first year of being chair of a department of psychiatry, I repeatedly found myself thinking of two jokes. As Freud wrote a number of years ago, there is a strong relationship between the jokes that an individual remembers and finds funny (or not) and what that individual thinks or is experiencing, at least unconsciously (1). I was told these jokes by two chairs and then

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found myself repeating them to others in the context of discussing my new position, so they may contain some generalizable truths about new chairs and other senior administrators. Any psychodynamically oriented psychiatrist will be able to see a number of the reasons, perhaps including some I have not thought of myself, why these particular stories repeatedly came to my consciousness during that year. Please try not to analyze my psyche too much from these, at least not until you have walked a year in a chair’s or other senior administrator’s moccasins.

The first story, as applied to my arrival as the new chair at Jefferson, is that a number of people in the department, after hearing about my previous contributions, idealized me and expected me to immediately do great things. An equal or greater number of people in the department had heard the same things about me but decided to expect the worst or to degrade me. In any case, shortly after my arrival, a group of residents invited me for a picnic lunch by one of the local rivers, the Schuylkill. When I arrived, the residents said, “We have heard great things about you, now let’s see you walk on the water.” I decided to be “one of the guys” and that the worst that could happen would be getting my shoes a little wet. So I stepped out onto the water. Much to my and the residents’ amazement, the water supported my weight, and I was able to walk across the river and back again on the water. Upon returning to the near bank, the residents and I gleefully returned to the Jefferson campus to tell the story. The next day, the headline on the front page of the Jefferson newspaper read: “New Psychiatry Chair, Dr. Thompson, Arrives from Colorado, Falls to Swim Schuylkill River.”

The second joke which frequently came to mind during my first year as chair has similar themes. Supposedly, a world-renowned violinist went to a northern city to play a concert in January. After he arrived, there was a huge blizzard, leaving new snow several feet deep. Arrangements were made for a large snowplow to pick the violinist up at his hotel, take him to the concert hall, and to wait for him by the stage door to return him to the hotel after the performance. At concert time he walked out onto the stage, and there were only four people who had made it through the snow and were sitting in the audience. Two in the back were preoccupied talking to each other; one was next to a side aisle reading a book; but a very large, intimidating looking man was sitting right in the middle of the front row. The violinist said to his audience, “Since you came out in this terrible blizzard, I would be pleased to have the snowplow that is waiting for me take you back to my hotel, I will buy you a drink or a cup of coffee and we can talk, then the snowplow can take you safely home.” While the other three considered the offer, the large man in the center of the front row became quite angry and said to the violinist, “No way, buddy. I came out in this stuff and I am not going anywhere until I hear you sing.”

A number of common themes are apparent in these jokes. Certainly one theme is the hope or expectation of a person doing something that is wonderful, grandiose, or impossible. Another may be a hope to be, or to be associated with, the “best in the world.” However, another just as powerful theme is that, regardless of how good you may be, or what wonderful or miraculous accomplishments you may be able to achieve, from someone’s perspective you will be viewed as a major disappointment or outright failure. The above themes reflect some of the major issues that I have observed within myself, my department, and my school since becoming a new chair.

HOPES THAT THE NEW CHAIR WILL “RIGHT PAST WRONGS”

Some faculty members felt, probably justifiably, that they had not been treated totally fairly in the past. Who has? However, when a new chair arrives, some will hope, con-
sciously or otherwise, that the new chair will promptly right the past wrongs that they have suffered in their careers (or lives?). A few may have the expectation that something grand and marvelous is going to happen and that their hidden talents and previously unappreciated skills and capacities will be immediately fully supported and appreciated. Sometimes, but seldom immediately, hard-working and deserving faculty and staff members can receive well-deserved support (at least verbally) from a new chair. However, often the constraints on a new chair prevent him or her from doing anything extraordinary, at least not overnight.

THE IMPORTANCE AND WISDOM OF DIVIDING SCARCE RESOURCES UNEQUALLY

A new chair usually negotiates for some additional resources for the department as part of accepting the position. Everyone in the department has special interests, projects, and programs to promote, and everyone hopes to get a portion of the new chair’s “dowry.” It is generally impossible and probably unwise for a chair to try to support all programs and projects equally. The chair will determine certain areas that are particularly important for psychiatry or for the specific needs of the department and will want to move the department more in those directions. This will inevitably annoy or frighten some faculty members, especially those who do not have their interests in those areas. Paradoxically, the strongest areas and faculty members in the department may not get a great deal of a new chair’s attention or resources, since to produce a better balanced department the relatively weaker areas may need more initial attention.

A seasoned chair said, “If I divided the new monies equally across all people and all programs in the department each year, each one of them would get an extra $1.95.” If new resources were divided totally evenly, nothing new, innovative, or of any consequence would likely be developed in any single area. Therefore, it is often necessary to put a significant portion of new resources behind two or three new programs or faculty members in order to allow them to “get on their feet” and then “take off.”

A military metaphor further illustrates this point. A general receiving new troop reinforcements as a battle is being fought will usually assign them primarily to the divisions that are moving forward on the battlefield. A division that is holding its own might need some reinforcements, but the wise general probably will put the new troops in the areas where advancement and breakthroughs into new areas are occurring. I believe most chairs will do the same whenever possible with a department; that is, the people who are being most productive in research, clinical activities, teaching, and critical administrative duties will ultimately get the most support from the chair. Someone who is maintaining a program, even a very important one, is in a status quo mode probably will get “cost of living” support but little more during times of academic institutional austerity.

DEVELOP AND STICK TO A STRATEGIC PLAN

A major aspect of becoming a successful new chair is to develop an overall strategic plan for the department and to convey this to the department in an energetic, enthusiastic, and action-oriented manner. It is important to pick priorities and to stick with them in spite of the almost daily demanding distractions and detours. A new chair must quickly develop thick skin which, however, remains somewhat permeable and sensitive. During my first year, I quickly learned that it is impossible to please everyone if the department is going to advance in new areas and that I was going to have to make some tough decisions and stick with them until the
changes became self-sustaining. These tough decisions will often include not continuing the appointment of some faculty members. For example, if an individual has not been productive after several years in a research or scholarly area, the chair probably will need to move that person into a nonacademic position, inside or outside of the department. This may be particularly difficult if the individual is a nice person and a good clinician and teacher. However, since the number of full-time positions is finite, most chairs of outstanding departments feel that virtually all full-time faculty positions should be occupied by people who are adding to new knowledge or actively being scholarly by integrating existing knowledge into new clinical or teaching areas.

When I was a division chief, I had the occasional fantasy that chairs could do pretty much whatever they wished. However, when I became chair, I quickly realized that I had more bosses (e.g., deans and hospital directors) than ever before, and that many major decisions (e.g., creating new faculty positions, equipping new laboratories) were almost totally dependent upon staying in the good graces of those individuals. As a division chief, the chair was my only direct boss, but as chair, I report directly to several senior officers of the university, depending upon the issue.

SEEK THE FAVOR OF SENIOR OFFICERS AND ADVICE OF SENIOR CHAIRS

During my initial negotiations, I was fortunate to have sought and accepted the wise counsel and advice of several senior chairs, both from other psychiatry departments and other clinical departments at Jefferson. These advisors stressed that I should request an extensive written agreement regarding what I and the department would be given if I became chair. I felt somewhat uncomfortable during the negotiations when asking to have in writing such seemingly minute details as having office furniture and equipment provided for new secretaries and for a parking space nearby for myself that would be paid for by the school. However, in retrospect I am glad that I asked for virtually everything that I felt was reasonable and that I got every aspect of my agreement in writing. This made my first (and, so far, my second) year go more smoothly than anything else.

I do not believe the Dean or other senior officers at Jefferson are malicious or would intentionally distort what they verbally agreed to provide me and the department; in fact, the opposite has been true. However, a dean routinely negotiates with several dozen chairs (including an average of one or two new chairs) each year, so there is no way for him or her to keep the minute details of multiple negotiations straight unless agreements are finalized in writing. Deans, like the rest of us, are going to remember the facts and discussions in a way that will be most favorable to them, even if they are not intentionally trying to do so. I have pulled out of my files the letters of my agreement when needed and sent a copy to the Dean, Hospital Director, or others with a nicely worded note reminding them of what was promised and wanting to know what further information I might provide. This has been very effective and has made my first two years as chair much easier than they would have been if I had “wanted to be nice” and naively accepted the “trust me, you can count on me remembering all the facts” type of negotiation. I continue to utilize this lesson by following up important meetings with summary memos to the key players.

BRIEF REGRESSIONS TO BE EXPECTED

The vast majority of the faculty have been quite understanding and allowed me time to get settled in and to get to know them and their programs. However, understandably, some were anxious or concerned and were in contact with me (in person or through
memos) on a regular basis, especially during the first few weeks when I was chair, with a variety of suggestions or complaints. Interestingly, most of those who were the most anxious were people who had been very productive and who had virtually nothing to worry about from my perspective. One might speculate that one reason they had been so successful and productive in their careers was that they characterologically had some degree of anxiety about whether their performance would be (or be viewed as) adequate, and this concern had fueled them over the years to achieve a great deal of excellence and productivity.

Under stress, supposedly, 90% of people regress and 10% of people progress. This was generally true in my observations of faculty and staff members as they related to me as the new chair. I found that if I asked them what they were doing in their programs, why, and what they felt was important to do next, I could usually reassure them by this demonstration of interest and any regressive reactions quickly melted away. A few faculty members did take my arrival as a stimulus to progress and got going on (or completed) some tasks on which they had been procrastinating; this was especially true for several research and scholarly projects. The latter occurred in part because I came with an accurate reputation as someone who feels that research and scholarly productivity are critical for ongoing faculty development.

FAMILY STRESSES

Another major issue that I encountered during my first year as chair was trying to figure out and address the changes this position would cause in my relationships with my wife and children. As chair, I became the major "parent," if you will, of the entire department. A great deal of my time and energy are devoted to monitoring and meeting the department's emotional needs. This is to a much greater degree than ever occurred when I was a division chief. I did talk extensively with my wife before accepting the position, and she had the foresight and sense of humor to give me "informed consent." However, neither of us could clearly foresee what would be involved, at least not emotionally.

Almost every day during the first year of being the chair, I encountered something new. I had not been involved previously with that level of political, administrative, or financial decision making. Whenever I had attended administrative meetings in the past, I had always been, metaphorically, "holding a retractor" or "closing the incision"; now I was the "chief surgeon cutting and suturing the aorta." After a month, my wife said that becoming chair was something like walking into the arms of an octopus that had developed a career interest in surgery; "everybody wants a piece of you." The constant emotional drain at work made additional support from my wife very important at a time when we were also dealing with the losses and stresses of a major relocation.

PLEASURES AND SACRIFICES OF BECOMING CHAIR

There are, however, many exciting aspects of being chair which I have enjoyed immensely. I have much more opportunity than ever before to shape programs in ways that I feel are important for psychiatry and for our students and residents, and that will lead to an even stronger and better balanced department. I enjoy being consulted, usually early in the game, and being able to provide input on most of the major decisions that will affect the department; in the past such decisions were passed down to me by the chair with an assignment to carry out part of the plan. Being chair is certainly more gratifying and much less frustrating than having someone else as chair who does not have my areas of interest among his departmental priorities. If you share some of my personality
traits, such lack of support can cause you to grow old more quickly than the burdens that come with being chair. After a year and a half of being chair, I feel I know the rudiments of the position. It has been something like learning how to ride a bicycle or how to ski; it is awkward initially, but once you master the basics it becomes much easier and more fun.

Another change for me was a decrease in my research and scholarly productivity during the initial year. I have been able to keep some research and scholarship going and plan to increase that in coming years. However, I doubt that anyone can be an effective chair of a large department if he or she continues doing the amount of clinical work, teaching, and research and scholarship that most were doing previously to put themselves in a position to become a chair. To be the chair in an effective administrative manner is almost a full-time job, at least initially. I have continued to see some private patients and do quite a few consultations because I am invigorated by patient care and teaching and want to maintain my skills as a psychiatrist and teacher. I teach daily in our residency or medical student programs, including leading a weekly small group discussion of freshmen medical students.

A surgeon who becomes an administrator and stops operating regularly becomes known as a “briefcase surgeon.” I have no desire to become a “briefcase psychiatrist,” although there seems to be a relatively large number of these among our field’s upper administrative ranks compared with other specialties. I believe that psychiatry is the only medical specialty with administrative boards. Can you imagine someone with boards in “administrative surgery” or “administrative internal medicine”? Maybe our focus on administration grew out of the large state hospital systems in which our predecessors needed to know more about institutional administration than most other specialists.

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**SOURCES OF INFORMATION ON CHAIRING AND MANAGEMENT**

A number of books have been published on how to be an effective administrator and even on managing and chairing an academic department (2,3). Some brief management books have been useful and interesting to me (4,5). However, I have been too busy as chair thus far to read many “how to” books. The first year as chair has some parallels to internship; first and foremost, I just wanted to get through it. When I become an “attending among chairs,” I may take the time to read a few additional books that have been recommended on related topics (6-8).

When I first became chair, an esteemed emeritus chair of surgery recommended that I read Dale Carnegie’s *How to Win Friends and Influence People* (9), which I did. The title of this book has become a cliché, which put me off at first, but it is the great grandparent of the numerous self-help books of recent decades and contains many pearls and lively “clinical” administrative vignettes. The surgeon told me that he did not think I would need it, but that he had found it more helpful in becoming a good chair than anything else he had done. I still do not know whether he said that he did not think I would need the book because he truly believed that or because he was displaying his mastery of the book’s techniques. After reading the book, I realized it did not really matter which was true, since his remarks achieved his desired effect. That is, I was flattered and thought, “He must be very wise to see how administratively astute I already am,” so of course I followed his advice and read the book. The book contains a great deal of the most basic common-sense advice that one might expect psychiatrists to know and practice, but which we often do not.

There are courses and organizations that focus upon management and administration for physician executives. I feel that I already spend too much time away from my department and my family attending psychiatry
meetings, so I have not joined any administratively focused organizations and do not plan to do so. Administration per se is not one of my loves, but I also do not view it as a "necessary evil." I view careful administration and management as essential means to the end of maintaining and further developing a well-balanced and in-depth department.

After being chair for about a year, I attended a two-week course for clinical service chiefs conducted by the Harvard School of Public Health. It was fairly rigorous and well organized, and it provided ample opportunities to share successes and war stories with other chairs from across the country and from many specialties. I could not quote much of the specific content of the management, finance, legal, or other minicourses, but I did learn, remember, and regularly apply a number of the general principles that were addressed. The overall lesson that I learned is that each aspect of management and administration is a complex field of study in its own right and that good support and occasional consultations in these areas are probably as important in being a successful chair as having a solid office staff and occasionally calling a clinical consultant from another medical specialty are for state-of-the-art patient care. I would recommend this or a similar course be taken after having been chair for one or two years, so personal experiences will help make the material come to life and stick.

CONCLUSION

Any transitional stage in life is associated with some degree of anxiety in everyone involved with the transition. This will inevitably result in some regression but, hopefully, the degree of anxiety experienced by most involved when a new chair arrives will be of the level that will result in more attention to the details and an increase in the excellence of one’s performance. Ideally, this will also be true for the new chair. This transitional period may be a time of introspection and reassessment of goals, objectives, and how one measures up compared to one’s peers. Relative intangibles, such as how well you will like the new chair and vice versa, what transference issues will be activated, etc., may be the most anxiety provoking and take the longest to resolve. In a sense, everyone in the department is getting a new work-based father or mother figure, and this will inevitably evoke a spectrum of hopes, fears, and fantasies. Most chairs will not have been the parent before to so large a family, so reactions to becoming the patriarch or matriarch of a large and usually extended family will require a time of adjustment.

The reactions to a new chair can be expected to vary widely depending upon the personality, background, and interests of the new chair as well as the organizational, financial, scientific, and clinical “personality” of the department and how these mesh. This article has provided a “snapshot” of some of the reactions of one new chair in one large, well-established, and relatively stable department. From my conversations with other chairs, it appears that many of my reactions as a new chair and of my departmental members may be somewhat generalizable phenomena.

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New Idea

Characterization of Psychiatry Residency Training Programs

J. Pierre Loebel, M.D.
Douglas M. Brock, M.Ed.
Craig S. Scott, Ph.D.
D. Daniel Hunt, M.D.

Psychiatry residency training programs were characterized on four dimensions in a pilot study of seven West Coast schools. Residents and faculty rated their programs on academic versus clinical, community-based versus institution-based, private versus public practice, and biological versus psychological orientation. Faculty and residents from the same schools differed only on the academic-clinical dimension. Significant differences existed between schools on each axis. Variation in ratings on the biological-psychological axis suggests that claims to a "biopsychosocial" orientation may be too broad to be meaningful. This method of dimensional ratings appears appropriate for program assessment and deserves further development.

Several authors have reported on the knowledge and skills deemed necessary for trainee psychiatrists (1-3) and on the personal attributes of such trainees (4), but few have investigated the nature of the training programs themselves (5,6). This lack of information is obviously a serious impediment for undergraduate and graduate students choosing residency programs and for faculty who wish to compare their programs with others and to set goals for their own. Those needs are presently met by word-of-mouth reports based upon impressionistic assessments.

In a related issue, it has become evident from the number of allusions in the literature that a "biopsychosocial" (or "eclectic") viewpoint has become the predominant conceptual mode in psychiatry (7-9). However, the characteristics of this viewpoint have not been made explicit, although some interesting efforts to do so have begun (10,11). Therefore, training programs that claim to function in accordance with this principle may in fact vary widely in their orientation and content.

The aims of the current study were to characterize psychiatry residency training programs based upon the views of both faculty and residents; to utilize this characterization to examine whether differences exist between programs; to examine whether the perceptions of faculty and residents within programs differ; and to investigate whether the programs agree on the meaning of the biopsychosocial concept.

The authors are affiliated with the University of Washington School of Medicine in Seattle. Dr. Loebel is clinical associate professor of psychiatry and behavioral sciences, Dr. Brock is a predoctoral research associate in the department of medical education, Dr. Scott is research associate professor in the department of medical education, and Dr. Hunt is associate professor of psychiatry and behavioral sciences. Address reprint requests to Dr. Loebel, Harborview Medical Center, 325 Ninth Avenue, ZA-99, Seattle, WA 98104.

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**FIGURE 1.** Questionnaire used to rate psychiatry residency training programs on four dimensions

<table>
<thead>
<tr>
<th>Psychiatry Residency Program Characterization Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructions: Place one check on each of the four scales below.</td>
</tr>
<tr>
<td><strong>Academic or Clinical Emphasis</strong></td>
</tr>
<tr>
<td>Academic: Emphasis is on teaching, theory, and research.</td>
</tr>
<tr>
<td>Clinical: Emphasis is on the practical applications of theory.</td>
</tr>
<tr>
<td>Academic</td>
</tr>
<tr>
<td><strong>Community-Based or Institution-Based Emphasis</strong></td>
</tr>
<tr>
<td>Community-based: The program is linked widely into community services and is used readily as a resource by the community.</td>
</tr>
<tr>
<td>Institution-based: The focus of the program lies within the institution itself.</td>
</tr>
<tr>
<td>Community-based</td>
</tr>
<tr>
<td><strong>Private Practice or Public Psychiatry Orientation</strong></td>
</tr>
<tr>
<td>Private practice: Training is primarily directed toward private office practice.</td>
</tr>
<tr>
<td>Public psychiatry: Teaching and training is focused most strongly on psychiatry as practiced in hospitals, shelters, mental health centers, and other societal institutions.</td>
</tr>
<tr>
<td>Private practice</td>
</tr>
<tr>
<td><strong>Biological, Eclectic, or Psychological Focus</strong></td>
</tr>
<tr>
<td>Biological: The chief focus of teaching, training, research, and clinical practice is on neurochemistry, neuropathology, neuropsychopharmacology, and related fields.</td>
</tr>
<tr>
<td>Eclectic: Teaching, training, and research give equal weight to elements arising from biological as from psychological domains (also referred to as the “biopsychosocial” approaches).</td>
</tr>
<tr>
<td>Psychological: The chief focus of teaching, training, research, and clinical practice is on psychological factors (including behavioral psychology) and psychoanalysis.</td>
</tr>
<tr>
<td>Biological</td>
</tr>
</tbody>
</table>
METHOD

Four axes were developed to delineate the more important aspects on which psychiatry training programs may differ. The axes were academic versus clinical; community-based versus institution-based; private practice versus public psychiatry orientation; and biological versus psychological focus. These axes were developed during trial efforts undertaken by the authors in conjunction with the University of Washington department of psychiatry and behavioral sciences. The four dimensions are further considered to typify areas of concern to undergraduate and graduate medical students who are in the process of selecting residency programs with which to interview. They were not designed to cover all aspects of psychiatric residency training.

A questionnaire was developed in which each program was rated on each axis using a five-point Likert-type scale (see Figure 1). Responses for academic, community-based, private practice, and biological orientations were given values of 1, and conversely responses representing clinical, institution-based, public psychiatry, and psychological orientations were assigned values of 5. The midpoint of the biological-psychological axis was considered to reflect an eclectic, or biopsychosocial, orientation, which represents a melding of biological and psychological perspectives. This orientation was reflected in a score of 3. The other axes had no generally recognized terms for the central position. The questionnaire also provided definitions for each axis label.

The residency program directors of 10 West Coast schools considered to be representative of the spectrum of West Coast psychiatry training programs were contacted by telephone and cover letter. The directors were given a detailed description of the study's benefits and of their school's responsibility if they agreed to participate. Seven schools agreed to participate: University of California, Davis; University of California, Los Angeles, Neuropsychiatric Institute; University of California, San Francisco; University of Colorado; Presbyterian Hospital of Pacific Medical Center; Stanford University, and University of Washington. For the purpose of maintaining anonymity, deemed necessary at this stage of the inquiry where our aim was essentially to determine the feasibility of the rating instrument, the seven schools are designated in the ensuing report by number only.

The directors of the seven programs were asked to provide the names and addresses of 10 faculty and 10 residents for inclusion in the study. They were requested to select the residents and faculty at random to allow for an adequate sampling methodology. Ten residents and 10 faculty, allowing for nonresponses, were considered an adequate number of subjects to represent specific programs. One school, which had enrolled only eight psychiatric residents at the time of the survey, provided the names of all the residents and an equal number of randomly selected faculty. The questionnaires, together with cover letters, were then mailed directly by the investigators to the addresses provided by the program directors. The first mailing was completed during October and early November of 1987. Nonrespondents were mailed a second survey four weeks later.

A factorial multivariate analysis of variance (MANOVA) was performed across the four dimensions of the questionnaire, with the respondents' school and status as either faculty or resident representing the independent variables.

RESULTS

The mean overall response rate was 73%, with a response rate of 79% for the residents and 68% for the faculty. Two residents (4%) were in their first year of training (PGY-1), 10 (19%) in PGY-2, 16 (30%) in PGY-3, and 23 (43%) in PGY-4. Three respondents (6%) did not provide a year of residency training but
indicated through additional information that they were not first-year residents. By program, residents' response rates ranged from a low of 60% to a high of 90%, and faculty response rates ranged from a low of 40% to a high of 90%.

Reliability analyses of the instrument are not provided for two reasons. First, this work represents a pilot effort and does not purport to address the stability of program orientations or faculty and resident attitudes. Therefore, a stability estimate of reliability is premature at this time. Second, a measure of internal consistency is not appropriate for this instrument, which was not intended to represent a unidimensional quality.

The responses of the two first-year residents were excluded from the analysis in order to limit the sample to individuals with a similar level of, and more extensive, familiarity with their respective programs. Two programs with good resident response rates (80% and 90%, respectively) but low faculty response rates (40% for both) were included in all subsequent analyses between programs for two reasons. First, these two schools did not lie at an extreme end of the distribution on any of the four axes, and, therefore, the low response rates were not considered likely to be the cause of any significant findings. In addition, subsequent analyses revealed minimal or nonsignificant differences between faculty and residents within specific programs. This finding was also evidenced in the schools with low faculty response rates. We therefore concluded that it was likely that the faculty who responded were representative of their programs' faculty in general.

The MANOVA, with all schools aggregated, showed a significant main effect between faculty and resident response patterns (Wilks Lambda=.86, p<.05). Separate univariate tests for each dimension indicated that this significant result was primarily a function of the academic-clinical dimension (F=5.42, p<.05). However, separate t tests between residents and faculty within each school found no significant differences at the p=.10 level.

The multivariate main effect across schools was also significant (Wilks Lambda=12, p<.05), suggesting that meaningful differences existed between schools. The multivariate results were further supported by univariate tests, which indicated that there were significant differences across schools for each dimension (p<.01). The multivariate interaction between school and the status of the respondent (faculty or resident) was not significant.
Due to some small cell sizes, these multivariate results are not especially powerful and should be interpreted with caution. Since the differences between faculty and residents were not significant on three dimensions and since two schools had low faculty response rates (40%), it was decided that the most relevant and supportable reports were those where the faculty and residents were aggregated within schools. This provided adequate response rates on a per-school basis and allowed for a more defensible evaluation of the validity of each dimension.

Table 1 presents the mean findings on the four axes when residents' and faculty's responses are combined. Table 1 also provides 95% confidence intervals for each dimension. One-way analyses of variance (ANOVARs), with multiple comparison tests, were performed on each axis to determine if significant differences existed between programs. The omnibus tests for each axis were all highly significant (p<.01) indicating that it was highly improbable that these differences were produced by chance. Newman-Kuels multiple comparisons tests were used to examine differences between schools. This test was selected because it balances Type I and Type II error by adjusting the critical value for tests of partial null hypotheses. This allowed us to determine which programs differed significantly from each other.

On axis 1, academic versus clinical focus, programs 6 and 7 were both rated as significantly more academic in orientation than the other programs. Program 4 was rated as significantly more clinical in its orientation than all others. Programs 1, 2, 3, and 5 were rated similarly near the center with respect to this axis.

On axis 2, community versus institutional emphasis, program 1 was rated as significantly more community oriented than all other programs, and programs 6 and 7 were rated as significantly more institution-based than the others. The rest of the programs were rated near the center.

On axis 3, private versus public practice orientation, program 1 was rated as significantly more public-practice oriented than programs 2, 4, and 6.

On axis 4, biological versus psychological focus, program 2 was rated as significantly more psychological than the other programs. Program 7 was rated as significantly more biological in orientation than programs 2, 3, and 4.

DISCUSSION

Seven psychiatry training programs were evaluated by faculty and non-first-year residents on four axes. Overall, the results indicate that the methodology appears applicable to the task of characterizing psychiatry residency programs and that discrimination between programs is readily achieved. This information is valuable for two fundamental reasons. First, such a characterization scheme might assist applicants of residency programs to select residencies that most closely match their preferences. Since the information is easily obtainable from faculty and residents at specific institutions, it provides a potentially valuable source of program information for purposes of comparison.

Applicants might use the dimensional ratings to screen various residency programs and to eliminate any need for extensive personal research on specific programs, unnecessary interviews, or an overreliance on potentially biased word-of-mouth information. This practice would also benefit the psychiatry residency programs, by reducing expenses related to screening, interviewing, and evaluating residents who may not meet their selection criteria. An additional benefit of dimensional characterization schemes is an increased understanding of residency programs and how well information about their characteristics is disseminated. For example, faculty from a number of institutions could be asked to characterize each others'
residency programs. Comparisons between an institution's self-perceived orientation and the perceptions of it by faculty at other programs would allow an increased understanding of the quality of information provided by word-of-mouth communication.

Second, a characterization of psychiatry residency training programs provides faculty who are interested in obtaining teaching positions with an easily interpretable assessment of a program's orientation. Third, this characterization may also fulfill a need regarding more general program assessment by faculty responsible for curriculum development.

Primarily the instrument might assist faculty by increasing the level of understanding regarding their program's perceived orientation and the degree of perceptual consensus among and between faculty and residents.

The data demonstrated that faculty and residents of the same program are typically congruent in their views of the program's orientation, but that there are significant differences between programs. The finding that faculty's and residents' views were not significantly different on three of the four axes is interesting, and it suggests that faculty members are successful in shaping the viewpoints of residents in accord with their own, thus bringing about an institutional orientation. The differences exhibited between the ratings of faculty and residents on the academic-clinical dimension may be interpreted in terms of role perception. Residents may perceive their program as more clinically oriented as a function of their role as clinicians in training. Conversely, faculty may respond in deference to their role as educators and evaluators rather than in relation to the institution's position on this axis.

With reference to axis 4 (biological, eclectic, or psychological focus), we conclude that while most schools appear to consider themselves "eclectic," they lean toward biological or psychological orientations to varying degrees. However, residency training programs typically provide little more than an implicit definition of what they mean by "eclectic." We argue that data on this dimension, with their wide variability between schools, indicate that the concept "eclectic" or "biopsychosocial" allows for such a wide variation in interpretation that it should be either discarded or be more explicitly described by each institution. The term "biopsychosocial" currently lacks the precise definition that is needed to render it more than just a slogan to which most psychiatry training programs claim to adhere.

We offer two suggestions to supervisory faculty and resident selection committees. First, it should now be recognized that the term "biopsychosocial" suggests a wide variety of meanings, even to residents and faculty within a specific program. Second, to avoid ambiguity, psychiatry residency programs might benefit by describing themselves in reference to specific scores obtained on this or a similar axis. Specifying the dates of a program's most recent evaluation on this dimension and providing a measure of the degree of variability evidenced by faculty and residents would further enhance the validity and worth of such measures to potential residency candidates.

Several limitations of this study should be noted. First, the instrument was developed in a rational fashion by the authors and may not represent all the critical dimensions of a psychiatry residency training program. We further caution that the dimensions may not represent unidimensional constructs, and might benefit from an increased complexity. The public-private distinction seems especially amenable to either an increased dimensionality or, alternatively, a labeled midpoint to further clarify the axis' intended content.

Second, we cannot conclude from the pilot work discussed in this article whether these dimensions are stable within institutions. Institutional orientations and educational philosophies might fluctuate widely,
further indicating the need for timely and repeated assessment. Finally, the anonymity of specific institutions within the current study disallows comparison between actual programs. While this information would prove interesting, we consider that the pilot nature of the study renders disclosure premature.

This study represented a pilot effort to characterize psychiatric residency programs in a fashion that is easily implemented and low in cost. Restricting our study to four dimensions provided for an increased ease of interpretation and did not prove overly taxing either to the respondents or to interested readers of the results. Furthermore, this information can be provided for a minimal expense at the institutional level. To further the development of this form of residency characterization, future studies should replicate the current findings with greater numbers of respondents in more and varied schools. Further development may also necessitate the creation and testing of an expanded range of descriptive dimensions.

The authors thank the residents, faculty, and residency training directors at each school for their participation. Appreciation is also expressed to Marcy Hall and Dorothy Reedy for editorial and secretarial assistance.

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Regular Articles

Professional Interests Among Residency Applicants in Psychiatry:

A Pilot Study of Autobiographical Statements

Joel Yager, M.D.
Alison R. Yager
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Gordon D. Strauss, M.D.

Spontaneous declarations of field of interest by 150 applicants to the UCLA Neuropsychiatric Institute—West Los Angeles V.A. Medical Center psychiatric residency program in 1986 were examined. In essays written as part of the National Resident Matching Program, many applicants expressed several areas of interest. About one-third of applicants expressed an interest in research, and about one-quarter expressed interests in teaching, psychotherapy, biological psychiatry, or child psychiatry. Between 5% and 9% expressed interest in community psychiatry, adolescent psychiatry, psychoanalysis, geriatric psychiatry, and chemical dependency, and <5% expressed interest in cross-cultural, emergency, legal, or administrative psychiatry.

Psychiatry has always been a multifaceted field that has attracted medical students with diverse career aspirations. Over the past decades psychiatrists have specialized in various areas of practice in adult, adolescent, and child psychiatry; in inpatient and outpatient settings; in private and public sectors, in somatic and various psychological therapies; in specific disorders; and in a variety of other arenas such as social and community work, forensics, administration, basic research, and academic teaching and practice, to name only the most prominent. The recent emerging interest in subspecialization in psychiatry reflects the evolution of some of these specialized areas as they are shaped by expanding knowledge in their fields and by social and economic forces in the practice of medicine (1).

Many medical students entering psychiatry are well aware of at least some of the career pathways open to them, and many have well-formed preconceptions of the specific types of psychiatric careers they desire. Although the initial aspirations of applicants for psychiatric training do not predict subsequent career pathways with certainty, and many trainees find new interests and career directions during training, the stated aspirations of applicants do bear, in our experience, more than a chance relationship to
subsequent careers. More often than not, graduates from our program who have had a reasonably clear idea about career direction during their initial interviews for the residency program attempt and often succeed in pursuing those career pathways following training. This notion has to some degree been validated by Bashook and Weissman, who followed a cohort of 196 psychiatric residents from their 1982 entry into training to their graduation in 1986. At entry about 80% of their group intended to take a fellowship or psychoanalytic training, and at graduation about 63% still intended to do so (2).

Therefore, the initial aspirations of residency applicants are of interest to educators and administrators who wish to predict future availability of professional personnel. Educators must ensure that the specific needs of trainees are being met, both during the residency and through post-residency fellowships and related opportunities. Administrators and planners need to know how consonant the aspirations of those entering the field are with the community's needs for psychiatric services. If those entering psychiatry are not interested sufficiently in areas of greatest need, additional areas of emphasis during training or other incentives may have to be extended in order to attract residents into careers in these areas, and additional efforts may be required to attract future applicants to the field who would find careers in these need areas to be worthwhile.

Therefore, with these issues in mind, we studied the initial aspirations of a cohort of medical students applying for psychiatric residency positions.

METHODS

The folders of 150 alphabetically consecutive American medical school seniors who were applicants to the UCLA Neuropsychiatric Institute–West Los Angeles V.A. Medical Center psychiatric residency in 1986 were selected for review of applicant interest areas. (The program received about 350 completed applications for the residency that year.) The folders contained autobiographical statement essays, included as part of the standard National Resident Matching Plan (NRMP) application forms, which were the major focus of our analysis. For those persons who were invited for personal interviews, approximately 40% of this group, the information contained in the autobiographical essays was supplemented with comments on our standard interview forms noted by either J.Y. or G.D.S. at the time of the interview.

Two of us (J.Y. and D.S.) created an a priori list of 10 special interest areas we thought would be heavily represented in the folders, and we separately reviewed 10 randomly selected essays for these topics. A high degree of inter-rater reliability was found on these areas. At that point two of us (A.R.Y. and J.Y.) each reviewed 20 additional folders. Since a high degree of inter-rater reliability was again found, one of us (A.R.Y.) reviewed all of the remaining essays independently. In the course of the review of the remaining essays, several additional interest area categories were created.

RESULTS

Only 20% of the essays did not state a specific area of interest, and many mentioned more than one area. Table 1 lists the 12 areas of special interest cited by at least 5% of the applicants. Fewer than 5% of the applicants mentioned specific interests in legal psychiatry (2%), administrative psychiatry, group psychotherapy, cross-cultural psychiatry, or emergency psychiatry (1% each).

A much smaller percentage than those listed as mentioning areas of interest specifically stated that they wanted a fellowship in a given area. For example, only 50% of those applicants interested in child psychiatry, 33% of those interested in adolescent psychiatry, and 11% (one applicant) of those interested in geriatric psychiatry used the word
"fellowship" in relation to their future plans. Sixteen percent (n=24) of applicants mentioned specific clinical problems of interest to them, with 26 different clinical problems listed, none mentioned by more than four applicants, one mentioned by four applicants (psychosomatic illnesses), and two mentioned by three applicants (stress disorders and terminal illness).

DISCUSSION

Certain limitations in this study should be emphasized. First, although only 600-700 American medical students entered PGY-1 programs in psychiatry during 1986, our sample of 150 students may not be representative of the entire pool, and therefore our findings possibly cannot be generalized. Second, applicants vary greatly in the extent to which they portray themselves in personal statement essays; some are detailed and eloquent, whereas others write perfunctory statements. Essays lack the structured stimuli contained in survey questionnaires that can prompt applicants to recall areas of potential special interest that they may have momentarily forgotten, and so these essays may not be complete statements of interest. Nevertheless, such essays have the virtue of resembling projective tests, the blank page evoking the applicants' ideas about themselves without the potentially distorting influences of face-to-face interactive interviews that may shape the applicants' statements depending on the perceived demand characteristics of the program. Since each applicant usually sends the identical essay to several programs, we can assume that the statements it contains are not written with the idiosyncrasies of only one particular program in mind. Third, for applicants who did not interview with us, we were not able to validate these statements of interest or to obtain more detailed information about their precise meaning in face-to-face interviews.

With the limitations of our study design in mind, our review of personal essays written in conjunction with NRMP application forms to psychiatric residency programs found that the most popular special areas of interest, each mentioned by >20% of the applicants surveyed, were research, teaching, psychotherapy, biological psychiatry, and child psychiatry. With the exception of research, these areas generally reflect the major activities in which psychiatrists are currently known to spend their professional time (3).

The finding that 35% of the applicants we reviewed listed research as a special interest area deserves comment, since it is well known that a much smaller percentage of psychiatrists actually engage in research careers. A recent survey of graduating medical students conducted by the Association of American Medical Colleges (AAMC) examined the career intentions of all 10,739 students graduating from medical school in 1986, and also examined the graduates by specialty choice (4). Accordingly, 491 students entering psychiatry at the PGY-1 level in 1986 were included in their survey, and we can assume that a large percentage of the students whose essays were examined in the present study were also surveyed in the AAMC study.

The AAMC survey found that 13% of these graduates entering psychiatry anticipated taking research fellowships, and that another 27% were undecided about whether to take such a fellowship. Of those psychiatrists-to-be indicating an interest in research fellowships, 47% wanted to focus on clinical medicine, 6% on basic research, and 2% on health services and social science research; 40% were undecided. The predominant interest in clinical rather than basic research is reflected in the AAMC finding that 1% of all graduating medical students anticipated having a full-time academic career with an emphasis on basic research and only 0.4% of the 491 students entering psychiatry anticipated a basic research career.

The AAMC figures for research interests
among residents entering psychiatry are quite similar to those of Haviland et al., who also examined psychiatric resident interests in psychiatric careers (5). These authors used 1985 AAMC data and found that, among students entering psychiatry training, 15.4% expected to take a research fellowship and that another 30.5% were undecided. Of those entering psychiatry in 1985, 1.7% anticipated full-time faculty appointments with basic science, teaching, and research and 0.2% anticipated careers as salaried basic research scientists (compared to 1.2% and 0.2%, respectively, for students entering all other specialties). Among those graduating from psychiatric residency in 1986, Bashook and Weissman (2) found 15% planning to take research fellowships.

Another factor potentially contributing to the high percentage of these applicants mentioning research is that students interested in research are likely to be overrepresented among those applying to UCLA and other university-based residency programs that are noted for academic emphasis. Many applicants have only the most rudimentary notions about what performing research is about; they often mention research interests both out of curiosity about such careers and because research is consistent with the academic value systems in which most have been taught as medical students.

Were the applicants telling us what they think we wanted to hear? It is very likely that our program's "market niche" is skewed in the direction of producing psychiatrists who enter academics and research, so that we more heavily attract such applicants. Follow-up studies we have conducted in the past document this point (6). Applicants who would like to be at UCLA for other reasons, such as family considerations, may also be more likely to present themselves as being interested in those areas in which our program ostensibly seems most interested. At the same time, this large group of applicants is likely to have submitted the same essay to several if not all of the programs to which they applied.

The "market niche" hypothesis (that applicants selectively seek those programs most likely to provide them with the preparation and, more concretely, fellowship and job opportunities in their special areas of interest) has a considerable degree of apparent validity. For example, applicants to the New York University psychiatric residency program are far more likely than those applying to UCLA to express initial interests in chronic mental illness and other areas in which that department offers fellowships (Zebulon Taintor, M.D., personal communication).

We compare the statements of special areas of interest among our 1986 applicants with the fellowship plans of the 1986 graduating residents surveyed by Bashook and Weissman (2), several findings are of

| TABLE 1. Percentages of 1986 applicants to the UCLA Neuropsychiatric-West Los Angeles V.A. Medical Center psychiatric residency mentioning special areas of interest (N=150)* |
|---------------------------------|---------------------------------------------------------------|
| Research                        | Community-public psychiatry                                  |
| 35%b                            | 9%                                                           |
| Teaching                        | Adolescent psychiatry                                       |
| 25%                             | 8%                                                           |
| Psychotherapy                   | Psychoanalysis                                              |
| 23%                             | 7%                                                           |
| Biological psychiatry           | Geriatric psychiatry                                        |
| 23%                             | 6%                                                           |
| Child psychiatry                | Chemical dependency                                         |
| 23%                             | 5%                                                           |
| Consultation-liaison            | Family psychiatry                                           |
| 9%                              | 5%                                                           |

*Fewer than 5% mentioned specific interests in legal, administrative, cross-cultural, or emergency psychiatry.
*Many applicants indicated more than one area of interest.
note. First, there is noteworthy agreement between the percentages of applicants interested in and of graduates planning to take fellowships in child psychiatry (23% versus 19%), adolescent psychiatry (8% versus 7%), consultation-liaison psychiatry (9% versus 3%), community psychiatry (9% versus 4%), and geriatric psychiatry (6% versus 2%). Second, the fact that many more graduates plan on psychoanalytic training (21%) compared to the initial statements of applicants (7%) may reflect that psychoanalytic teachers during residency are quite influential, that residents find value in such training that they did not initially anticipate, that medical students are reluctant to indicate interests in psychoanalytic training on their initial applications because they fear that some residency programs may not regard such interests favorably, or some combination of these factors.

With respect to planning future availability of professionals in specific service areas, it is of concern that so few applicants expressed interest in areas that are generally thought to be in need: geriatric psychiatry, community psychiatry, chemical dependency, and cross-cultural psychiatry in particular. Specific interests in major mental disorders or in the care of the chronically mentally ill were mentioned by only three applicants. While those low numbers may, as discussed above, reflect the applicants' distorted perceptions of our department's particular interests, it is generally recognized that these areas are not ones that excite most neophytes, and that our profession must find ways to encourage interest in these areas during residency training. Clearly, training and practice incentives for medical students and residents to become increasingly involved in underserved areas must be developed.

Although formal subspecialization in psychiatry for fields other than child psychiatry is still in its infancy, it is conceivable that as fellowship training achieves a higher professional status, as employment opportunities become scarcer in psychiatrist-dense regions of the country, and as subspecialty areas achieve formal recognition, the demands and the competition for subspecialty fellowship will increase, including those in the high-need areas mentioned above. That so few applicants specifically mentioned "fellowships" may reflect the fact that, at this point in psychiatry's history, formal fellowships are still seen to have little professional or economic impact on one's career.

Our pilot study, and the others described, suggest several directions for program evaluation and further research. First, programs should monitor the expressed interests of applicants and of those residents actually recruited to ascertain their individual "market niches" and to assess the extent to which the residents who enter a program have career interests that actually match the program's professed training interests and mission of the faculty. Program modifications or different recruitment strategies may be in order if the match is not a good one. However, programs need a broad clinical and didactic base if they are to satisfy representative cross-sections of today's applicants. Second, longitudinal studies of applicants' preferences are needed to see how well our profession succeeds at informing medical students about various psychiatric career opportunities, including emerging subspecialties and "shortage" areas of psychiatry.

Finally, studies are required to examine how specific psychiatric career choices expressed at entry are influenced during residency. For example, at least some of the most altruistic, research-interested, and community-oriented applicants will abruptly shift career directions during residency training when faced with such reality issues as bearing and raising children, buying a house, and repaying $50,000-$80,000 in college and medical school loans. The extent to which such factors as economics, life-style, personal safety, role models, and practice opportunities interact to shape the ultimate
interests and behaviors of young psychiatrists by the time they finish residency training must be better understood if we are to encourage more of them to enter the professional areas of greatest need.

References

5. Haviland MC, Pincus HA, Dial TH: Career, research involvement and research fellowship plans of potential psychiatrists. Arch Gen Psychiatry 1987; 44:493–496
Post-Psychiatry Residency Career Choice:

**Current Trends**

Rif S. El-Mallakh, M.D.
Michelle Riba, M.D.

Of 203 psychiatry residency directors surveyed in 1988 about the career choices of graduates, 97 (48%) usable responses represented 1,403 residents. Results were compared to previous surveys (1968–1972 and 1978–1979). The prior increase in post-residency fellowships (from 4% in 1968–1972 to 17% in 1978–1979) has leveled off (16.4% in 1988). Fewer residents chose academic psychiatry (9.7% in 1988 versus 26% in 1978–1979); more are entering hospital-based psychiatry (22.8% in 1988 versus 14% in 1978–1979). The proportions choosing private practice (28.7%) and community psychiatry (10%) are unchanged compared to 1978–1979. These findings reflect a departure from forecast expectations.

Recent discussions regarding the future of psychiatry have emphasized the changing face of psychiatric practice and training (1). They have highlighted the trends toward increased subspecialization (2,3) and impinging economic pressures (4) as potential influences on career choice. Particularly obvious in these discussions, however, is the generous use of impressions and the paucity of objective data. To increase the database on which to base policy decisions, this survey of young psychiatrists' first post-residency positions was undertaken and compared to similar surveys conducted 10 and 20 years previously.

METHODS

In spring 1988 a survey was mailed to all 203 U.S. general psychiatry residency program directors listed in the 1987 National Residency Matching Program (5). The half-page questionnaire was designed to be brief yet informative. It requested information regarding the first post-residency position of 1986 and 1987 graduates and the anticipated position of 1988 graduates. The following general (rather than specifically defined) categories of post-residency career choice were provided: private practice, academic positions, hospital staff physician, HMO staff, community psychiatry, fellowships, and other. The program directors were instructed to indicate what positions occupied 50%, or greater, of their graduates' time. They were also instructed to indicate what specific fellowships or other activities were chosen by their residents. Our data were then compared to similar surveys conducted in 1968–1972 (6) and 1978–1979 (7).

The 1968–1972 survey requested information from all National Institute of Mental
TABLE 1. First post-residency position of 1,403 residents graduating 1986–1988, as reported by their program directors

<table>
<thead>
<tr>
<th>Graduating Year/ Program Type</th>
<th>Total Number of Residents</th>
<th>Private Practice</th>
<th>Academic Positions</th>
<th>Hospital Staff</th>
<th>HMO Staff</th>
<th>Community Psychiatry</th>
<th>Fellowship ( ^a )</th>
<th>Other ( ^b )</th>
</tr>
</thead>
<tbody>
<tr>
<td>1986/Unknown Nonuniversity</td>
<td>23</td>
<td>6</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>University</td>
<td>277</td>
<td>96.5(\pm)34.8</td>
<td>46(\pm)16.6</td>
<td>45(\pm)16.3</td>
<td>1(\pm)4</td>
<td>29.5(\pm)10.7</td>
<td>8(\pm)15.5</td>
<td>15(\pm)5.4</td>
</tr>
<tr>
<td>Subtotal</td>
<td>467</td>
<td>146(\pm)31.3</td>
<td>52(\pm)11.1</td>
<td>99.5(\pm)21.3</td>
<td>4(\pm)9</td>
<td>55.5(\pm)11.9</td>
<td>77(\pm)16.5</td>
<td>28(±)6</td>
</tr>
<tr>
<td>1987/Unknown Nonuniversity</td>
<td>19</td>
<td>3</td>
<td>1</td>
<td>7</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>University</td>
<td>203</td>
<td>46(\pm)22.7</td>
<td>7.5(\pm)3.7</td>
<td>70(\pm)34.5</td>
<td>2(\pm)1</td>
<td>25(\pm)12.3</td>
<td>35(\pm)17.5</td>
<td>16(\pm)7.9</td>
</tr>
<tr>
<td>Subtotal</td>
<td>529</td>
<td>132(\pm)25</td>
<td>53(\pm)10</td>
<td>134(\pm)25.3</td>
<td>5(\pm)1</td>
<td>55.5(\pm)10.5</td>
<td>83.5(\pm)15.8</td>
<td>31(\pm)5.9</td>
</tr>
<tr>
<td>1988/Unknown (anticipated)</td>
<td>23</td>
<td>7</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Nonuniversity</td>
<td>130</td>
<td>35(\pm)27</td>
<td>4.5(\pm)3.5</td>
<td>38.5(\pm)29.6</td>
<td>0</td>
<td>12(\pm)9.2</td>
<td>16(\pm)12.3</td>
<td>23(\pm)17.7</td>
</tr>
<tr>
<td>University</td>
<td>254</td>
<td>83(\pm)32.7</td>
<td>27(\pm)10.6</td>
<td>42(\pm)16.5</td>
<td>4(\pm)6</td>
<td>20(\pm)7.9</td>
<td>48(\pm)18.9</td>
<td>32(\pm)12.6</td>
</tr>
<tr>
<td>Subtotal</td>
<td>407</td>
<td>125(\pm)30.7</td>
<td>31.5(\pm)7.7</td>
<td>86.5(\pm)21.3</td>
<td>4(\pm)1</td>
<td>32(\pm)7.9</td>
<td>70(\pm)17.2</td>
<td>61(\pm)15</td>
</tr>
<tr>
<td>Total</td>
<td>1,403</td>
<td>403(\pm)28.7</td>
<td>136.5(\pm)9.7</td>
<td>320(\pm)22.8</td>
<td>13(\pm)1</td>
<td>143(\pm)10.2</td>
<td>230.5(\pm)16.4</td>
<td>120(\pm)8.6</td>
</tr>
</tbody>
</table>

\( ^a \) See Table 4.  
\( ^b \) See Table 5.

Health (NIMH)–supported psychiatry residency program directors. Its data represented information regarding 1,308 of 1,370 residents graduating from 60 programs over the five-year period. The 1978–1979 survey canvassed all residency program directors. Although 62 of 118 programs responded, the analyzable data represented information regarding 480 graduates from 55 programs.

Since the residency-to-practice transition has long been recognized as stressful (8,9) and formats for a transition seminar have been published (9,10), we also queried residency program directors whether such courses or seminars are available in order to test for their possible effects on career choice decisions.

RESULTS

Of 203 questionnaires mailed, 118 (58%) were returned, but only 97 (48%) that were completed sufficiently were tabulated. Four of the excluded questionnaires were from military programs that demand a minimum of three years of post-residency military service. The tabulated data represent the career choice of 1,403 residents. This population is approximately 35.3% of the 3,976 residents estimated in the American Psychiatric Association Census of Residents to have completed psychiatric residencies in 1986–1988. Residency programs were divided into university-based programs (N=50), non-university private and public hospital-based programs (N=41), and a small number of unknown programs (N=6). Table 1 summarizes the data according to year of graduation (year of residency completion) and type of program. Data from the previous surveys of 1978–1979 (Table 2) and 1968–1972 (Table 3) are provided for comparison.

We found that nearly a third of all graduating residents in our survey (28.7%) spend at least half of their time in private practice. A slightly smaller fraction elected salaried positions as hospital-based staff (22.8%). Less than 10% of our sample elected a half-time or greater academic position immediately following residency. A similar fraction (10.2%) chose community-based psychiatry. A significant number (16.4%) chose to further their training in a post-residency fellowship.
A distinct difference between university and nonuniversity programs appears to be that university programs produce more graduates who pursue academic psychiatry (14.4% versus 3.2%), whereas nonuniversity programs have more graduates who pursue hospital-based psychiatry (31.6% versus 17.8%).

The subspecialty fields of postgraduate fellowships are quite variable (Table 4). Child psychiatry fellowships continue to be the most common. Geriatric, forensic, research, and consultation fellowships are also relatively common, while other fellowship areas are represented but are rare. An additional small fraction of the residents in our sample (8.6%) went in other directions, including practicing in subspecialty fields without postgraduate training (e.g., research, public health, consultation), pursuing other residencies (e.g., neurology), or pursuing novel applications of their training (e.g., journalism, government, or Indian psychiatry).

A substantial number (46%) of the residency programs provide a transition to practice seminar or course (Table 5). There is no difference between university and nonuniversity programs in the frequency of seminar availability. Further, there is no correlation between seminar availability and graduates' career choice.

**DISCUSSION**

During the early 1970s the impending termination of NIMH funding for psychiatry training stimulated research in post-residency career choice. The major question at that time was whether the governmental investment in psychiatric residency training paid off in graduates choosing to practice in the public sector. Surveys were conducted of graduates of individual programs in Los Angeles (11), Boston (12), and New York (13), as well as all NIMH-supported programs (6). These surveys collectively concluded, contrary to earlier studies (14,15), that only 20%-40% of graduates of NIMH-supported programs spent >50% of their time in private practice. This situation changed little after the withdrawal of government funds, when Chan and Astrachan (7) found that only 26% of 1978–1979 graduates chose private practice to occupy the majority of their time. This fraction has remained constant to the present, with 28.7% of the graduates reported in our survey choosing private practice. This result suggests that, of the many potential variables involved in career choice, the source of program funding does not appear to have a significant impact on initial practice choice.

Economic market pressures and the trend toward subspecialization are among the more powerful current forces shaping psychiatric training and practice. Subspecialization has been a trend in all medical fields and has been primarily the result of the tremendous growth in medical knowledge and technology over the past three decades (2). Practicing general psychiatrists not infrequently limit their practice to a single area.

<table>
<thead>
<tr>
<th>Table 2: First post-residency position of 581 residents graduating 1978–1979 (7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Career Choice</td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>Academia</td>
</tr>
<tr>
<td>Private Practice</td>
</tr>
<tr>
<td>Hospital Staff</td>
</tr>
<tr>
<td>Community Psychiatry</td>
</tr>
<tr>
<td>Child Fellowships</td>
</tr>
<tr>
<td>Other Fellowships</td>
</tr>
<tr>
<td>Other</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 3: Private practice, public service, and fellowships among 1,292 residents graduating 1968–1972 from NIMH-supported programs (reports jobs occupying greater than 20 hours per week only) (6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychiatric Practice Type</td>
</tr>
<tr>
<td>----------------------------</td>
</tr>
<tr>
<td>Public service</td>
</tr>
<tr>
<td>Private practice</td>
</tr>
<tr>
<td>Fellowship or advanced training</td>
</tr>
</tbody>
</table>
of interest (2,16). Subspecialty areas are forming and span a wide range of psychiatric expertise. Yager et al. (2) suggested that there are several potential areas of subspecialization and that they follow specific areas of expertise or population groups (e.g., forensic, child, adolescent, geriatric), specific disorders (e.g., schizophrenia, affective disorders, substance abuse), specific techniques (e.g., psychopharmacology, ECT), or other domains in which psychiatrists work (e.g., family therapy or administrative psychiatry). (2, p. 132)

Our data appear to imply that the most solid subspecialties involve certain population groups. Specifically, child, geriatric, forensic, and consultation fellowships appear to be the most popular among recent graduates; research fellowships also appear to be desirable. The many other post-residency training fellowships may ultimately be selected out. However, since practicing in a subspecialty does not necessarily require post-residency training, these figures may be misleading. This may be, in part, why our data do not confirm forecast expectations of expanding post-residency subspecialty training (2,3). Although impressions that the number of filled fellowship positions is increasing may be accurate (due to the overall increase in the number of graduating psychiatry residents), our data show that the fraction of graduating residents pursuing post-residency training has remained the same over the last 10 years, indicating that psychiatry is moving toward subspecialization at a slower rate than other medical specialties. Our data do not help to explain why this might be the case.

### TABLE 4. Fellowship type among 1,403 residents graduating 1986–1988

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Unknown</td>
<td>16</td>
<td>6</td>
<td>11</td>
<td>33</td>
</tr>
<tr>
<td>Child psychiatry</td>
<td>35</td>
<td>35.5</td>
<td>29</td>
<td>33.5</td>
</tr>
<tr>
<td>Geriatric psychiatry</td>
<td>10</td>
<td>10</td>
<td>5</td>
<td>25</td>
</tr>
<tr>
<td>Forensic psychiatry</td>
<td>3</td>
<td>7</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>Research</td>
<td>1</td>
<td>12</td>
<td>6</td>
<td>19</td>
</tr>
<tr>
<td>Consultation psychiatry</td>
<td>5</td>
<td>7</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>Psychopharmacology</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Outpatient psychiatry</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Eating disorders</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Administrative psychiatry</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Academic psychiatry</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Inpatient psychiatry</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Sleep disorders</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Female psychiatry</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Epidemiology</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>General psychiatry</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Neuropsychiatry</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Medical psychiatry</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

### TABLE 5. Number of programs offering seminar or course to help residents with the residency-to-practice transition

<table>
<thead>
<tr>
<th>Course/Seminar</th>
<th>Available</th>
<th>Not Available</th>
<th>Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>University programs</td>
<td>22</td>
<td>25</td>
<td>3</td>
</tr>
<tr>
<td>Nonuniversity programs</td>
<td>19</td>
<td>16</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>41</td>
<td>41</td>
<td>9</td>
</tr>
</tbody>
</table>
The fraction of graduating psychiatry residents choosing academic careers has decreased dramatically (from 26% in 1978–1979 to 9.7% in 1988). It is unlikely that this is an artifact of an incomplete database, since the comparison data from 1978–1979 (7) also had an overall questionnaire return rate of 46.4%, and a similar return rate from large institutions (with more than nine residents graduating per year). It may be that some graduates seeking advanced fellowship training will ultimately choose academia; however, this fraction has remained unchanged over the last decade. It also may be possible that there are currently fewer available academic positions, a possibility not investigated in this study. From our data it appears that large numbers of those not seeking academic positions are choosing hospital-based psychiatry (22.8%, an increase from 14% in 1978–1979).

Factors that may contribute to the apparent shift from academic to hospital careers for recent graduates include the upsurge in corporate medicine, job availability, more varied salary ranges, physician indebtedness, and the increase in female psychiatrists. In terms of the latter, the American Psychiatric Association Census of Residents reports that female residents, who represented <20% of all residents in 1972, comprised over 42% of the residents in 1989. This doubling of women psychiatric residents could have played a role in the career choice trends we report. Unfortunately, we did not ask the training directors to separate their responses for male and female graduates and therefore we cannot assess the impact of gender on career choice.

Financial data gathered by the American Association of Medical Colleges reveals that the mean debt of graduating medical students rose from $14,622 in 1979 to $42,374 in 1989; and the fraction of students having no debt fell from 26% in 1979 to 18.7% in 1989. This increase in indebtedness far exceeds inflation and also does not take into account the loss of low-interest student loans that occurred over the same decade. Such financial burden may very well have played a role in shifting post-residency job selection from academic positions to more lucrative hospital jobs; however, our study design does not allow us to determine its relative impact.

Our data does identify program type as an important variable. More graduates of university programs go into academic psychiatry, and, conversely, more graduates of nonuniversity programs go into hospital-based psychiatry. This is compatible with the finding of Chan and Astrachan (7) that more graduates of larger programs (which are usually university programs) choose academic careers than graduates of smaller programs. However, this may be an example of a "self-fulfilling prophecy," that is, residents may select such programs because of their pre-residency interest in an academic career.

Finally, it is gratifying to see that nearly one-half of the responding training programs have initiated some program to aid residents in the difficult residency-to-practice transition. The widespread use of such transition courses or seminars makes them ideal outlets for resident education and guidance as well as further acquisition of knowledge about the career choice process.

There are several limitations to this study. The lack of specific definitions of the practice categories may be a source of error. For example, is a resident who takes a job at a Veterans Administration hospital that is affiliated with a university residency program categorized as hospital-based or academic? Such an error source may be compounded by having residency training directors, rather than the graduates themselves, complete the questionnaire. Further, the use of the first post-residency job choice is not necessarily an accurate reflection of a psychiatrist's post-residency career. However, the only long-term study with which we are familiar (Steve Holzman, M.D., personal communication) reveals that career
patterns are remarkably constant over the first five post-residency years. Finally, although our study documents specific trends, it does not provide clear insight into the forces that are shaping these trends. Despite these limitations, our findings suggest changing trends in the career choices of young psychiatrists are worthy of continued monitoring and more detailed investigation.

We thank Dr. Randy Parke of the American Association of Medical Colleges for providing us with data from their graduation questionnaires and Dr. Allan Tasman of the Department of Psychiatry, University of Connecticut School of Medicine, for his invaluable assistance. This work has been supported, in part, by an educational grant from Sandoz Pharmaceuticals Corporation to Dr. El-Mallakh.

References

The Role of Current Literature in Psychiatric Residency Education

Edward Schweizer, M.D.
Derri Shtasel, M.D.

Residents in 18 academic psychiatry residency programs were surveyed to assess the role of reading the current literature in residency education. Results are reported for 277 residents, a 39% response rate. Time spent on independent reading, use of the medical library, and use of computer searches of medical databases all reflected a relatively low level of autonomous educational activity. Reference to current literature was not an integral part of the educational climate of the residency programs surveyed. The implications of the findings, both for psychiatry residency education and for continuing medical education, are discussed.

One goal of residency education has universal appeal, especially in a medical climate marked by an accelerating accumulation of medical knowledge: residents should be equipped with professional habits that will ensure their continuing medical education after the residency ends. In its current form, continuing medical education is, as George E. Miller wrote in a recent editorial (1), not so much “continuing” as “episodic.” Physicians submit to periodic doses in lectures, symposia, and workshops, often in exotic venues (2).

Ensuring true continuing medical education is a more elusive objective. Ideally, practicing physicians would regularly set aside time to keep abreast of new developments in their field. Printed media (books and journals) remain the primary means for reporting and disseminating new diagnostic and therapeutic knowledge (3-5). Little recent research, though, has been directed toward assessing the place that reading the literature occupies in continuing medical education. Such professional habits must become established in residency training, if not earlier. In recognition of the importance of developing the habit of reading during residency, Journal Club has long been a tradition of psychiatry residencies, though participation is not a formal requirement for an approved psychiatry residency. In addition, readings are prescribed as part of formal didactic curricula. Two surveys (6-8), 20 years apart, have reported on the composition of these didactic reading lists.

We were interested in the nature and extent of residents' own reading, and in determining how integral “keeping up” with the literature is to current training programs. To investigate these questions, we undertook a survey of residents in selected psychiatry residencies across the country.

METHOD

Eighteen psychiatry residency training programs were selected from the American Psy-
chiatric Association’s Directory of Psychiatry Residency Training Programs (9).

The selection was un systematic and nonrandom, with a selection bias favoring the academic residencies with which one of the authors was familiar. Our initial interest in conducting a survey grew out of our perennial difficulty in sustaining residency interest in an ongoing current-literature seminar or Journal Club at our institution. The bias toward academic residencies was more likely, in our estimation, to have selected residents who kept up with current literature, and to favor residency environments that promote good reading habits. Our results, therefore, probably overestimate the degree of reliance on current literature for the national sample of residencies.

Questionnaires were sent in a packet to the director of residency at each program with a request that he or she distribute them to the program’s residents. The two-sided questionnaire consisted of 22 questions, each with four to six multiple-choice answers and a write-in option when appropriate. The first section obtained information about the characteristics of the respondents and the residency programs. These items included age, sex, year of residency, career plans of the residents, number of overall residents in the program, and “orientation” of the residency. The next section focused on specific educational habits. Respondents were asked to itemize the journals they read regularly and to estimate the amount of time spent on psychiatric reading in the past week. Two more questions assessed frequency of use of the medical library and of computer searches, or requests for searches.

The next section assessed the role of psychiatric literature in the residency training program. Questions covered how often current literature was cited or referred to by residents and attending physicians; whether Journal Club was a regular feature of the residency, and if so, how frequently it was offered and how often did the respondent attend; how relevant residents felt the current literature was for day-to-day diagnosis and treatment of their patients; how residents rated their attending physician’s knowledge of current literature; preferred types of information sources (books, review articles, research reports, etc.); and residents’ primary motivation in “keeping up” with the literature.

In the final section, background information was elicited concerning how much and what kind of “general interest” reading the respondents engaged in and how satisfied they were with their residency education to date. Residents were also asked to provide reasons why they did not spend more time reading current literature.

Respondents were anonymous. Statistical significance was tested using a chi square for dichotomous variables and an ANOVA for continuous variables.

RESULTS

Surveys were mailed to 21 residency directors for distribution to residents. No responses were received from three residency programs, so we can only assume that they were never distributed. A total of 277 surveys were returned, for a response rate of at least 39%, assuming that all 714 available residency positions listed in the directory were filled, and that each resident actually received a copy of the survey. Table 1 lists the residencies surveyed, the total number of residency positions available, and the number of responses received per residency. No data are available on nonrespondents, and therefore the nature of the bias they introduced is a matter of speculation.

Sixty percent of the resident respondents were male, and the residents’ mean age was 31. First-year residents constituted 14% of respondents; second-year residents, 30%; third-year residents, 30%; and fourth-year residents, 26%. The orientation of the training program was described as “psychoanalytic-dynamic” by 26% of respondents, “biological” by 19%, and “eclectic” by 53%.
Forty-seven percent of respondents reported that their post-residency career plans were to establish a private practice with some academic affiliation, and 42% planned to establish an unaffiliated private clinical practice. Eight percent planned on full-time academic careers, and the remainder cited other plans, such as joining the military.

A total of 58% of residents reported spending less than one hour per week, and only 16% reported spending more than two hours per week, reading the current literature. The mean number of journals read regularly was 2.4; 19% of respondents reported reading no journals regularly and 30% reporting reading four or more journals on a regular basis.

Table 2 summarizes the top 10 journals

### Table 1. Rate of response to survey, by residency program

<table>
<thead>
<tr>
<th>Program</th>
<th>Positions Available</th>
<th>Responses Received</th>
<th>Rate of Response (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UCLA, Los Angeles</td>
<td>68</td>
<td>32</td>
<td>47</td>
</tr>
<tr>
<td>University of Colorado, Denver</td>
<td>65</td>
<td>32</td>
<td>49</td>
</tr>
<tr>
<td>St. Elizabeths, Washington, D.C.</td>
<td>34</td>
<td>6</td>
<td>18</td>
</tr>
<tr>
<td>Menninger, Topeka, Kansas</td>
<td>37</td>
<td>20</td>
<td>54</td>
</tr>
<tr>
<td>University of Kentucky, Lexington</td>
<td>24</td>
<td>5</td>
<td>21</td>
</tr>
<tr>
<td>McLean Hospital, Belmont, Mass.</td>
<td>27</td>
<td>23</td>
<td>35</td>
</tr>
<tr>
<td>Massachusetts Mental Health Center, Boston</td>
<td>38</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lafayette Clinic, Detroit</td>
<td>51</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>Dartmouth University, Hanover, N.H.</td>
<td>24</td>
<td>19</td>
<td>79</td>
</tr>
<tr>
<td>Washington University, St. Louis</td>
<td>44</td>
<td>21</td>
<td>48</td>
</tr>
<tr>
<td>New York Hospital-Cornell, New York City</td>
<td>44</td>
<td>41</td>
<td>26</td>
</tr>
<tr>
<td>NYU, Bellevue, New York City</td>
<td>72</td>
<td></td>
<td></td>
</tr>
<tr>
<td>St. Vincent's, New York City</td>
<td>39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New York Hospital, Westchester, White Plains, N.Y.</td>
<td>42</td>
<td>11</td>
<td>26</td>
</tr>
<tr>
<td>Institute of Pennsylvania Hospital, Philadelphia</td>
<td>24</td>
<td>14</td>
<td>58</td>
</tr>
<tr>
<td>Temple University, Philadelphia</td>
<td>40</td>
<td>7</td>
<td>18</td>
</tr>
<tr>
<td>University of Pennsylvania, Philadelphia</td>
<td>34</td>
<td>26</td>
<td>76</td>
</tr>
<tr>
<td>University of Utah, Salt Lake City</td>
<td>25</td>
<td>7</td>
<td>28</td>
</tr>
</tbody>
</table>

*Based on counts of postmarks except for programs in Philadelphia. For cities with more than one surveyed residency we were unable to specify which residency the respondent in that city was attending.

*Since all positions were not filled, the response rate reported is likely to be artificially low.

*Rate of response for programs in the same city.

### Table 2. Journals cited as the most regularly read by residents

<table>
<thead>
<tr>
<th>Name of Journal</th>
<th>Number of Residents Who Cited Journal</th>
<th>Percent of Residents Who Cited Journal</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Journal of Psychiatry</td>
<td>185</td>
<td>66.8</td>
</tr>
<tr>
<td>Archives of General Psychiatry</td>
<td>86</td>
<td>31.0</td>
</tr>
<tr>
<td>Journal of Clinical Psychiatry</td>
<td>49</td>
<td>17.7</td>
</tr>
<tr>
<td>Hospital and Community Psychiatry</td>
<td>48</td>
<td>17.3</td>
</tr>
<tr>
<td>Psychiatric Annals</td>
<td>47</td>
<td>17.0</td>
</tr>
<tr>
<td>Psychosomatics</td>
<td>42</td>
<td>15.2</td>
</tr>
<tr>
<td>New England Journal of Medicine</td>
<td>42</td>
<td>15.2</td>
</tr>
<tr>
<td>JAMA</td>
<td>30</td>
<td>10.8</td>
</tr>
<tr>
<td>Journal of Clinical Psychopharmacology</td>
<td>14</td>
<td>5.1</td>
</tr>
<tr>
<td>Psychiatric News</td>
<td>8</td>
<td>2.9</td>
</tr>
</tbody>
</table>
read regularly by respondents. In all, 64 different journals were cited by residents, 25 of which were cited at least twice. The favored journals were remarkably similar across program orientation. Review articles were preferred by 60% of respondents, primary research reports by 16%, book reviews by 14%, case reports by 9%, and miscellaneous by 2%.

Twenty-two percent of residents reported using the library on a weekly basis, while 59% used it rarely or only occasionally (once a month or less). Fifty-seven percent of residents had either never conducted (or requested) a computer search of the literature or could not remember doing so in the past three months. Seventeen percent of residents reported regular reliance on computer searches (one search a month).

Several questions attempted to assess how integral the current literature was to the academic climate of the residency. Eighty-three percent of respondents reported that current literature was cited only "sometimes" or "almost never" by residents. Sixty-eight percent reported that attending physicians cited the literature sometimes or almost never. Despite this assessment, 69% of residents felt that their attending physicians' knowledge of the literature was good to excellent. Forty-nine percent felt that reference to the literature was clinically relevant, rating it as "often helpful" or "essential." Journal Club was a regular feature of their residency for 59% of respondents. Thirty-six percent reported monthly Journal Club meetings, while 23% reported weekly or biweekly meetings. Fifty-two percent of residents in programs with regular Journal Club meetings reported that they "never" or only "occasionally" attended.

The most commonly cited reasons for keeping up with current literature were that it made clinical work more interesting (49%) and a sense of professional responsibility (32%). Lack of time was the most commonly cited reason for not doing more professional reading (69%), with lack of interest or motivation a distant second (9%). Residents in psychoanalytic programs spent significantly less time reading current literature; 71% reported spending less than one hour a week reading compared to 54% of residents in biological and eclectic programs ($\chi^2=7.47$, df=2, p<.05). Also, though they were still a minority, more residents in psychoanalytic programs (23%) reported relying on books as sources of psychiatric information than residents in nonpsychoanalytic programs (11%) ($\chi^2=9.30$, df=2, p<.01).

There were also nonsignificant trends for residents with academic career plans to spend more time reading current literature, using the library, and relying on computer searches. These trends achieved significance only in that academically inclined residents reported keeping abreast of a greater number of journals (a mean of 3.2) compared with residents with no academic career plans (a mean of 1.9) (F=10.3, df=2,271, p<.01).

First-year residents, as might be expected, read significantly less than second-, third-, or fourth-year residents. Seventy-nine percent reported spending less than one hour per week on academic reading, compared with 61%, 57%, and 46% of second-, third-, and fourth-year residents, respectively ($\chi^2=12.2$, df=3, p<.01). When first-year residents were excluded from the analysis, the trend toward more reading in the later residency years was no longer significant ($\chi^2=3.92$, df=2). And though one might have expected time pressures to ease between years 1 and 4 of residency, lack of time was cited as a deterrent to reading with equal frequency throughout all residency years.

Respondents engaged in general interest reading at a higher rate than they did professional reading. Sixty-four percent reported spending more than two hours a week on leisure reading. Residents in different types of programs spent similar amounts of time each week in leisure reading.

Forty-three percent of residents reported feeling very satisfied with their resi-
dency experience, and another 39% reported feeling somewhat satisfied. There was a trend ($\chi^2=5.34, df=2, p<.10$) for residents in biological programs to be less satisfied with their residency.

To better assess significant correlates of high and low levels of reading, a composite index was created by combining the answers to three questions to create a single score. The three questions inquired about number of journals read regularly, time spent each week reading journals, and frequency of library use. A number from 0 to 4 was assigned to the multiple choice answer to each question, and the three numbers were summed to create a readership score for each resident. Respondents with a readership score $\geq 8$ were called "high readers" ($n=70$); those whose score was $\leq 2$ were called "low readers" ($n=51$).

No significant difference was found in the program orientation of high and low readers. Residents with career plans that included part- or full-time teaching or research were significantly more likely to be high readers (69%) than were those planning to enter clinical private practice (45%) ($\chi^2=6.86, df=1, p<.01$). Finally, there was a significant correlation between a high readership score and increased satisfaction with one's residency education, with 51% of high readers reporting marked satisfaction with their residency education, compared with only 30% of low readers ($\chi^2=5.48, df=1, p<.02$). If the criteria for low readership was relaxed to a score of 3 or 4, 30 and 63 more respondents, respectively, were added to the total number of low readers, but there was no change in the significance of the results.

**DISCUSSION**

The results of the current survey indicate that the majority of psychiatric residents spend little time reading independently. Fifty-eight percent reported spending less than one hour per week keeping up with the current literature. Only 22% of residents reported regular weekly use of the library. Only 17% of residents relied on computer searches of the literature with any degree of regularity. Taken together, these findings indicate that little time appears to be devoted to autonomous educational activities. Assuming there is some connection between behaviors learned in residency and those practiced post-residency, these findings are disheartening.

The results further suggest that the current psychiatric literature is not integral to the "academic climate" of most residencies. Current literature was cited only infrequently by attending physicians, and even less frequently by residents. Only 59% of programs surveyed sponsored regularly scheduled Journal Club meetings. Of those programs that did have Journal Clubs, only about half of the residents reported regularly attending.

The results of the current survey need to be interpreted with caution for two reasons. First, the response rate (39%) was relatively low. We have no information on the professional or demographic features of the nonrespondents or how their use of the literature compared to that of respondents. Second, the selection of residencies surveyed was nonrandom, which resulted in academic residencies' being over-represented. We assume that the bias introduced by selection methods would result in an overestimation of the amount of reading done by residents, not an underestimation. But this is only speculation, and both the low response rate and the nonrandom selection of programs severely limit our confidence in the generalizability of the results.

On average, residents reported keeping abreast of two or three journals. The choice of journals residents read regularly (Table 2) reflects trends noted in the past decade toward greater eclecticism and medicalization of the field of psychiatry. The *American Journal of Psychiatry* and the *Archives of General Psychiatry* (especially the former) dominated the field. Nearly 67% of residents read one
or both of these journals. No other journal claimed even a 20% readership. No journals with a primary psychoanalytic, psychotherapy, or social psychiatry focus appeared on the list, though two medical journals did. Most journals were of general psychiatric interest, though they tended to have a biological perspective on diagnostic and treatment issues. The citation of 25 different journals by at least two respondents was an index of the eclectic range of professional interests, and also a measure of the bewildering array of information sources available.

At least half of the top 10 journals are often distributed free to residents, or come as part of membership in a national medical organization. This leads us to wonder whether a useful educational strategy might be to subsidize subscriptions to two or three journals during the residency years. Additionally, since library use and computer searches of medical databases are so infrequent, another educational strategy might be for residency programs to subsidize computer searches and make terminals available at clinical sites. It could be argued that provision of such educational computer access should be as essential to a residency program of the 1990s as provision of a library is now.

The identification of factors that would promote good professional reading habits is an important task both for residency education and for continuing medical education. The relatively low level of independent educational activity we report raises more questions than it answers. We suspect that our findings of low readership are not due solely to methodologic artifact since the survey was clearly skewed toward academic programs. The sample sites chosen were more likely biased in a way that would overestimate the time spent on reading and related activities.

What characteristics, then, contribute to high and low readership? The personal and professional qualities of the residents likely interact with features of the residency program to yield a professional identity in which keeping up with the literature is an important component. How to select residents possessing these personal qualities is the recruitment equivalent of the riddle of the sphinx. Our results suggest that interest in biological psychiatry and in an academic career are both correlated with a greater likelihood of keeping up with current literature. But this is perhaps self-evident and merely begs the question of how such educational interests are engendered.

In terms of program features, we suspect that few residency education programs have been explicitly designed with the central objective of equipping the resident with information-gathering skills that will permit continuing medical education after the residency ends. On the contrary, most didactic coursework, even in a postgraduate medical setting such as a residency, does not model or encourage these information-gathering skills. The dominant educational stance in such lecture-seminar settings all too easily becomes one of passivity. Furthermore, research suggests (10) that reference to the literature is one of the least observed teaching behaviors during clinical supervision, even on inpatient medical services. Even when reading is assigned, there is evidence (11) that it may be erratically assimilated unless information objectives are explicitly defined and written answers required.

The information-seeking skills of physicians have been found to be very limited (12). Such skills can be taught and encouraged (11,13), but the reinforcement of continued application is needed to make them an established part of clinical practice. The current survey completely neglected these qualitative aspects of information gathering. Only a few crude quantitative measures were indexed. But even by these measures the skills in question are not being practiced and consolidated, if they have ever been acquired in the first place.

In conclusion, we believe that the role of residency education is not only to provide
the resident-in-training with specific clinical skills, but also to promote the educational habits needed to continue his or her education throughout a professional career. Judging by the results of the current survey, we in the field of psychiatry residency education must wonder if we have earned a passing grade.

References

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A Method of Teaching and Evaluating Psychiatric Case Formulation

Colin A. Ross, M.D., F.R.C.P.(C)
Pierre Leichner, M.D., F.R.C.P.(C)
Manuel Matas, M.D., F.R.C.P.(C)
Donna Anderson, M.D., F.R.C.P.(C)

Formulation is a poorly defined, core clinical skill in psychiatry. The authors present a method of teaching and evaluating biopsychosocial formulation of cases and introduce a reliable formulation marking scheme for scoring the comprehensiveness of a formulation. This method has been well received by four successive groups of residents, does not involve excessive reading or esoteric terminology, can be used within the time constraints of clinical practice, is flexible, and can be used for any psychiatric patient.

Formulation is a poorly defined, core clinical skill in psychiatry. The literature on formulation is sparse (1), and some of it is not readily available to psychiatrists practicing in the United States (2–8). The expectations for formulation on specialty oral examinations are not uniform (9,10). There is a growing body of opinion, however, that formulation should be done within a biopsychosocial model (11–19).

Several authors agree that a formulation consists of a synthesis of a wide range of longitudinal data about a patient (1,12, 18,19). The formulation is to take into account those features of the patient that are not accounted for by a DSM-III-R diagnosis, but which must be considered in the treatment plan. Some authors argue that the formulation is distinct from the diagnosis, differential diagnosis, treatment plan, and prognosis (1), while others favor a more comprehensive view of formulation that includes these items (19). The point of consensus is that a more comprehensive systematic account of the patient is required than can be provided by a DSM-III-R multiaxial diagnosis. This would be the case even if a sixth axis for psychodynamics were added in DSM-IV (20).

In the context of this controversy about the definition, content, and purpose of a psychiatric case formulation, this article presents a method of teaching and evaluating formulation.

DEVELOPMENT OF THE TEACHING PACKAGE

The teaching package described here was developed over a period of four years from 1983 to 1987. Initially, we conducted a review of the literature and sampled the opinions concerning formulation of 97 residency...
program directors, Royal College oral examiners, and departmental chairpersons in Canada (1). As we systematized the format for organizing and presenting a formulation, we devised a teaching package, which included a scheme for rating formulations (the marking scheme).

Our teaching package consists of a folder distributed to first-year residents. Its contents include the following:

1. a format for case presentations, which is a list of standard headings for a case presentation, including identifying data, entrance complaint, and history of a present illness;
2. references on formulation;
3. the formulation marking scheme (Table 1);
4. guidelines for the formulation marking scheme (Table 2), a one-page hand-

<table>
<thead>
<tr>
<th>TABLE 1. Formulation marking scheme</th>
<th>Inter-rater</th>
<th>p*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Reliability</td>
<td></td>
</tr>
<tr>
<td>1. The formulation begins with an opening statement including: (10 marks)</td>
<td>1.00</td>
<td>-</td>
</tr>
<tr>
<td>a. basic identifying data</td>
<td>1.00</td>
<td>-</td>
</tr>
<tr>
<td>i. name or initials</td>
<td>.05</td>
<td>.01</td>
</tr>
<tr>
<td>ii. age</td>
<td>.74</td>
<td>.01</td>
</tr>
<tr>
<td>iii. sex</td>
<td>.64</td>
<td>.05</td>
</tr>
<tr>
<td>iv. marital status</td>
<td>.82</td>
<td>.01</td>
</tr>
<tr>
<td>v. social status</td>
<td>.82</td>
<td>.01</td>
</tr>
<tr>
<td>0—absent 2—present Total</td>
<td>.99</td>
<td>.01</td>
</tr>
<tr>
<td>b. the problem to be formulated</td>
<td>.99</td>
<td>.01</td>
</tr>
<tr>
<td>0—absent 10—present Total</td>
<td>.99</td>
<td>.01</td>
</tr>
<tr>
<td>2. The formulation contains specific mention of the following, if only the major negative findings. (30 marks)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. biological factors</td>
<td>.74</td>
<td>.01</td>
</tr>
<tr>
<td>b. psychological factors</td>
<td>.64</td>
<td>.05</td>
</tr>
<tr>
<td>c. sociocultural factors</td>
<td>.82</td>
<td>.01</td>
</tr>
<tr>
<td>0—absent 5—present, not differentiated into predisposing, perpetuating, precipitating</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10—present, differentiated into at least two of predisposing, perpetuating, precipitating</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>.82</td>
<td>.01</td>
</tr>
<tr>
<td>3. The following are touched on in the formulation: (40 marks)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. symptoms</td>
<td>.57</td>
<td>NS</td>
</tr>
<tr>
<td>b. impulses</td>
<td>.76</td>
<td>.01</td>
</tr>
<tr>
<td>c. themes/recurrent patterns/basic life stance</td>
<td>.18</td>
<td>NS</td>
</tr>
<tr>
<td>d. strengths</td>
<td>.79</td>
<td>.01</td>
</tr>
<tr>
<td>e. how patient relates to interviewer</td>
<td>.57</td>
<td>NS</td>
</tr>
<tr>
<td>f. biological factors</td>
<td>.86</td>
<td>.01</td>
</tr>
<tr>
<td>g. mental status</td>
<td>.72</td>
<td>.05</td>
</tr>
<tr>
<td>h. major life events</td>
<td>.67</td>
<td>.05</td>
</tr>
<tr>
<td>i. developmental task</td>
<td>.42</td>
<td>NS</td>
</tr>
<tr>
<td>j. defenses</td>
<td>.84</td>
<td>.01</td>
</tr>
<tr>
<td>0—absent 4—present Total</td>
<td>.80</td>
<td>.01</td>
</tr>
<tr>
<td>4. The formulation ends with a summarizing statement which is related to the opening statement (10 marks)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0—absent 10—present Total</td>
<td>.71</td>
<td>.05</td>
</tr>
<tr>
<td>Overall Total</td>
<td>.85</td>
<td>.01</td>
</tr>
</tbody>
</table>

*NS=not significant.
TABLE 2. Guidelines for formulation marking scheme

1. (a) This information must be contained in the first paragraph to be scored. Only 0 or 2 are possible (you cannot score 1). Social status consists of the name of the person’s job, which may include “unemployed” or “housewife.”

(b) The problem to be formulated need not be stated in great detail. It may resemble the entrance complaint and could consist of a statement that the patient was admitted with a relapse of a specified chronic disorder. The only possible scores are 0 or 10.

2. The terms biological, psychological, and social need not appear in the formulation for full marks to be given, as long as it is clear that they are being discussed. Likewise, the words predisposing, perpetuating, and precipitating need not appear. To score 10 for psychological factors, for instance, all that is required is that psychological factors from the distant past and the recent past be differentiated (e.g., abandoned by father at age 4, abandoned by husband at age 32, defense of denial used both times). The only possible scores are 0, 5 or 10.

3. In this section, as above, the terms “mental status,” “developmental task,” “impulse” need not be specifically mentioned in order to get full marks. All that is required is that they be discussed (e.g., “the patient was suicidal” may be an adequate discussion of impulse). The discussion should not be lengthy. An adequate discussion of mental status in the formulation of a recurrent unipolar depression, for instance, might consist of no more than a statement that the patient was depressed. Four marks could be awarded for discussion of developmental task if the patient is an anxious 18-year-old woman and it is stated that she is having difficulty separating from her family of origin. The only possible scores are 0 or 4.

4. The summarizing statement need not begin “in summary,” “to conclude,” or with a similar announcement. It should briefly relate what has been done in the body of the formulation to the initial problem to be formulated. Its purpose is to show the reader or listener that the goal of the formulation, which is to account for the problem, has been achieved. An example might be, “Because of these psychosocial forces, the patient experienced a relapse of the chronic illness to which he is biologically predisposed.” The only possible scores are 0 or 10.

5. guidelines for preliminary notes for a formulation (Table 3), a one-page description of the main headings and subcategories to be considered in preparing a formulation; and

6. guidelines for writing a formulation (Table 4), a one-page handout that standardizes the expectations for organizing a written formulation in essay form.

The instructions in these components correspond directly to the marking scheme.

RELIABILITY TESTING OF THE MARKING SCHEME

The marking scheme was tested for its inter-rater reliability four times, with modifications between the testings. On each occasion 10 formulations were scored independently by four different raters. The final draft of the marking scheme was tested as follows: a group of 10 first-year residents watched a videotape of a one-hour psychiatric assessment of a 57-year-old manic-depressive woman by a psychiatrist not involved in the formulation project. Immediately following their viewing of the tape, the 10 residents spent up to an hour devising a written formulation of the case. They had received no formal teaching on formulation since completion of medical school, they were in the second month of their residency, and they were simply given written instructions to “Please write a formulation of the case you have just seen.”

The 10 formulations were then photocopied with names removed, coded A–J, and presented in a different random order for each of the four independent raters to mark
using the marking scheme. Raters were teaching psychiatrists in our department. An inter-rater agreement was calculated for each subitem and for the overall score using Winer’s method (21).

The formulation marking scheme demonstrated a high degree of reliability for its overall score (r=.85, p<.01) and most of its subitems. Only four of the 23 subitems in the marking scheme did not have significant inter-rater agreement, as shown in Table 1. Items were scored as either present or absent and needed to be mentioned only briefly to be rated as present.

DISCUSSION

Galasso illustrates the necessity for clinical care, peer review, accreditation, and third-party payment of having a systematic, individualized care plan on every psychiatric patient’s chart (22). We have defined formulation operationally and conceptualized it as the bridge between diagnosis and treatment plan. As Galasso argues, every patient with a given diagnosis does not require an identical treatment plan. Our formulation marking scheme provides a reliable method of evaluating the quality of the formulation, an essential aspect of treatment planning.

Formulation can also be defined more globally as incorporating differential diagnosis, diagnosis, what we call formulation, treatment plan, and prognosis. We favor the more narrow definition because it emphasizes the function of this synthetic, analytical process and makes it possible to develop a uniform definition of formulation, which in turn makes valid and reliable assessment of formulation possible.

There is a body of literature on purely psychodynamic formulation that is essential to the teaching of psychodynamic psychiatry (23-27). The problem in this literature is that the methods of formulation are either too comprehensive and exhaustive for daily

<table>
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<tr>
<th>TABLE 3. Guidelines for preliminary notes for a formulation</th>
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<td>A formulation is an integrated, conceptually coherent account of the patient’s problem. It leads to a treatment plan and prognosis. The DSM-III-R diagnosis is made separately. The formulation must include an assessment of the following factors:</td>
</tr>
<tr>
<td>1. Biological</td>
</tr>
<tr>
<td>2. Psychological</td>
</tr>
<tr>
<td>3. Social and Cultural</td>
</tr>
<tr>
<td>Each of these is subdivided into predisposing, perpetuating, and precipitating factors.</td>
</tr>
<tr>
<td>Before actually writing the formulation, notes are made in the following sequence:</td>
</tr>
<tr>
<td>1. Identify what it is you wish to formulate in two or three sentences. This may include:</td>
</tr>
<tr>
<td>a. Symptoms</td>
</tr>
<tr>
<td>b. Impulse—this may be readily apparent (e.g., uncontrollable rage, suicidal impulses, perverse sexual drive). If not readily apparent, leave discussion of impulse till later.</td>
</tr>
<tr>
<td>c. Theme—recurrent conflict, repeated pattern, or basic life stance (e.g., inadequacy, repeated rejection, always taking a certain role in relationships). The focus might be on the entrance complaint.</td>
</tr>
<tr>
<td>2. Decide what major items from the history, mental status, laboratory results, collateral history, physical exam, psychological tests, and family interview you must account for. List these. Include any other items you think relevant. The list may include:</td>
</tr>
<tr>
<td>a. The SIT items from 1.</td>
</tr>
<tr>
<td>b. Strengths—the patient’s adaptive and characterological strengths.</td>
</tr>
<tr>
<td>c. Interview—how the patient relates to the interviewer (transference in the broad, general sense).</td>
</tr>
<tr>
<td>d. Biological factors.</td>
</tr>
<tr>
<td>e. Mental Status—any gross abnormality.</td>
</tr>
<tr>
<td>f. Events—major life events/situations (e.g., adoption, divorce, overdoses, abandonment, specific traumatic experiences).</td>
</tr>
<tr>
<td>g. Defenses—particularly any dominant, unusual, or highly specific defenses.</td>
</tr>
<tr>
<td>h. Developmental task at present life stage.</td>
</tr>
<tr>
<td>i. Dreams, coincidences, memories (particularly earliest memories), or any other item that strikes you as significant.</td>
</tr>
<tr>
<td>3. Once you have made these notes, you have the basic items that must be woven together into the formulation.</td>
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</table>
clinical or examination use, or too narrowly focused on intrapsychic factors. The same can be said of models of formulation based on a single school of thought such as behavioral (28) or social (29) case formulations. As do 74% of psychiatrists and 77.1% of residents in Canada, we believe that formulation should be done within a broad-based biopsychosocial model (1). Biopsychosocial models of formulation have been presented by Canadian (12,17,18) and American (19) investigators and have been shown to be useful teaching guides (14-16).

We teach a two-hour seminar to introduce new residents to our model of formulation. The first hour consists of a review of formulation that proceeds page by page through the teaching package. Each section of the package is discussed, the rationale for its inclusion is presented, and its relationship to the rest of the package is outlined. The global purpose and utility of formulation are also discussed. The guidelines included in the teaching package are brief in order to increase their utility for overburdened trainees. The package is based on the assumption that residents will learn the details of biology, the life cycle, analysis of transference, and so on elsewhere.

In the second hour of the seminar, a resident presents a current case, which may be from the inpatient or outpatient service, taking about 15 minutes. While the case is being presented, one of us (C.A.R.) takes notes and asks for clarification of certain items. He reviews these notes and his thoughts about the case in detail following the structure of the guidelines for preliminary notes for a formulation. Having presented his rationale for selecting the major items for formulation, he then presents a formulation of the case using the guidelines for writing a formulation, which are also used in spoken formulations. Having done this, he reviews how his formulation accounts for the main features of the case and

<table>
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<th>TABLE 4. Guidelines for writing a formulation</th>
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| 1. The formulation should be written in essay form. It begins with identification of the patient and statement of the problem to be formulated in two or three sentences. This opening statement should be simple and straightforward.
| 2. It is often easiest to deal with biological factors first. This usually involves the family psychiatric history and obstetric, medical, traumatic, and other factors including noncompliance with psychiatric medications. It is necessary to mention that there are no apparent predisposing, perpetuating, or precipitating biological factors if this is so. A simple statement of the importance of biological factors in the case can be made.
| 3. Psychosocial factors are often best dealt with together, as they are often intertwined. When certain factors are clearly social, however, they should be specifically described as social factors. The same is true for cultural influences.
| 4. The closing statement should be a brief, simple summary of one or two sentences related to the initial problem to be formulated. The closing statement indicates that you have a clear grasp of your formulation.
| 5. Following the guidelines, mentioning something under each heading in the marking scheme, and tying it together in a simple, commonsense way will result in a thorough formulation and earn you a good score. The following are some tips on how to organize your thinking when looking at your notes and preparing to write the formulation:
  a. Examine any particularly striking features of the case and use this as a starting point to generate hypotheses about the patient.
  b. Start with the parents and the patient's relationship with them. Then see how this pattern repeats itself and what predictions it leads to.
  c. Anxiety, depression, poor coping, and low self-esteem might be accounted for in general terms in a brief statement (e.g., separation, anxiety, depression resulting from introjected anger, a daughter acting out a mother's unacceptable impulses). Such brief references to theory should involve a minimum of jargon.
  d. Base your formulation on the assumption that a plausible, commonsense understanding of the patient is possible. Avoid a formulation that is too clever or speculative. |
takes the necessary factors into account.

Our teaching package has been well received by four successive groups of residents, does not involve extensive reading or esoteric terminology, could be used in specialty oral examinations or under the time constraints of clinical practice, is flexible, and can be used for any psychiatric patient. Since no other reliable method for the teaching and evaluation of formulation exists in the literature, we were unable to compare the formulation marking scheme to another instrument. At present our residents are not receiving formal evaluations of their formulations using the formulation marking scheme. However, we are planning to institute a second two-hour formulation seminar in which residents formulate a case they have seen on videotape and then receive written feedback based on the formulation marking scheme.

Future studies of this method of teaching and evaluating formulation will involve attempts to demonstrate that it distinguishes between candidates who pass and fail their specialty oral examinations, and that it can detect improvements in the quality of formulations resulting from exposure to the teaching package.

References

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dynamic formulation. Psychiatry 1987; 50:126–141
Psychiatry Clerkship Sites:
Factors That Make a Difference in Student Performance

Deborah A. Miller, M.S.
Douglas A. Puryear, M.D.
John Z. Sadler, M.D.

Using correlation ratios and analysis of variance, several potential variability factors in student clerkship performance were examined. Comparisons are made between clerkship clinical sites for scores on written work, clinical work, and examination scores, and for factors such as the amount of patient and faculty contact. A small amount of grade variance is due to clerkship site. Correlations between scores on clinical skills and examination scores were low, consistent with the idea that grades of clinical performance and performance on examinations measure different dimensions of student ability. The relevance for clerkship planning and grading equity is discussed.

The fairness and validity of clinical clerkship grades are important aspects of the educational process. This grading usually includes both subjective ratings (clinical performance skills) and objective measures (written examinations). Furthermore, the students may be distributed among different clinical sites, where they receive subjective grades from different faculty, and receive different educational experiences. However, very little research has been done on the reliability of faculty ratings from different clerkship sites, or on the correlation between the students' performance on written examinations and measures of clinical skills.

Delk et al. (1) examined the topic of inter-rater reliability and addressed the issue of fairness in ratings by different clerkship coordinators. Agreeing with his findings, some medical schools apply a handicap system, adjusting students' original scores to counterbalance variability in faculty raters. Jacobson et al. (2) found no statistically significant differences in performance scores among students at different sites during surgery clerkships. Harsch and Young (3) found that students in both inpatient and consultation psychiatry clerkships showed an increase in objective knowledge and an increase in self-ratings of psychiatric skills. Melchiode et al. (4) found that a new training site, the psychiatric emergency room, met the behavioral objectives of the clerkship as well as other, more traditional, sites.

Other studies have focused on the different skills involved in clinical rotations, usually dividing them into cognitive and clinical abilities. Goldney and McFarlane (5) sug-
gested a more complicated model with at least three different skills used in a psychiatric clerkship: the abilities to observe psychopathology, to engage in interpersonal interaction and elicit information, and to acquire and use academic knowledge. Thus, a student might perform and score quite differently in these areas. Researchers such as Musher et al. (6) have determined that objective and subjective measures often correlate poorly and thus appear to measure distinctly different skills.

The University of Texas Southwestern Medical Center at Dallas has an average student class of 200 with approximately 15 third-year medical students on each four-week psychiatric clerkship rotation. Students rank their preference for their clerkship site from the following choices: a county inpatient unit, a psychiatric emergency room, a consult-liaison service, a V.A. inpatient hospital unit, or two private inpatient hospitals. Students’ site requests are honored whenever possible; those students who cannot receive the site they requested are assigned randomly to a site.

The clerkship uses three equally weighted areas in awarding grades: the written work, the clinical performance, and the final examination. The written work includes a comprehensive case study of a patient along with routine patient work-ups and chart notes appropriate to the clinical service site. The clinical performance grade is made up of five components: work and patient responsibility, motivation for learning, knowledge base and its implementation in the clinical context, interviewing skills, and interpersonal skills. The written work and clinical performance grades are awarded by the clinical faculty coordinator for each site. The primarily multiple-choice final examination, which is given to all students, is developed by central departmental faculty members and consists of questions based on the required-attendance weekly lectures. Students’ grades are not adjusted for site or other factors; no handicapping system is currently used.

The department has been aware that the students’ clinical experiences are quite different from site to site. There is variation in the amount of time spent; the amount and type of work performed; the amount of exposure to patients, faculty, and residents; clinical or didactic emphasis; and other factors. Some of these differences are general faculty knowledge, and no data have been collected for documentation; other differences have been measured by student evaluations at the completion of the clerkship. These differences, then, raise a question regarding the validity and fairness of the grading system.

The authors addressed four educational aspects of the clerkship: 1) Can significant differences be found in students’ written, clinical performance, or examination grades between the various clerkship sites? 2) Is there a correlation between test scores and other educational factors such as the number of patients seen or the amount of time students spend with faculty attendings and residents? 3) Is there a correlation between the written, clinical performance, and examination performance measures? 4) Is handicapping to compensate for between-site differences a reasonable and useful procedure to enhance fairness in clerkship grading? The authors hoped to find clues to the importance of a wide number of clerkship variables regarding student learning to provide an empirical basis for revision of clerkship grading procedures.

METHODS

Clinical and test grades of 437 student psychiatry clerks between 1986 and 1988 were examined. All six clerkship sites were included. The grades were sorted by clerkship site. Means, standard deviations, correlation coefficients, and tests of statistical significance were calculated.

Besides evaluating the importance of clinical clerkship site on student perfor-
performance, the authors investigated variables that may influence outcome across sites. Because of a recent change in the reporting of patients seen by the students, this aspect of the study included only the most recent 101 students from the larger sample of 437. The variables used in this aspect of the study included the number of patients assigned to the student, the number of patient write-ups completed by the student, the number of patients discussed with the student, the number of student interviews evaluated by the faculty, the number of hours the student spent with the attending, and the number of hours that students spent with residents. These estimates were student-reported on an anonymous evaluation form completed at the end of the rotation. The student estimates were sorted by site and a mean score was determined. Mean examination scores for each site were also compiled. The faculty and clinical contact variables were tested for correlation with exam scores and with each other.

The authors also collected data on the students' evaluation or assessment of the clerkship experience. The authors wondered how the students' perceptions of their clerkships differed across sites. Comparison of these site differences with those in grading and faculty-student contact would round out the assessment of the sites. The authors collected student assessments of the clerkship from the most recent 101 students. Students were asked to rate their clerkship regarding its enhancement of the following skills: interview skills, skill in psychiatric diagnosis, comfort with psychiatric patients, skill in psychiatric patient management, skill in prescribing psychopharmacologic agents, skill in treatment planning, and knowledge of managing difficult non-psychiatric patients. Students ranked enhancement of these seven dimensions on a scale from 1 (strongly disagree) to 5 (strongly agree).

RESULTS

An analysis of variance demonstrated that students made significantly different grades in written work, clinical performance, and exam areas depending on clerkship sites (Table 1). Because of heteroscedasticity (the variances in the groups are not equal to one another), Welch's approximation was used. Results indicated significant differences between the means of each site; \( p = .005 \) for the written work, \( p < .001 \) for the clinical performance category, and \( p = .053 \) for the written examination. Although a significant difference was found between the sites in all three grades, the differences were small. Only 4% of grade variance in the written category, 6% of grade variance in the clinical performance category, and 3% of grade variance in the examination scores were attributed to training site. This suggests that no clerkship site

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</tr>
</thead>
<tbody>
<tr>
<td>Written work examination</td>
<td>91.01±3.42</td>
<td>90.89±3.81</td>
<td>91.28±2.74</td>
<td>90.00±3.31</td>
<td>89.40±4.46</td>
<td>89.58±3.03</td>
<td>0.005</td>
<td>3.49</td>
<td>5,136.4</td>
</tr>
<tr>
<td>Clinical work</td>
<td>89.64±3.69</td>
<td>90.69±3.21</td>
<td>90.31±2.10</td>
<td>88.80±3.20</td>
<td>88.08±4.48</td>
<td>89.39±2.88</td>
<td>&lt;.001</td>
<td>5.27</td>
<td>5,135.4</td>
</tr>
<tr>
<td>Written examination</td>
<td>85.12±5.32</td>
<td>83.93±6.67</td>
<td>85.54±5.49</td>
<td>86.65±5.52</td>
<td>84.82±6.05</td>
<td>87.01±5.52</td>
<td>0.053</td>
<td>2.25</td>
<td>5,137.4</td>
</tr>
</tbody>
</table>

*Data are mean±SD.
provided any large advantage over another regarding student grades. Further analysis by a Newman-Keuls multiple comparison (a conservative post-hoc analysis), demonstrated significant differences between the means of any two sites only in the clinical performance category (Table 2). This may indicate that some clerkship sites are somewhat harsher in grading policy in the clinical performance area, not a surprising finding given the ambiguous nature of these assessments.

Table 3 summarizes the correlation coefficients between the three grades from each site. These reflect the relationship between clerkship sites for any two of the three grade categories: written versus clinical performance, written versus examination, and clinical performance versus examination. All sites had significant correlations (at the .05 level) between the written and clinical performance measures, ranging from a low of .53 to a high of .78. Four of the sites had significant correlations between the written grade and examination scores in the medium range from .26 to .59. Only the emergency room site and one inpatient site had significant correlations, of .39 and .28 respectively.

TABLE 2. Multiple comparisons of training sites in the subjective evaluation of clinical performance, at the University of Texas Southwestern Medical School, 1986–1988

<table>
<thead>
<tr>
<th>Group Comparisons</th>
<th>Q</th>
<th>Critical Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency room vs. private inpatient A</td>
<td>5.031</td>
<td>4.042</td>
</tr>
<tr>
<td>Emergency room vs. consultation liaison</td>
<td>5.115</td>
<td>3.869</td>
</tr>
<tr>
<td>Private inpatient A vs. private inpatient B</td>
<td>4.154</td>
<td>3.869</td>
</tr>
<tr>
<td>Private inpatient B vs. consultation liaison</td>
<td>3.784</td>
<td>3.642</td>
</tr>
<tr>
<td>County inpatient vs. private inpatient A</td>
<td>4.623</td>
<td>3.642</td>
</tr>
<tr>
<td>County inpatient vs. consultation liaison</td>
<td>4.777</td>
<td>3.322</td>
</tr>
</tbody>
</table>

Note: Results are significant at the .05 level df=5,431.

TABLE 3. Correlation coefficients of performance measures in six psychiatry clerkship sites, at the University of Texas Southwestern Medical School, 1986–1988

<table>
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<tr>
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<tbody>
<tr>
<td>Written vs. clinical</td>
<td>0.64*</td>
<td>0.78*</td>
<td>0.53*</td>
<td>0.64*</td>
<td>0.85*</td>
</tr>
<tr>
<td>Written vs. examination</td>
<td>0.17*</td>
<td>0.32*</td>
<td>0.05</td>
<td>0.26*</td>
<td>0.27</td>
</tr>
<tr>
<td>Clinical vs. examination</td>
<td>0.02</td>
<td>0.39*</td>
<td>0.11</td>
<td>0.13</td>
<td>0.19</td>
</tr>
</tbody>
</table>

* p<.05.


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</thead>
<tbody>
<tr>
<td>Patients assigned</td>
<td>11.50</td>
<td>41.50</td>
<td>5.11</td>
<td>11.50</td>
<td>1.25</td>
</tr>
<tr>
<td>Patient write-ups</td>
<td>10.70</td>
<td>43.80</td>
<td>4.33</td>
<td>8.64</td>
<td>1.16</td>
</tr>
<tr>
<td>Write-ups discussed</td>
<td>5.58</td>
<td>28.90</td>
<td>2.44</td>
<td>7.00</td>
<td>0.75</td>
</tr>
<tr>
<td>Interviews observed</td>
<td>3.18</td>
<td>6.97</td>
<td>5.16</td>
<td>2.84</td>
<td>0.83</td>
</tr>
<tr>
<td>Hours with attending</td>
<td>7.23</td>
<td>7.61</td>
<td>2.27</td>
<td>8.09</td>
<td>3.33</td>
</tr>
<tr>
<td>Hours with resident</td>
<td>7.54</td>
<td>9.58</td>
<td>4.19</td>
<td>12.40</td>
<td>1.00</td>
</tr>
<tr>
<td>Mean test score</td>
<td>84.63</td>
<td>80.74</td>
<td>83.29</td>
<td>85.02</td>
<td>90.43</td>
</tr>
</tbody>
</table>
tively, between the clinical performance measures and the written examination. The other correlations for this category were too low for significance, ranging from .02 to .19. These findings as a whole suggest that examinations measure different skills than the clinical performance and written scores or, possibly, the effect of different graders.

Table 4 illustrates the mean scores by site from the second part of the study, the student-reported data. This represents a subset of the 101 students from the original 437 who took the psychiatry clerkship from October 1987 to April 1988. Because the evaluations completed by the students can only be identified by site, correlation coefficients were calculated using these mean scores with the results reported in Table 5. Correlations between the number of patients assigned, written up, write-ups discussed, and interviews observed proved significant at the .05 level. This suggests the more patients assigned, the greater the teaching exposure. There was also a high correlation between the number of hours spent by the attending and resident with the student.

As faculty contact with students varies, so does resident contact with students. Significant negative correlations were found between mean written examination scores and all other categories. This result may indicate that the more patients a student sees, the less time that remains for learning test-related material.

Table 6 summarizes the 101 students' assessment of their clerkship experience. The table includes 103 responses because two students failed and subsequently repeated the clerkship. A Kruskal-Wallis analysis of variance indicates a significant effect of site in three of seven categories (p<.05). This suggests a difference between the sites in how students felt about enhancing their interview skills, increasing their skills in psychiatric treatment planning, and increasing their knowledge of appropriate interventions. Students tend to rate those sites where they see fewer patients as not improving these skills in comparison to students on busier sites.

**DISCUSSION**

The data collection and analysis methods used in this study are useful for monitoring fairness in clerkship grading. Monitoring the between-site differences in grading as well as differences in teaching activities across site serves to alert faculty to potential inequities, so that these factors can be discussed at the monthly medical student education committee meeting. The computerized data management used by the department simplifies what would be an enormous task if done by hand.

The grades on written, clinical perfor-

---

**TABLE 5.** Correlation coefficients of mean estimates of patient care categories and test scores from six clerkship sites of 101 students taking psychiatric clerkships, at the University of Texas Southwestern Medical School, 1987–1988

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>0.99</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>0.99</td>
<td>0.99</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>0.81</td>
<td>0.81</td>
<td>0.79</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>0.66</td>
<td>0.61</td>
<td>0.62</td>
<td>0.35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>0.63</td>
<td>0.56</td>
<td>0.58</td>
<td>0.54</td>
<td>0.90</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>-0.78</td>
<td>-0.76</td>
<td>-0.75</td>
<td>-0.95</td>
<td>-0.49</td>
<td>-0.67</td>
</tr>
</tbody>
</table>

*Note: A=number of patients assigned; B=number of patient write-ups; C=number of write-ups discussed; D=number of interviews observed; E=number of hours spent with attending; F=number of hours spent with resident; G=mean test score. All correlations were significant (p<.05).*

*Student reported data.*
TABLE 6. Mean scores of student rated skills achieved during a psychiatry clerkship, at the University of Texas Southwestern Medical School, 1987-1988

<table>
<thead>
<tr>
<th>This Rotation</th>
<th>V.A. Inpatient (N=28)</th>
<th>Emergency Room (N=14)</th>
<th>County Inpatient (N=18)</th>
<th>Consultation-Liaison (N=32)</th>
<th>Private Inpatient-B (N=4)</th>
<th>Private Inpatient-A (N=7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enhanced your interview skills</td>
<td>4.50</td>
<td>4.79</td>
<td>4.50</td>
<td>4.53</td>
<td>4.75</td>
<td>3.43*</td>
</tr>
<tr>
<td>Increased your confidence in diagnosing psychiatric illnesses</td>
<td>4.57</td>
<td>4.57</td>
<td>4.56</td>
<td>4.53</td>
<td>5.00</td>
<td>3.86</td>
</tr>
<tr>
<td>Helped you feel more comfortable about interviewing disturbed patients</td>
<td>4.57</td>
<td>4.86</td>
<td>4.50</td>
<td>4.47</td>
<td>4.50</td>
<td>4.14</td>
</tr>
<tr>
<td>Increased your confidence in managing psychiatric patients</td>
<td>4.39</td>
<td>4.50</td>
<td>4.50</td>
<td>4.22</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Increased your skills in prescribing psychopharmacologic agents</td>
<td>4.14</td>
<td>4.21</td>
<td>4.33</td>
<td>4.00</td>
<td>4.25</td>
<td>3.71</td>
</tr>
<tr>
<td>Increased your skill in treatment planning for major psychiatric diagnosis categories</td>
<td>4.43</td>
<td>4.14</td>
<td>4.28</td>
<td>4.06</td>
<td>3.75</td>
<td>3.86*</td>
</tr>
<tr>
<td>Increased your knowledge of appropriate interventions with certain difficult patients</td>
<td>4.18</td>
<td>4.64</td>
<td>4.06</td>
<td>4.03</td>
<td>3.50</td>
<td>4.00*</td>
</tr>
</tbody>
</table>

*Significant effect (p<0.05, df=5). Rating scale: 5=highest; 1=lowest.

Performance, and test scores were shown to vary significantly across sites, but with only a small difference, some sites having mean scores of B+ and others of A-. These small differences are not surprising when considering the overall grade distribution: 44% A, 35% B+, 20% B, and 1% C. Nearly 80% of the students make A's and B+'s overall. The only significant difference between any two specific sites was a small one between the clinical scores of two sites. The faculty has tried to develop specific criteria for subjective grading and will continue reviewing patterns of grades and discussing the grading process. This small between-site difference would seem to make grade handicapping a large effort for a small return.

On each site the written scores correlate with the clinical scores. This suggests a consistency in the grading process or attitude at each site, as well as suggesting that the written and clinical grades may measure similar skills. The authors wonder if this distinction between written and clinical skills is worth making in the grading system. Perhaps written work should be given a lower priority in grading, or perhaps written work should be considered a separate part of general clinical skills.

In contrast, only two sites show a correlation between the clinical performance and examination scores, and these were only modestly correlated. This is consistent with the idea that the clinical performance and examination scores are measuring different skills, but may also represent the effect of different people grading the students. The latter may be an important factor, because examination grades tend to be more objective and reproducible compared to the written and clinical performance grading. This difference in grading reliability can, and does, generate "grade inflation" with the written and clinical performance grades.
The students at this institution in fact score lower on examinations than in their written and clinical performance work.

There was high correlation between the number of patients seen, the work-ups written, and the number of work-ups discussed with the students. There was also high correlation between the number of hours of interaction with attendings and the number of hours of interaction with the residents. Finally, the teaching factors were significantly correlated with the work load factors. It is suggested that on the sites where the students have a heavy work load they also receive a heavy load of teaching, and from both residents and faculty. It is known that there is wide variation in faculty contact across the sites, and possibly in emphasis on medical student education. The finding that "the more work you did, the more teaching you got" seems to run counter to the convention that work load and teaching time are inversely related. Perhaps there is an educational "window" where a circumscribed patient load range provides the best educational reward, and work loads above and below this range produce notably poorer educational results.

There was a high negative correlation between the number of patients seen and the test scores. This was probably our most important finding, especially in the face of our generalization that "the more work you did, the more teaching you got." It is paradoxical that those students with the most intensive clinical experiences and the most teaching tended to receive the lower test scores. On some sites, the students are given heavy clinical responsibility, working up three to five patients daily, as in the emergency room. On this site the test scores were the lowest, and also showed the widest fluctuation (highest standard deviation). Our discussions with students confirmed that sites that are less busy and less emotionally stressful allow the students to have more time and energy for study. Students who had been on the emergency service expressed great liking for this clerkship site but voiced concern about being too tired to study when they get home. They reported that their peers on other services enjoyed more free time.

The students' favorable assessment of the emergency room (labor-intensive) experience raised the issue of whether clerkship site, work load, or other factors have some influence on students' overall experience and enjoyment of the clerkship. Unfortunately, this hypothesis could not be evaluated with the current data. Currently, there is no overall clerkship evaluation score, nor any score regarding interest in a psychiatric career. Additionally, the students' evaluations of the clerkship are completed anonymously to enhance frankness. For this reason, site-specific variables could not be correlated with any particular student's overall evaluation or stated interest in psychiatry. Cursory examination of Table 6 seems to suggest that there may be site-specific effects for the students' evaluations, but there was only a statistically significant difference between one site (a private inpatient service) and all others, and in that case, the difference was in only three of seven evaluation areas. For practical purposes, the students see no particular advantage in their learning experience when comparing one site with another.

The disadvantage of students with heavy work loads raises the question of equity in grading. Either the faculty needs to arrange for the students to have a less heavy work load (which for various reasons they do not want to do), or a handicap system might be considered. There are problems connected with the latter as well, including questions of exactly how to apply the handicap, the appearance of inequity arising from using a handicap, and the fact that handicapping is based on patient load, which in itself varies significantly from month to month.

The emergency room faculty have instituted an alternative strategy to combat the high work load–poor examination grade relationship by asking the residents to specif-
ically help their medical students with the didactic portion of the clerkship. The residents have responded by increased teaching of the students with a specific focus on factual material that would be helpful in preparation for written examinations. Previous teaching had been more focused on the clinical work and the peculiarities of the individual cases in the emergency room. A preliminary survey of grades suggests that this simple procedure has significantly improved the test scores of the emergency service students.

This study has supported the hypotheses that 1) different skills are measured by different approaches, 2) there can be significant differences in student scores and experiences on different clerkship sites, 3) fairness in grading requires attention to the factors that determine this variability, and 4) handicapping for grading equity is of questionable usefulness. Furthermore, it has demonstrated the power of using statistical methods to analyze aspects of the educational experience, and has provided a model for monitoring clerkship teaching variables. It has also raised some interesting questions for further research; for example, the identification of clerkship site variables which have the heaviest impact on students' interest in a psychiatric career.

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