SPECIAL SUPPLEMENT

RESIDENT SUPERVISION AND HOURS: Recommendations of the Association of American Medical Colleges

During the past decade the health service delivery system has accommodated to dramatic changes in medical technologies, patient expectations, and payment systems. Adjustments to these changes that affected teaching hospitals and their medical staffs include a greater use of preadmission and preoperative work-ups and a shift of postoperative care to the outpatient setting. Some patients who used to be admitted to hospitals are now treated only as outpatients. As a result, the patient admitted to a teaching hospital has a shorter length of stay during which the patient receives numerous diagnostic and treatment services compressed into a very few days.

These new patterns in the ways patients are cared for in teaching hospitals have significant implications for residency training programs. Residents participating in the admission of patients often see more patients, order and coordinate more ancillary and treatment services, perform more procedures and experience more calls to assist in the care of patients. This makes it appropriate to reassess the traditional operating characteristics of residency programs and to develop guidelines which may be used to evaluate current practices.

The Executive Council of the Association of American Medical Colleges (AAMC) has developed these recommendations and guidelines: (1) to help ensure high quality patient care and to preserve the high quality of residency programs, (2) to address the issues raised by changes in physician practice patterns and hospital characteristics, (3) to guide its members in responding to the issues raised by these changes, and (4) to alert policy makers and payers to the financial implications of changing resident supervision and hours. The policy statement is presented in five sections: the role of the resident, graded supervision of residents, hours assigned to residents, policy monitoring and evaluation, and the implications of changes in present practices. Each of these sections contains recommendations designed to guide the AAMC constituency, including institutional executives, program directors, and external review bodies.

The Role of the Resident

To enter independent medical practice, an individual must complete the general professional education provided by medical school and a specialty education in an accredited residency program. During the residency, the physician occupies a unique position as both a learner and a provider of services. This combination is achieved by involving the resident in the care of patients under the supervision of more experienced physicians.

While the resident is both a student in training and a provider of medical services under supervision, residency programs should be established and conducted primarily for educational purposes. The educational purpose, however, must not be allowed to diminish the quality of services received by patients. Therefore, the AAMC recommends that:

Every teaching hospital have governance and operational mechanisms to insure that residency programs not only have inherent educational value but also enhance the quality of care provided to patients.

The Supervision of Residents

The objective of a residency program is to prepare physicians for the independent practice of medicine. In the course of a residency program, the physician must develop the capabilities to examine and evaluate patients, to develop diagnostic and treatment plans, and to perform specialized procedures according to such plans. At the beginning of the training program, the resident has the least developed skills and must be regularly and consistently supervised by more experienced physicians, including more experienced residents.

If the capability to practice independently is to be achieved, the resident must be allowed to progress from on-site and contemporaneous supervision to more indirect and periodic supervision. There is no simple or single path for this transition from direct supervision to more independent responsibility. The resident's capabilities must be regularly assessed by more senior physicians and the authority to practice under indirect supervision must be granted gradually as the resident demonstrates competence.

Supervising and assessing the competence of each individual resident imposes a heavy responsibility on the more senior physicians. They must judge the clinical capabilities of the resident, provide the resident with the opportunities to exercise progressively greater independence, and ensure that the care of patients is not compromised. This supervising responsibility requires both significant time and commitment.

While the progression from directly to indirectly supervised participation in the care of patients is based on the capabilities of the individual resident, supervisory decisions need to be made in the context of an institutional commitment that will assure patients that residents have adequate and appropriate supervision from more senior residents and medical staff physicians. Therefore, the AAMC recommends that:

Teaching hospitals and residency programs have policies and procedures specifying the level of supervision which faculty and other supervising physicians exercise over residents at each level of training.

Resident Hours

Residency programs are very intense learning experiences. While each of the specialty disciplines may impose different requirements on its residents, the resident benefits by being exposed to patients throughout the course of their illnesses. This allows observation of both the natural history of the illness and the impact of the medical intervention. To experience all of the learning opportunities, the resident would have to be on-duty seven days a week, twenty-four hours a day. Clearly, such a schedule is unrealistic and does not recognize the possible adverse impacts of fatigue or the resident's commitments to other activities and interests. Therefore, assignment schedules for residents must be balanced between competing objectives and constraints.

There is no single assignment schedule that is optimal for all specialty disciplines, residents, or hospitals. In developing residency schedules, program directors should recognize differences in the clinical competence of residents resulting from factors such as specialty and year of training. They should also ensure that the resident's ability to make decisions about the care of patients is not impaired by fatigue resulting from excessive assigned hours or from the intensity of assigned responsibilities. Finally, they should distinguish between "on-call" hours which allow the resident to leave the hospital or sleep for a significant period and "on-call" hours which become working hours because the resident is repeatedly required to return to duty on-site and participate in the care of patients. While these differences preclude a single, uniform assignment schedule for all residents, the AAMC recommends:

That every teaching hospital adopt general guidelines for residents' working hours according to specialty, intensity of patient care responsibilities, level of experience and educational requirements. In order that decisions about the care of patients are not impaired by fatigue, resident hours actually worked should not exceed 80 hours per week when averaged over four weeks.

In recommending guidelines for resident hours and in suggesting a maximum of eighty working hours per week, the medical education community is foregoing a more rigorous training schedule to help preserve and protect the quality of the care provided to patients. This adjustment serves neither the interests of education nor patient care quality if the resident is fatigued because the personal time provided has been used for moonlighting in another hospital or provider setting. The AAMC recognizes that some residents moonlight to earn extra income and part of this motivation may result from increasing levels of medical student debt. Nevertheless, it is inappropriate to allow the resident to moonlight in another hospital beyond the training hospital's guidelines for working hours. Therefore, the AAMC recommends that:

Teaching hospitals and residency programs have policies which prohibit unauthorized moonlighting. The total working hours for residency and authorized moonlighting should not exceed 80 working hours per week when averaged over four weeks.

Policy Monitoring and Evaluation

In recommending that teaching hospitals and program directors have policies for resident supervision and assignments, the AAMC is emphasizng the historic and continuing responsibility of the medical education community for both its trainees and its patients. As a self-regulating profession, medical education must develop mechanisms to help ensure a regular and impartial review of the practices of individual hospitals and residency programs. The Accreditation Council for Graduate Medical Education (ACGME) and the Residency Review Committees (RRCs) provide a framework for the necessary monitoring and evaluation. Therefore, the AAMC recommends that:

The Accreditation Council for Graduate Medical Education inform each residency review committee that it must include in its program surveys an assessment of the policies and operating procedures that provide for direct and indirect resident supervision by program faculties.

The AAMC further recommends that:

Surveyors should examine residents' schedules

and visiting review committees should include an assessment of the working hours assigned to residents in determining a program's accreditation status.

Implications of Change

The aforementioned recommendations may require significant changes in present practices in many teaching hospitals. The implications of these changes for quality of patient care, access of patients to care, future physician supply, and costs of teaching hospitals must be understood and accepted if the recommendations are to be implemented.

Quality of Care

Teaching hospitals have a number of distinctive characteristics. One of the most significant is the presence of physicians on-site twenty-four hours a day. Traditionally, part of this complement of on-site physicians has been met by resident whose on-call assignment begins one day, concludes the next and may last from 32-36 hours. The guidelines for resident hours in the previous section recommend limiting a resident's working hours. As a result, teaching hospitals adopting these guidelines may need to alter present staffing patterns, and teams of physicians may be responsible for the patient. To transfer responsibility from one physician or team of physicians to another, it will be necessary to provide adequate time for the physician going off duty to brief fully the physician coming on duty about the patients and their problems. This imposes an additional service requirement on resident physicians; however, the time must be made available and funded or the quality of patient services may decline. Because of the multifaceted impact on quality of care resulting from changes in resident assignment practices, the AAMC recommends that:

Changes in resident hours be phased in gradually, enhancing the quality of patient care and preserving the educational goals of residency programs.

Access to Care

Some teaching hospitals are located in communities with a shortage of physicians. In this setting the hospital becomes the primary provider of both hospital and physician services. Patients in these communities may face substantial problems in obtaining access to medical services unless the implications of the recommendations for resident supervision and hours are matched by the personnel resources necessary to maintain at least the present supply of patient services. Hospitals in this situation should work with representatives of the local community, government regulators, and third party payers to obtain the financial and other resources required to hire and retain the physicians and other personnel necessary to provide care to the community.

Future Supply of Physicians

Another matter that warrants consideration is the long-term implications for physician manpower inherent in these recommendations. The simplest solution to a limitation in resident hours is to increase the number of residents. If the recommendaton to limit hours is met by increasing the number of residents, then consideration must be given to the impact on those residents who are trained in medical, surgical, and support specialties that may be overpopulated. The ultimate effect of increasing the number of residents on the supply of practicing physicians at a time when that supply is already increasing disproportionately to estimated requirements must be carefully evaluated by hospitals considering this option.

Where hospitals conclude that increasing the number of residents is inappropriate, the requirements for patient services may be met by employing other health professions. Nurse anesthetists may be used in place of anesthesiology residents, surgical technicians may be used in place of junior surgery residents, and nurse practitioners may be used to see primary care ambulatory patients and to triage emergency patients. The precise type of health professional required must be determined by the needs of patients, the availablity of alternative personnel, and the acceptability of such personnel to the medical staff. Even where all factors encourage the use of "physician extenders," time and effort are needed to plan, recruit, train, and integrate them into a hospital which has formerly used residents. Finally, it also seems likely that where tasks presently performed by residents can be performed by alternative clinical, technical, or support staff, it is incumbent upon the hospital to provide such help. Such measures are likely to increase resident productivity and reduce the need for additional residency positions.

One option that might be considered is to utilize fully-trained physicians in place of additional residents. While, at first glance, this strategy appears to be much more expensive, it has been shown that in certain patient settings (emergency room, intensive care units, and operating rooms) the use of fully-trained and licensed physicians who do not require supervision can be cost-effective. Certainly it merits a trial in some circumstances.

Some hospitals cannot or should not expand their residents in response to the recommendation on resi-

dent hours. They may respond by abolishing their residency programs altogether. Such a step would put a greater onus for patient care on attending physicians themselves. This is the modus operandi in many community hospitals that do not have residency training programs. Progressively, over the past 10 years, such hospitals have cared for sicker patients. The absence of residents implies that practicing physicians will need to assume progressively greater responsibility. Given the sophisticated graduates of specialty training programs, physicians in hospitals that discontinue their residency programs should be well qualified to assume these additional duties.

Cost Implications

The hours residents are assigned are busy hours. While learning, they are seeing and caring for patients. As a result, efforts to decrease resident hours, either by an internal hospital decision or by external regulation will leave tasks which need to be done. Increasing the number of residents, hiring physicians extenders, employing hospital-salaried physicians, or increasing the involvement of attending physicians are alternative responses to a reduction in resident hours. While the responses are different, they share the common element of increased costs.

Increasing the hospital's complement of residents, physician extenders or salaried physicians immediately and visibly increases academic medical center personnel costs. These costs can be met only through generating higher revenues, greater productivity using existing resources, or reduced hospital earnings. Increasing the responsibilities of attending staff also increases costs, albeit more indirectly because they may not show up on the hospital's books, since attendings derive their fees through services provided to patients. Where academic attending physicians spend more time caring for hospital inpatients, additional faculty physicians need to be paid; it is likely that these costs will be shifted to other cost centers in the hospital, or as seems more likely, the medical school. No matter what course is chosen to address the problems, the economic implications of limiting resident hours are clear: tasks previously performed by residents will need to be performed by others who must be paid. Therefore, the AAMC recommends:

All public and private purchasers of hospital services support teaching hospital efforts to ensure high quality patient care by reimbursing the hospital for all of the incremental costs incurred as a result of altering resident supervision and assignment policies.

Conclusion

The AAMC supports examining and re-evaluating current practices on resident supervision and on the number of assigned hours. Many of our current practices have a long history and tradition. They have resulted in well-trained physicians able to make critical decisions about seriously ill patients. At the same time, the teaching hospital has experienced dramatic changes in the past few years: patient stays are shorter, more procedures and treatments are scheduled in a shorter period of time, and the less ill are often treated on an ambulatory basis. As a result, residents are called upon to make more decisions about sicker patients than their predecessors. Consequently, training practices that were appropriate in an earlier time may need to be re-examined to ensure that they meet sound objectives of both patient services and medical education.

In making recommendations for hospital policies on resident supervision and assignment, the AAMC is appreciative of the different characteristics of individual teaching hospitals and the different requirements of individual specialty disciplines. Accordingly, the recommendation are presented as guidelines, not as formulas, which each hospital and program should consider and utilize in a manner appropriate to its setting, role, and resources.