Sixth David D. Henry Lecture: Quality and Equality in Health Professions Education and Service by Lloyd C. Elam

Collection: David D. Henry Lecture Series, 1972-2008

Repository: University of Illinois Archives

Rights: Data

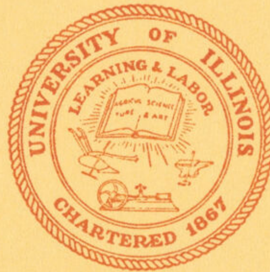
Digital Collections at the University of Illinois at Urbana-Champaign Library

https://digital.library.illinois.edu/items/518931b0-fed9-013d-3124-02d0d7bfd6e4-e

Downloaded on April 22, 2026

Quality and Equality in Health Professions Education and Service

by
Lloyd C. Elam



Sixth David D. Henry Lecture

University of Illinois at the Medical Center
Chicago, Illinois

The David D. Henry Lectureships in Educational Administration are endowed by gifts to the University of Illinois Foundation in recognition of Dr. Henry's contributions to the administration of higher education, including his career as president of the University of Illinois from 1955 until 1971. The lectures are intended to focus upon the study of the organization, structure, or administration of higher education, as well as its practice. Selection of persons to present the lectures is the responsibility of the chancellors of the three campuses of the University. Presentation of the lectures is alternated among the campuses on an annual basis.

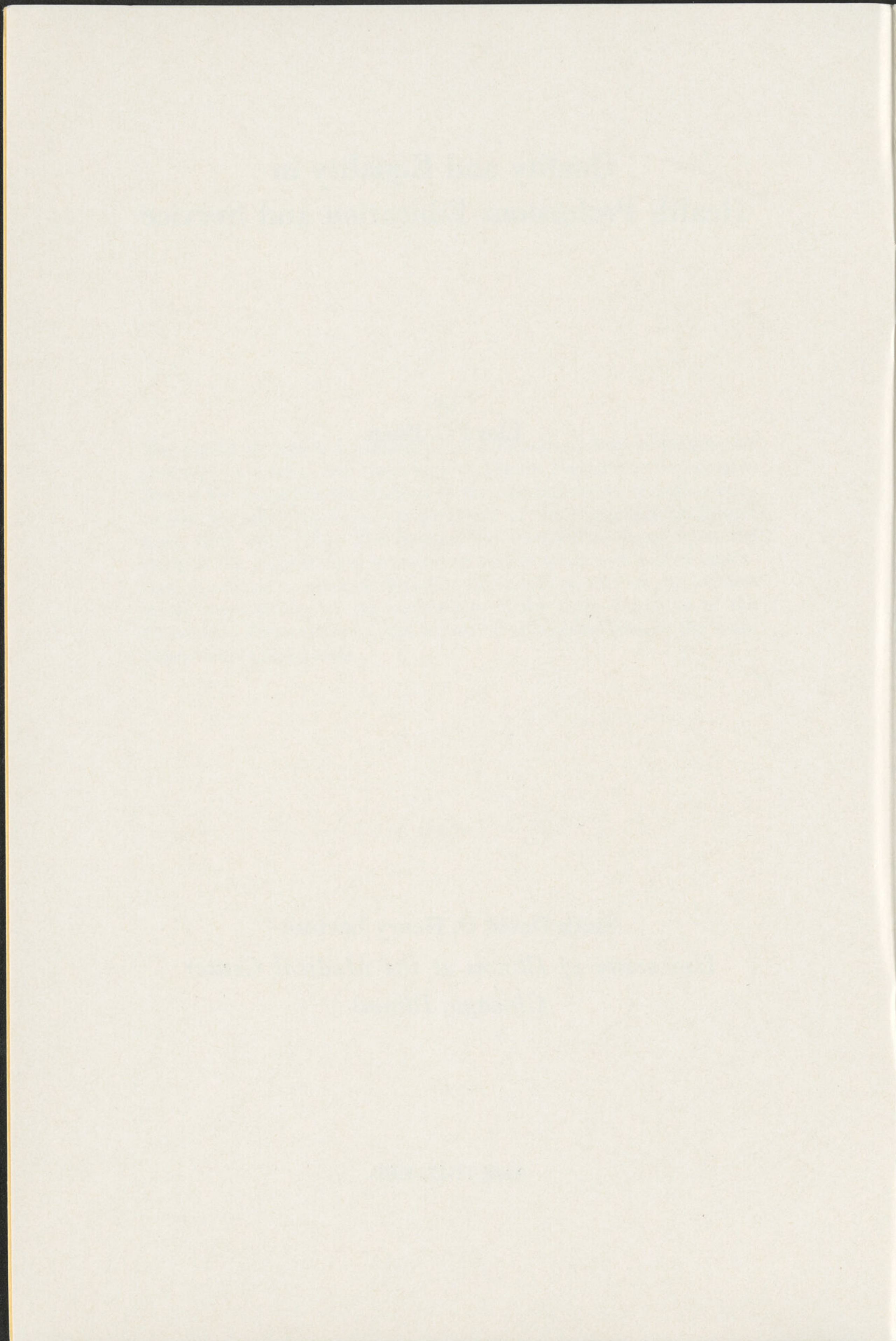
Quality and Equality in Health Professions Education and Service

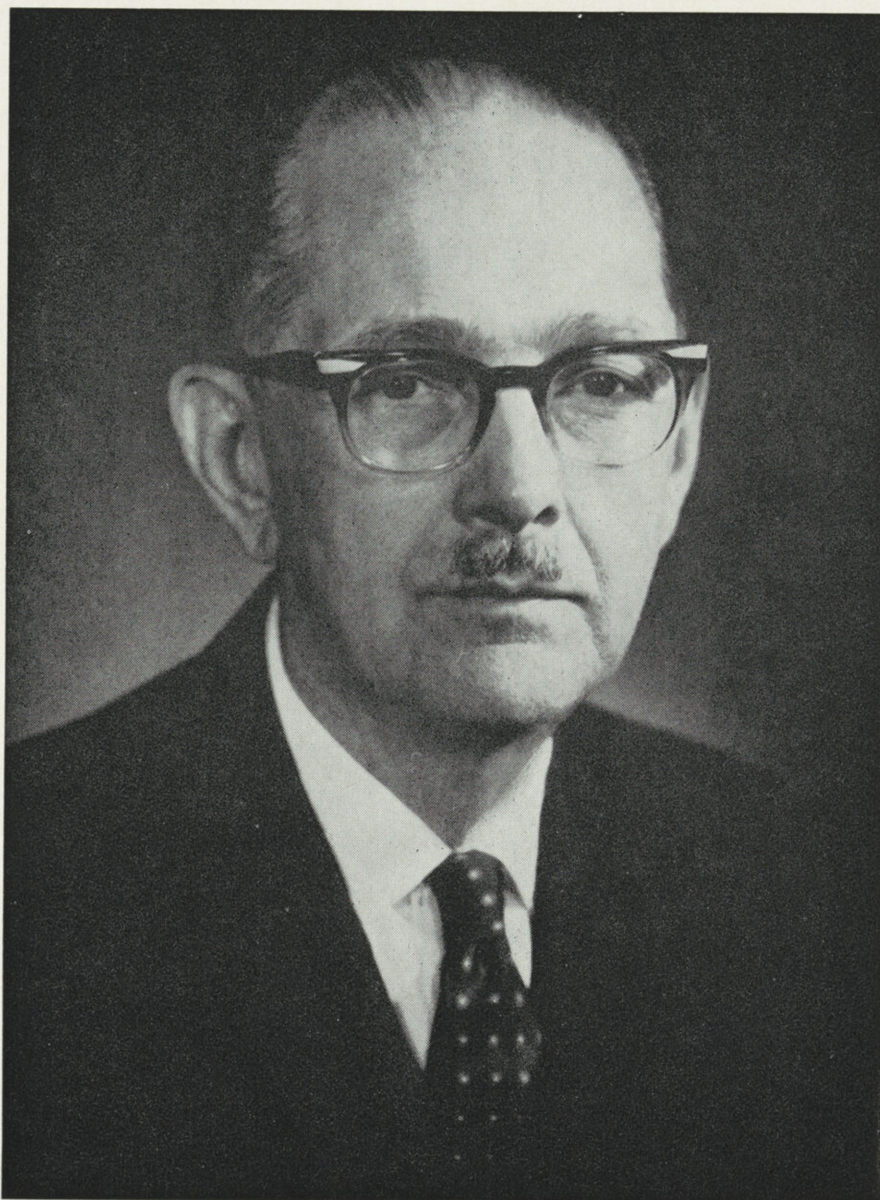
by
Lloyd C. Elam

Sixth David D. Henry Lecture

University of Illinois at the Medical Center
Chicago, Illinois

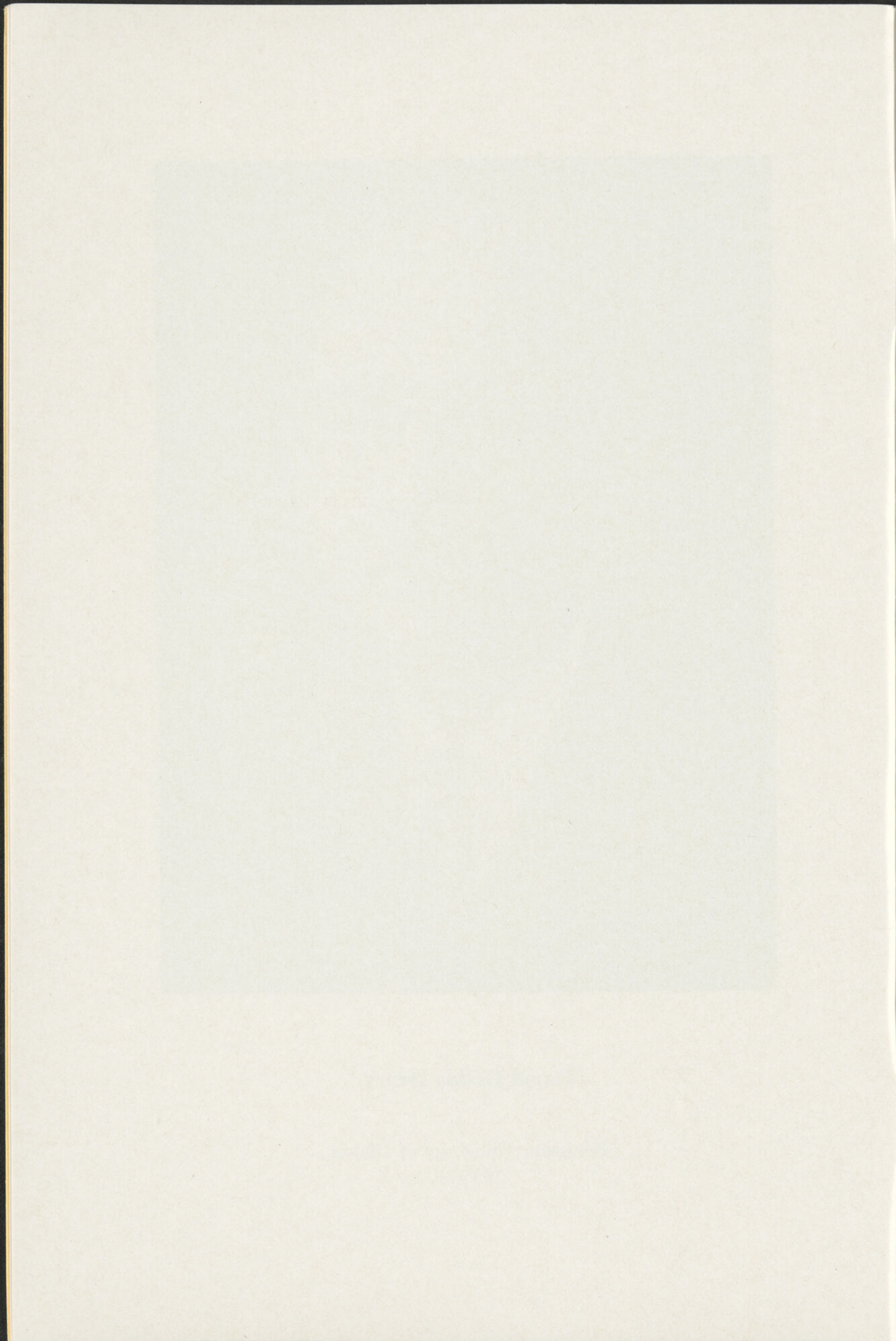
April 11-12, 1979





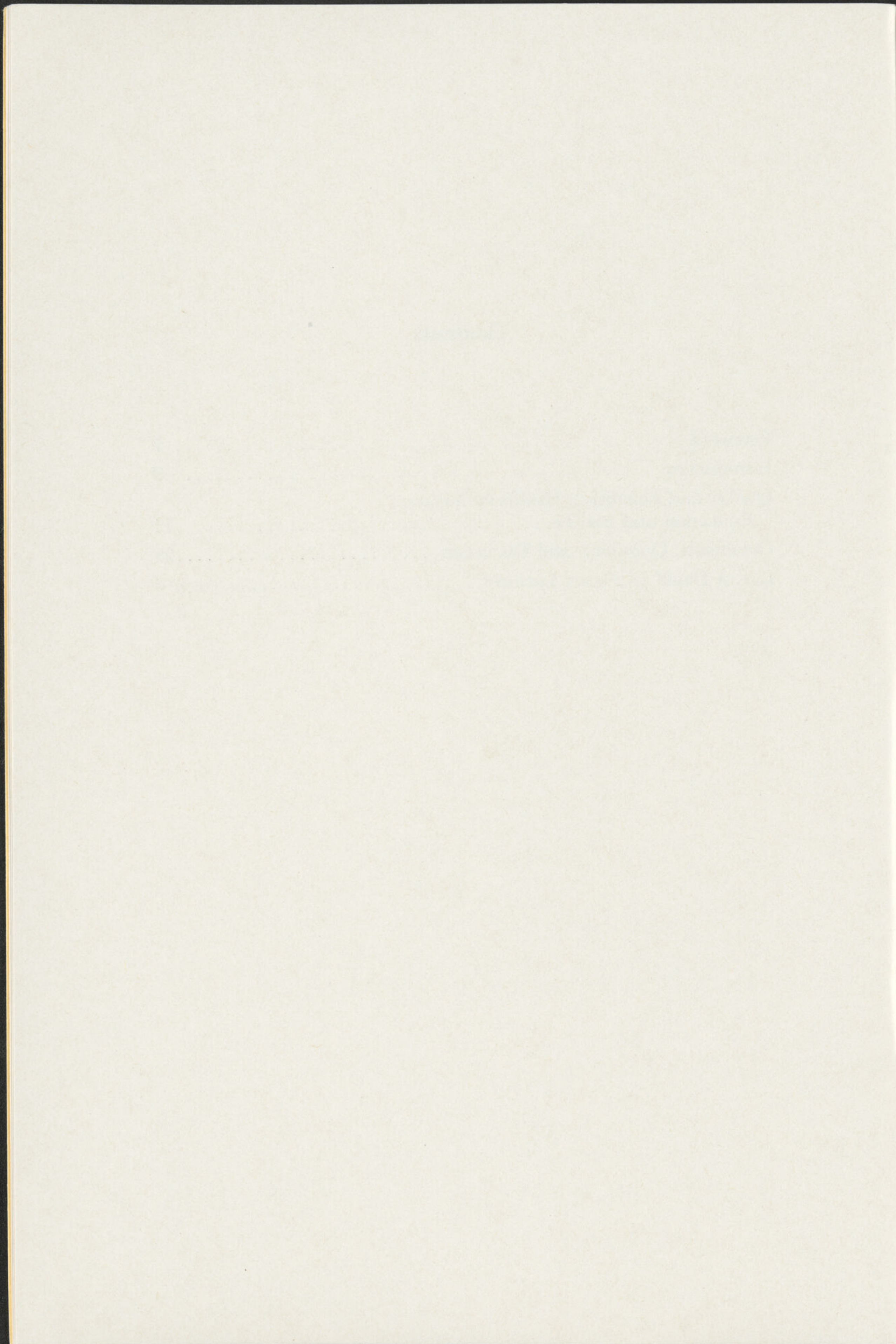
David Dodds Henry

President, University of Illinois
1955-71



Contents

Foreword 7
Introduction 9
Quality and Equality in Health Professions Education and Service 11
Comments, Questions, and Discussion 25
List of David D. Henry Lectures . . . . cover 3

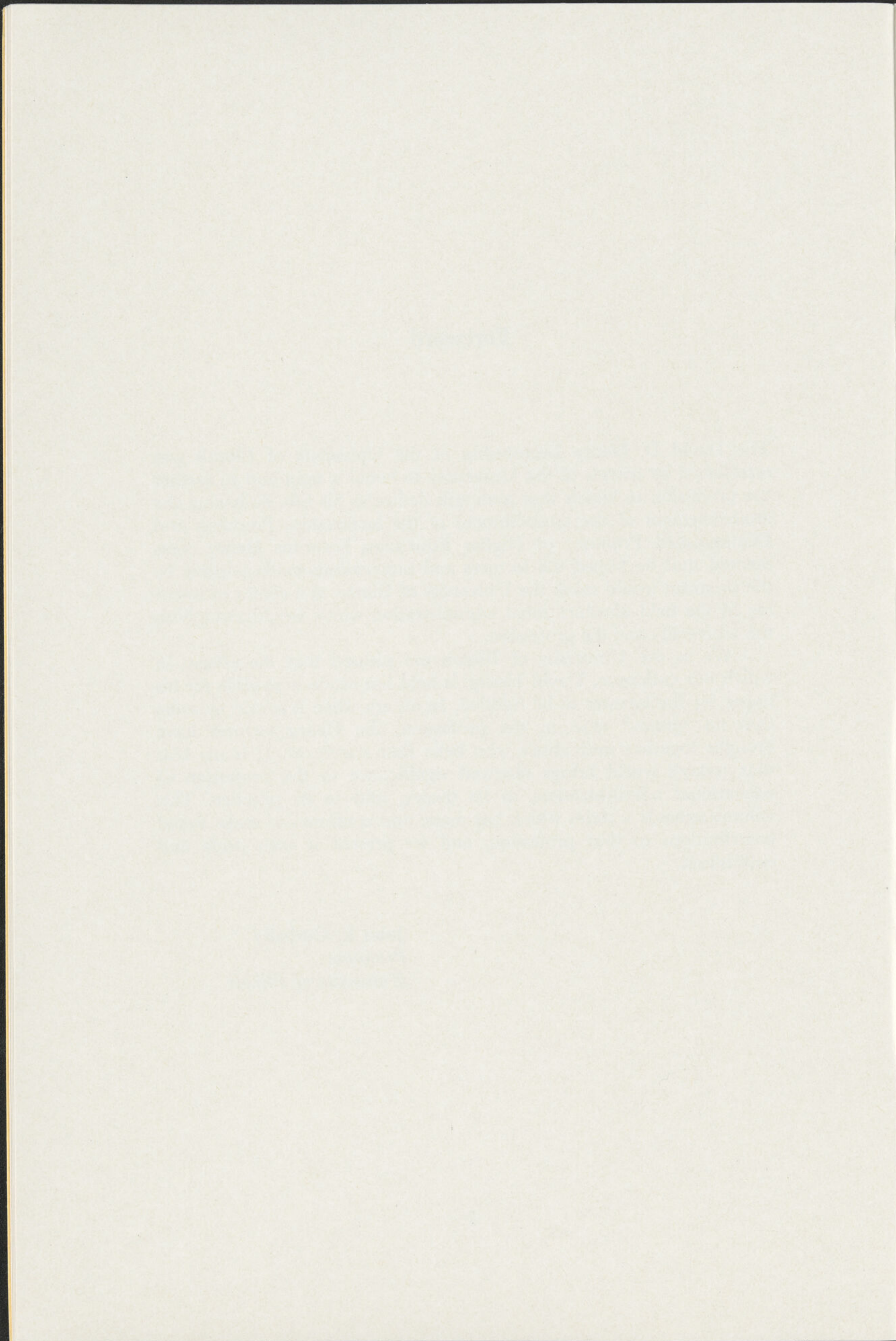


Foreword

The David D. Henry Lectureship at the University of Illinois was established by friends of the University to honor a man and to further the profession to which that man still dedicates his life. Following the announcement of the establishment of the lectureship, President and Distinguished Professor of Higher Education Emeritus Henry commented that he hoped the lectures and publications made possible by the program would mark the University of Illinois as a center of learning in the field of educational administration which would serve both the University and the profession.

We at the University of Illinois are pleased that the esteem in which our colleague, David Henry, is held has made it possible for his hopes for the lectures to be fulfilled. In an era when it is said by some that no "giants" exist in the profession, the Henry lectures have brought together individuals who belie that statement. It is my bias that today's world brings renewed significance to the profession of educational administration, to its theory, and to its practice. This volume extends a series which has made and continues to make sound contributions to that profession, and we present it with pride and enthusiasm.

John E. Corbally
President
University of Illinois



Introduction

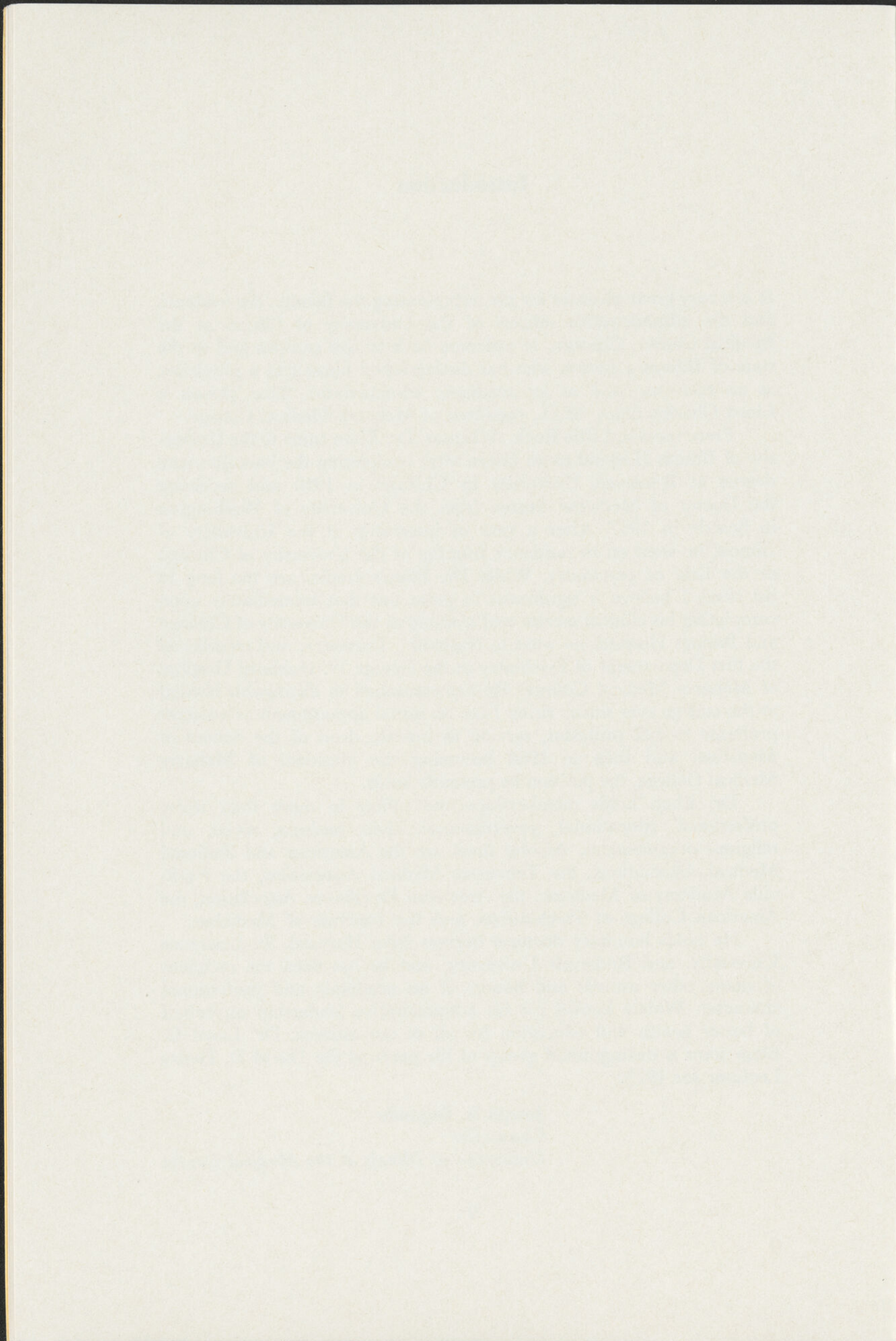
It is a very great pleasure for me, representing the faculty, the students, and the administrative officers of the University of Illinois at the Medical Center, Chicago, to welcome back to this campus and to the state of Illinois a person who has distinguished himself as a physician, as an educator, and as an academic administrator. That person is Lloyd Charles Elam, M.D., president of Meharry Medical College.

From roots in Little Rock, Arkansas, Dr. Elam came to the University of Illinois Hospital as an intern after completing the baccalaureate degree at Roosevelt University in Chicago in 1950 and receiving the Doctor of Medicine degree from the University of Washington in Seattle in 1957. After a year of internship at the University of Illinois, he went on to residency training at the University of Chicago in the field of psychiatry. While Dr. Elam's credits are too long to list here, I believe it significant to point out that immediately upon completing his clinical service and training at the University of Chicago and Billings Hospital he went to Nashville, Tennessee, and established the first Department of Psychiatry at the George W. Hubbard Hospital of Meharry Medical College. He has continued to distinguish himself at the college ever since: rising from an initial appointment as assistant professor to full professor, serving as interim dean of the School of Medicine, and then in 1968 becoming the president of Meharry Medical College, the position he presently holds.

Dr. Elam holds memberships and offices in more than thirty professional, educational, governmental, civic, business, social, and religious organizations. Among them are the American and National Medical Associations, the Tennessee Medical Association, the Nashville Academy of Medicine, the American Psychiatric Association, the American College of Psychiatrists, and the Institute of Medicine.

He holds honorary doctoral degrees from Harvard, St. Lawrence University, and Roosevelt University; and he has been the recipient of many other awards and honors of an academic and professional character. Widely known for his administrative leadership on behalf of better health and education for all of our citizens, Dr. Lloyd C. Elam joins a distinguished group of his peers as the David D. Henry Lecturer for 1979.

Joseph S. Begando
Chancellor
University of Illinois at the Medical Center



Quality and Equality in Health Professions Education and Service

by Lloyd C. Elam, M.D.
President, Meharry Medical College

Thank you very much, Dr. Begando, for those nice words. Dr. Henry, it is a delight to see you and to be a part of this program established in your name. For anyone who has received some part of his or her education at the University of Illinois, there can surely be few greater honors than to be invited back as a Henry Lecturer. In returning after twenty years I am impressed by the changes I see, not only in physical appearance of the Medical Center but also in terms of where this campus is going.

Earlier lecturers in this series have addressed some of the major concerns and thrusts of higher education in general. Today I wish to consider a dimension of comparable significance, the issue of quality and equality in health professions education and service. In doing so I will underscore my observation that the University of Illinois is one of a few places in the country where a minority person would be invited to talk about quality. Generally, when University communities think about minorities there is accompanying anxiety about maintaining quality. As a matter of fact, one of the reasons for widespread concern about the present thrust to increase the number of minority persons in upper-division programs is a fear that educational quality will be diminished. You will understand, then, why I am particularly proud that the institution of which I am an alumnus would invite one of my race to talk about quality, as well as equality, in health professions education and service.

As background let me say that we are very fortunate to live at the zenith of development of medical science and health services based on that science. Never before have so many people been involved in

providing health care to others: 426,000 physicians; 122,000 dentists; 961,000 nurses; 4,393,000 other professionals. A total of 5,902,000 individuals are involved in delivering health services.

And never before has health care been so effective. Diseases which were scourges only a decade ago are now controllable or extinct. In the United States, for example, smallpox and diphtheria are museum relics; malaria is only known because of world travel; and poliomyelitis and measles could join the others if we chose. Not only the infectious diseases but all of the major killers of mankind are on the decrease in the United States except cancer, suicide, and accidents. In the field of mental health, manic depressive illness, which affected some of the most successful persons with periods of incapacity, can now be controlled, and many other mental diseases, like the phobias, are curable by new psychological approaches. The success of therapies in the mental health field must certainly be approaching that which has been achieved with infectious diseases. Problems of diagnosis have been equally susceptible to solution through new laboratory aids and such technical advances as the CAT scanner.

Never before have so many sectors of the economy been involved in expanding the armamentarium against sickness. A single pharmaceutical house will spend as much as $300 million for research in a single year, and the investments by all segments of government in research and service are among the most useful expenditures of tax money.

And yet never before have so many taken it upon themselves to criticize the health care in this country. An informed example of that criticism is *The Quality of Mercy* by Selig Greenborg, who gives what he calls "A Report on the Critical Condition of Hospital and Medical Care in America." He applauds the teaching hospital for all it can do and the efforts of the staff to meet each person's needs. But he is a critic and suggests areas which require serious attention in every aspect of the system. Says Greenborg:

> While medical research unquestionably deserves continued massive support, correction of the lopsided imbalance between it and the financing of services, along with the training of many more people to apply knowledge, is long overdue.
>
> ... The greatest need today in the world's richest nation is not for organ transplants or for some of the other marvels of the latest medical technology, but for wider availability of the now commonplace results of the research of twenty-five or even fifty years ago.

And yet the perceived need to make major changes in the system is not just a reflection of the desire of the intellect to always do better — it is rather a recognition that a certain kind of synthesis is necessary.

For more than 100 years there has been a relentless effort to improve health professions education. During that time there have been such tremendous breakthroughs in our knowledge of preventive and curative medicine that *quality* medical care now has real meaning in terms of outcome — in terms of what can be done to prolong life and diminish suffering.

In other sectors of society, and with the same relentlessness, the struggle for *equality* has also brought about gradual but significant change. Although equality is a generally understood term it may mean different things to different people. In education, it usually implies equal opportunity. In health care it suggests equal access to all services. For the politically minded it means representation based on percent of the population. For the health worker it means pay based on the job performed. Since equality has all these meanings, the health system must accommodate itself to all of them or be accused of fostering inequality.

Initially the problem was resistance to the concept of equality as appropriate for the health field. More recently this view was replaced by a scarcity philosophy, in which it was assumed that there were not enough health care jobs to go around and thus it was justified to award the available places to an elite. However, whether health care is considered a right or a necessity, equity would demand withholding some care from *all* if the premise is accepted that there will not be enough to go around. Since this is unacceptable to both consumers and providers, because it reduces the quality of health service, current thrusts have attempted to move health care out of the economy of scarcity. These efforts are manifested by the increasing numbers being educated as health professionals, the increasing variety of health professions, and the drive to provide additional services in areas that have been underserved. Although health planners sometimes consider scarcity a necessary means of controlling the escalation of costs, a more logical system is surely needed.

What I am saying is that for more than a century many individuals have worked diligently to improve *quality* in health professions education and health service, and during the same period others have worked to improve *equality* of opportunity and of access to those same things. The difficulties begin when you try to combine the two. It is the kind of trouble an administrator encounters when trying to implement equal opportunity programs in education or to provide services which assure not only equal access but also payment of providers on the basis of the service they perform rather than the label they wear. You can surely picture the controversy that would accompany paying the nurse what a doctor is paid for doing the same thing. Nobody wants to argue against the merits of improved quality or

extension of equality. It is only when we attempt a synthesis of the two that a solution for one seems to confound the other. We need to ask ourselves whether this is an inevitability or the result of missed opportunities in the past.

The present generation of health professions educators faces a fierce attack on all those ingredients that have traditionally been designed to guarantee quality in education and practice. Today the patterns of the past are being challenged in many ways. Among the most significant may be the diminishing financial resources at a time of increasing costs. For example, during fiscal year 1979 federal guidelines seek to hold the annual increase of hospital costs to 9 percent when inflation, the increase in the cost of energy, and wage increases in general will predictably exceed that amount. Secondly, there is a growing sophistication of the populace with a resulting increase in demand for more, as well as more elaborate, health services for all the people. Further, the profession is faced with steady advances in medical knowledge and expertise, which together increase the educational and service options at a time when there is also growing pressure to accept a more heterogeneous student body.

The system is being shaken by a growing demand to establish collegial patterns of institutional governance along with mounting insistence upon community participation in decision making. Although collegial patterns of governance have always been a part of the University scene, only recently have medical, dental, nursing, pharmacy, and other health professions faculties exhibited great concern for those matters. In the past deans, presidents, and other administrative officers have often functioned in faculty roles as well, and there was little difficulty in perceiving such individuals as wearing two hats simultaneously. However, as faculties are unionized, as community pressures on universities mount, and as accountability becomes more common as a tool for external control, health science faculties demand greater participation in institutional management. Finally, institutions must respond to the rising expectation that they will produce graduates who will gravitate to less desirable parts of the country to live and to practice. The maldistribution of health professionals and health services continues to be among the greatest failures of the health system in every country in the world. All of these new emphases raise the question of whether today's educators can develop the pattern of health professions education which will serve this evolving health system.

The definition of quality in health professions education is not as critical as its recognition. In a very enjoyable discussion in *Zen and the Art of Motorcycle Maintenance,* the point is made that when quality exists it is recognizable whether we are observing a painting, listening to music, or repairing a machine. Similarly, in health services

it is not the definition of high quality care which is the goal (for somehow when it is present we can recognize it), but rather assuring the delivery of high quality service should be the objective. Although some people have tried to quantitate quality, in the absence of certainty about what constitutes quality substitutes are frequently employed — popularity, opulence, being the only one in town, being the largest in town, or being better than the others in some measurable dimension may be chosen as goals. All of these have been utilized in varying degrees and at times are even quantified to suggest that they are approximations of the real thing. However, these substitutes cannot be allowed to eclipse what is basic and fundamental.

To assure the achievement of quality in health professions education we have relied first on the selection of the most successful students for admission to these programs, since past success is among the best predictors of future success. Historically many factors have been used to identify these "successful" candidates: those from the most successful families, the offspring of successful alumni, those with the highest scores or grades in college, those who were most like the selectors. These have all been used to choose who will be admitted to health professions schools. All have varying degrees of credibility. Although these may be simplistic ways of promoting quality, no better ways have been found to date. But I want to make it very clear that I refer to choosing those who will be most *successful,* not simply those who have the most of some particular thing. We all will recognize the scriptural principle "To him who hath it shall be given." However, if we only admit to medicine those who have the most, whether it is money, scores, experiences, or family background, we cannot effectively address the question of equality. To deal with both quality *and* equality, we must choose the most successful, not just those who have the most of any one of these elements. Educators who, in this day of rising concern for human rights and insistence upon affirmative action, fear that quality will suffer can be reassured. Choosing the most successful persons from other races, other communities, or the other gender will all contribute to insuring quality, since people successful in many dimensions are more likely to be successful health educators and health providers.

The second ingredient in contributing to quality is knowledge. There is no question in any educator's mind about the necessity to have a fund of knowledge which is constantly being reviewed and updated if graduates are to practice modern health care. Because of the requirement for knowledge, numerous organizations have been developed to assure the public that this base is present: testing organizations such as the National Board of Medical Examiners, or the National League for Nursing, or the specialty boards in other health pro-

fessions. One of the consequences of this reliance on knowledge is an increase in specialization. By becoming a specialist, health professionals can cope with the increasing amounts of knowledge required for effective practice by reducing the scope of the data which must be mastered. This also increases the time available to keep abreast of new developments in the field.

The emphasis on knowledge as an index of quality has also elevated the importance of memorization. Thus high rewards are given to students who memorize easily, in the belief that they will have learned what is necessary to be a good practitioner. When they do well on evaluative tests, teachers also feel successful. It is therefore understandable that faculty members may feel that quality is threatened when the need for equality of opportunity forces acceptance of students who have not perfected a talent for rote memory and are slower at data recall.

In addition, the need for more doctors for family medicine causes concern in the face of the vast amount of knowledge to be mastered, or memorized, in order to understand complex scientific principles. Fortunately the new emphasis on problem solving and the use of problem-oriented records are examples of attempts to reduce rote memory as the principal means of learning. It is generally acknowledged that the use of information in problem solving is a natural method of learning, one far superior to simple memorization of a large number of facts. Quality and equality will both be better served by these new advances in medical education and in health care.

The third ingredient which has historically been used to promote quality is insistence upon standards, and the employment of varied techniques to monitor how well these standards are met. The existence of such organizations as the American Medical Association, the American Nursing Association, the American Hospital Association, the State Licensing Boards, the American Boards of Medical Specialties, and the Professional Standards Review Organizations is an example of the system designed to keep standards high and to provide reasonable assurance that those standards are met. The ease with which standards can be established by governmental bodies is such that some think that setting standards is the major method of insuring quality. This may be all that governments *can* do, but a problem is introduced when the purpose of these mechanisms is diverted to achieve other goals. For example, for many years membership in a county medical society of the AMA was necessary to obtain staff privileges in many hospitals. This was designed to assure high quality health service, but when it was also used as a method to enforce racial discrimination equality in health care delivery suffered. Similarly, the Professional Standards

Review Organizations was initially designed to maintain quality, but when it was misused to control costs the basic purpose was compromised and health care suffered.

The basic functions served by all of these organizations are necessary. As health care is broadened, a wider variety of diagnostic and therapeutic options will become available. In addition to doctors' offices, clinics, and hospitals, an array of neighborhood health centers, new types of surgery centers, special purpose single organ centers (like renal disease centers), and primary care centers staffed by special professionals (like nurse practitioners) will all become more prominent. Instead of using the traditional indirect measures of quality (comparing such variables as manpower, budget, patient flow, facilities, etc., among institutions), direct measures (like outcome) will need to be used, for a better outcome is the real goal of health care. The fact that the input includes more practitioners or a different array or those who have different training is irrelevant if outcome is the measure of quality. Outcome standards will not only permit a broader selection of manpower for quality health service but will contribute to the achievement of equality as well.

A fourth key element in the search for quality is the judicious use of rewards. Two major reward systems are those which are external to the individual (like salary increments or faculty rank) and those which are internal (like the satisfaction which comes from having done a job well). Overemphasis on the external reward system causes many to forget that which comes from within. At the present time great attention is given to external rewards because of the materialistic orientation of our society and because they provide a tool for manipulating health care providers. External reward systems have been entirely adequate in the past to reinforce the search for quality. But, as we seek to expand the health care system, the external reward system (especially money) impedes rather than aids the effort to broaden the distribution of quality. The most flagrant example of this is relating Medicare payments to the "usual and customary fee." This encourages practice in the "overdoctored" areas (where fees are customarily higher) and penalizes those who practice in rural areas or among the poor. The internal rewards associated with fulfilling an important social and professional purpose may be displaced by those that are merely monetary.

A fifth ingredient of quality assurance in a technological culture is the presence of an adequate number and variety of facilities and modern equipment. However, the belief of some health planners that the easiest way to cut costs is to limit the amount of sophisticated equipment in certain areas does not take into account the additive

quality produced by much of the new hardware. The extension of high quality health care to those who have not had it demands that the benefits of each technologic advance be made available to the newly-to-be-served population, not only to those who already have the most.

The sixth ingredient of quality assurance is the organization of a system for providing adequate care. This involves highly qualified physicians, a complement of sensitive and dedicated support personnel, ready availability of necessary drugs, and an internal monitoring structure that can determine both the degree to which quality goals are reached and future needs and directions. Of course this component is not always appreciated by the target groups whose cultural orientation is toward a day-to-day satisfaction of needs and who seek only episodic care. At the other extreme are those providers interested in only one segment of the health service complex (like the proprietary hospital) and who often fail to appreciate the entire system. Health maintenance organizations, for example, are reputedly concerned with aspects of the system which can be organized to provide better care, care at less cost, and/or care to a broader population.

I would like now to turn your attention from quality to equality — the most elusive of our goals. What is equality in the field of health professions education and health services? Is it equal access to medical care when it is needed? Is it the provision of educational opportunities for the most successful blacks, Chicanos, or women? Looking at equality historically, we must acknowledge that there has never been a serious attempt within the health field to objectively define it in either education or care. As an outgrowth of the civil rights movement of the 1960s, a project sponsored by the Association of American Medical Colleges, the National Medical Fellowship, the National Medical Association, and the Macy Foundation, among others, aimed to increase minority representation in medical classes to 10 percent, with the assumption that this would correct the serious shortage of blacks and other minorities in the medical field. Although many said, "It cannot be done," the tremendous progress made within five years raised the proportion of minorities from 2 percent to 7 percent of the entering class. The absolute number was even more impressive, since size of medical classes grew steadily larger during that period.

Despite such initial success it was then claimed that this achievement merely reflected the large pool of applicants who had been denied admission in the past but would not continue as the backlog was absorbed. Contrary to this belief, even as money for special recruitment has decreased, there has been only a small reduction in the number of interested minorities and no evidence that those applying are less qualified, according to college grades or MCAT scores, than those in

the earlier pool. It was finally argued that the efforts to increase minority representation were unfair, certainly too expensive, and might be illegal. Following the Bakke decision at least a few schools reduced their special efforts to recruit minorities.

The background for this pessimism is sordid. During the early years in this country, there was a general belief that blacks did not possess the intelligence required to learn medicine. As a matter of fact, the first black person to receive a medical degree in America was sent to school on a wager that he could not succeed. After he graduated, it was decided in some states that blacks should not become doctors, for those who did would have too much mobility and might foment insurrection against the slave practices. In many states, including my present one, laws were passed prohibiting blacks from practicing medicine. These laws were abolished after the Civil War, and since then there has been no prohibition against blacks being educated in medicine. For many years over three-fourths were educated in two predominantly black medical schools, Howard and Meharry, but until the 1950s those graduates were barred from membership in most medical societies and from practicing in many hospitals. The black doctor, excluded from many medical schools, medical societies, and hospitals was denied not only the opportunity for personal growth but also was forced to fight for both equality and quality if black people were to benefit from the advances in medicine.

Some of these inequalities existed for other minorities as well. The medical profession, which has led other professions in its search for quality, had to be (and still is to some degree) dragged screaming and kicking by the civil rights and human rights movements into activity designed to promote equality. But progress was made. In 1968 when I left Chicago there were only nineteen black students in all the medical schools in the city. By 1975 the University of Illinois alone admitted that many and in subsequent years exceeded that number. I would like to offer my special commendation to the University for that outstanding effort. While the number of black student applicants has leveled off, or shown a small decrease since 1975, and there has been a decrease in the number accepted as well, there has at the same time been less pressure to provide equality of educational opportunity. What will happen when that pressure disappears?

One other change which deserves note is the changing role of the historically black medical institutions. Two questions have had to be faced: (1) Does the existence of these schools promote equality or inequality? (2) If they are to exist, how can they best contribute to improving the quality of education and service? Meharry Medical College in Nashville, Tennessee, set about to address both these chal-

lenges. The finding of the courts could not be refuted — to have segregated schools, whether black or white, whether in lower or higher education, meant unequal schools. Most particularly, the financial support was not equal, and this affected everything else. How then could the school make a contribution to equality? Of course exclusion of nonblacks had to stop immediately, just as exclusion of blacks had to cease in other schools. This alone was not enough. The next step was to define an area of concern which would provide an institutional focus — one in which this school had advantages — and concentrate on it. This is not a new approach since it is the basis of specialization and division of labor which together have contributed so greatly to quality and production. The school chose as its focus comprehensive ambulatory health care. This was both compatible and consistent with its traditional role of concern for the disadvantaged and with existing interests in the community. The subsequent popularity of primary care and the need for all institutions to address the most pressing needs in medical education with limited resources simply contributed to the momentum.

The next step was to study the options for ambulatory health care and to determine the most effective one. The alternatives we studied were the neighborhood health center model; the hospital-based ambulatory care center model; and traditional approaches using doctors' offices, emergency rooms, and outpatient clinics. A seven-year longitudinal study indicated that there was no significant difference in the outcome of the overall health of a community served by a neighborhood health center and one served by the hospital-based center, but that the presence of some kind of organized program was superior to none, especially for such areas as prenatal care and the discovery time for new diseases.

Concurrently, research was undertaken in the educational area to determine what measurable criteria could predict, with greater accuracy than MCAT scores and GPAs alone, which applicants would be successful in medical school and which would need special assistance. The curriculum was also altered to provide several tracks, some of which were optional, but all of which were selected on the basis of preliminary data from the predictor study. This investigation is continuing, and the predictors are not yet sufficiently firm for publication. I can say that they are based on data obtained from the MCAT science section, the UP-Biology test (Educational Testing Service), the AAMC Biochemistry Placement Test (1975), the Nelson-Denny Reading Score — Form C, and performance in a concentrated three-week cell biology course at Meharry.

While National Board examinations, and similar testing proce-

dures, are obviously useful for end-of-year or end-of-semester student assessment, systematic use of problem-oriented medical records is an ideal method for providing feedback on students' day-to-day data collection, diagnostic, and problem-solving skills. Both tools are useful in self-pacing as well as in choosing the proper educational track. And some degree of self-pacing is absolutely essential when students with greatly differing backgrounds, abilities, and interests are members of the same class. These two advances in medical education planning and implementation have been far more effective in facilitating student achievement than any of the curriculum time and course manipulations that have been more popular.

At the same time, in order to fulfill this important focus, the institution decided that it should get involved in similar efforts in some developing countries. One of the most rewarding things we did was to go to Botswana and retrain all the nurses in that country to become providers of primary health care. Shortly thereafter Norway provided the assistance required to build clinics throughout that land. Today every citizen of Botswana is within walking distance of a clinic staffed by a trained nurse practitioner. This has been a remarkable experience from which we learned many things, for example, the usefulness of having mothers keep each child's health record. Thus, wherever the mother goes she can provide for the nurse practitioner or physician an accurate account of the child's past history and management, and that practitioner can then add the current symptoms, findings, and treatment. The record is always current and is always available wherever the mother may take her child.

This background information on the search for quality in education and service by the health professions in general, the recent moves toward equality in both spheres, and the work at one predominantly black medical college lead me to the following conclusions and recommendations:

1. Equality and quality can go hand in hand, but they do not do so automatically. It is easier and less expensive to provide high quality for the few. Segregation has been the traditional way of solving problems in order to save money. However, it leads to a two-class health care system. With such an approach, the number included in the first class steadily diminishes as more and more of them begin to get second-class education and health care. Only by insisting on equality will we be forced to correct the weakness of the present system — a weakness that exists because decisions are made for the benefit of the providers on the assumption that some consumers can be ignored.

2. The persons who should become health care providers must be chosen from the most successful individuals from a wide variety of

backgrounds. Being the most successful includes making acceptable grades in college and scores on tests, but many other factors must also be considered. For example, the most successful applicant from rural USA may have a lower MCAT score than the most successful applicant from the suburbs. Both have a place in medicine in order to justify the goal of equality and to provide care to the two different localities.

3. The school must be able to predict success and failure with a great degree of accuracy and to provide individual feedback all along the educational continuum. The frequent failure of health professions schools to do so reflects an attitude inherited from the graduate education model, in which the responsibility for learning is on the students. In the professional schools this responsibility must be shared by the institution. Recent advances in teaching techniques enhance the ability to ensure high quality graduates even with a more diverse student body than was present in the past.

4. Learning by use (which is far superior to present reliance on memorization and testing) is underemphasized because it requires more of teachers. Problem solving, rather than the acquisition of facts alone, should become the mode of thinking, and the differences between the so-called basic and clinical sciences should diminish. At present, health professions students are interested in clinical courses and view the basic sciences as hurdles. If these sciences are to make their maximal contribution, they should be learned as they assist in the solution of clinical problems. If this approach to learning is used in teaching, there will be less reason for concern about the different cognitive backgrounds of students when they come to school.

5. New systems of ambulatory health care are not sufficient to improve quality of health services. They may improve access to the system but today, using any of the present organizational patterns, the outcome in terms of quality is determined more by the people involved and what happens at the point of contact than by the organization of the service. Any system can exclude persons, provide fewer than adequate resources, or extend those services. These factors affect quantity of service more than quality. Quality in health care, as in most other areas, rests primarily with the individuals involved.

6. The present system has in the past focused upon the central role of practitioners but is now moving in a direction of growing reliance on the system itself rather than on the individuals providing the services. This is a dangerous trend, for a system cannot guarantee quality if the individual service providers are not highly qualified. Quality care demands well-trained professionals, not poorly trained

auxiliaries. If we are to use physician assistants, for example, they must be good enough for the suburbs, not just for the ghettos.

7. In order to produce such providers, concentration on the fund of knowledge is not enough. In addition to knowledge, skills and emotional maturity are also necessary. It is required therefore that we make progress in the noncognitive areas. For a person to pass a conventional test and therefore acquire a license to practice in the health field does not assure quality. We need *qual*ifiers as well as *quan*tifiers as evaluative tools.

8. The popular notions about economics of health care erroneously attribute the rapid escalation in cost to single formulas like the number of hospital beds or the number of doctors per unit of population. In a period when there is rapid increase in the number of people being covered by medical insurance, it is at least misleading to lump all the payment in one figure and compare that amount with an earlier one. It is like discussing the cost of travel in terms of the number of airports. Instead, we should be discussing cost per unit of service delivered. In that case we would include not only the cost of caring for a patient with tuberculosis or manic depressive psychosis, but also the cost of a heart attack to the family of a patient who lives in a rural area, or the benefit to a ghetto community of having health services immediately available so that a day of work need not be lost each time medical care is required.

There is a cost of accessibility and a cost of quality. At some point decreased accessibility becomes a charge against quality. The notion of limiting the number of sophisticated facilities or of doctors may be logical if only the dollar cost is considered. This assumes that regulation and manipulation can be relied upon to assure quality care just as they can demonstrably prevent it. The present focus on reducing cost by limiting the availability of care is particularly unfair to consumers who have only recently been brought into the health care system. Economists and managers cannot reduce health care cost in a way which is fair and also preserves quality. The only reliable method of decreasing cost is to provide some incentive for moving provision of care to an earlier phase in the continuum, that is, from tertiary to secondary to primary to prevention.

Instead of reducing available services, economic forces must be used to push care in the cost effective direction, a striking contrast to the present system which makes tertiary care most profitable to providers. Such a change might be accomplished by providing chronic disease care in public hospitals and tertiary care on a cost reimbursable basis in the larger medical centers. At the least expensive end of the

spectrum, preventive care and primary care would be supported on a fee-for-service basis providing enough profit to encourage providers to invest their major efforts in identifying and managing disease at this less expensive part of the spectrum. Disorders requiring secondary treatment (like appendectomies) would be placed in the fee-for-service or cost reimbursement category, depending on whether this or an earlier intervention represented the optimal management path. It is my belief that this approach is far more likely to reduce cost than merely withdrawing services or support from selected community areas or population groups.

9. Finally, caring is not assured by amount or type of payment; the amount or type of knowledge; the amount or type of facilities; or by regulations, laws, or the so-called system. And yet, for many people caring is the bottom line of health care. The most important factor in the development of the ability to care for others is the feeling that one has been cared for himself. Feelings of strong self-esteem, increased ability, or awareness of others' needs — while important ingredients — do not enable the individual to care to the same degree as a feeling that the caretaker himself was loved as a child and as an adult is respected, appreciated, and wanted in his present role. In other words, if you want health professionals really to care for others it is necessary to show that you care for them. We can't conduct polls which tell dentists we don't like them, and then expect those practitioners to have a caring attitude. You can't tell physicians that they are widely regarded as crooks, then expect them to devote themselves fully to caring for you. If you want people to care, you must insure that they feel cared for, that they feel respected and appreciated themselves. If society is not willing to pay this price to develop health providers who care, perhaps we should resort to the system used in some parts of Africa where health professionals provide the technical skill but the family provides most of the caring, whether a patient is inside or outside the hospital.

The danger that faces us is that we will choose between quality care for a few and mediocre care for all. This dilemma is unnecessary. The alternative is a multifaceted approach which chooses the most successful from the haves and the have-nots and judiciously combines government and free enterprise, knowledge and concern, standards and caring to provide the best for all. Racism, sexism, and poverty still remain the greatest enemies of quality *and* equality in health care and education. But as these enemies are overcome, it is incumbent upon the health professions educators to avoid creating new ones.

Comments, Questions, and Discussion

Following the address three University administrative officers were invited to comment. After a response from Dr. Elam more general discussion took place.

The invited discussants were John E. Corbally, president, University of Illinois; William J. Grove, vice-chancellor for academic affairs, University of Illinois at the Medical Center; and Helen K. Grace, dean of the College of Nursing, University of Illinois at the Medical Center. Alexander M. Schmidt, vice-chancellor for health services, University of Illinois at the Medical Center, served as moderator for the session.

President Corbally: First let me thank you, Dr. Elam, for a very stimulating presentation. We are all most grateful for what you have offered us.

In that presentation you noted that while we have reached a remarkably high level of achievement in the development of resources to deliver the best kind of health service it has been coupled with increasingly frequent expressions of disillusionment with the providers of those services. However, one might conclude that this mounting criticism merely reflects the importance of the health sciences and health professions and the fact that the expectations we have of them are very high. This may be an encouraging point of departure for further dialogue about the issues of improving both quality and equality in these fields.

You also spent some time in describing the different ways in which people think of equality: in terms of opportunity, access, numbers, and pay, among others. It seemed to me that you then went on to describe the five or six ways in which we might achieve quality. I have a feeling that we have as much trouble with different meanings of quality as we do with different meanings of equality. For example, when I go to see a physician I often feel better or worse after that visit, not so much in terms of what has been done for my physical

health but in terms of how I have been treated — your caring comment. It may be that I could be fooled by a very bad physician who is a very fine human being and who kept making me feel good all the time, mentally, while I was slowly wasting away from some physical problem. So I might describe high quality in terms of the compassionate physician, whereas I am sure others might think in terms of skills in curing people. I would be interested in some comment on whether you feel there is as great a range of meanings in the area of quality as there is in the area of equality.

Vice-Chancellor Grove: It is difficult, after such a moving presentation, to bring oneself to break the spell. But I need to put before the group the record of the University of Illinois at the Medical Center with respect to minority representation. We have had a special program since 1969 to increase minority admissions, and the number of graduates as well. In 1970-71, 5.7 percent, or 153, members of the total student body were from minority groups. In 1978-79 that number had increased to 12.4 percent, or 550 students. Yet leaders of minority groups exhort us to do more — as we should.

Nonetheless, as I reflect upon thirty-nine years of experience on this campus, I note a great change in the race and sex of both student body and faculty. Thirty-nine years ago the rare minority student would probably have been classified, using the current terminology, as an Asian or Pacific Islander. There were essentially no black or Hispanic students and no faculty members from either group. Virtually all of the students and faculty were white and English was their native tongue. The few faculty members who spoke with a thick accent were generally refugees from Hitler's Germany. One of the things that continues to amaze me as I walk around the campus today is the contrast with 1940. Today we are of varied colors, have many native tongues, and represent both sexes.

This campus, particularly the College of Medicine, has had a long experience with mixed student cultures, even among the essentially all white male population of 1940. Then the contrasting backgrounds were those brought by students from downstate counties and from Cook County. The two populations were very different in their "level of success," to use your word. The policy of admitting students from Cook County and the remaining counties of the state in the same ratio as the population of Cook County to that of the other counties produced this contrast. Then, about 1950 the Illinois Agricultural Association and the Illinois State Medical Society initiated a recruitment program for individuals who would return to underserved areas to practice, and thus another set of backgrounds was introduced into the student population. In 1969 not only medicine but all of the colleges began to seek those from yet another group — minorities.

In spite of our careful selection of those best qualified within each of these groups, some of those selected are unable to meet established standards for graduation. And so faculty members in all of the colleges become discontented and say there must be a better way. In your paper, Dr. Elam, you suggested that perhaps we should change some of our modes of teaching; independent study and diversified tracks were two alternatives you proposed.

Because of the problems we are having in recruiting qualified students, and the external pressures to extend our commitment to minority groups, we have launched the Urban Health Program. One major thrust of that program is a long-term effort to improve the quality of applicants for admission to medical schools and colleges. To help us with that work we have recruited new staff members who are especially sensitive to these issues, and have invited community representatives to serve on citizen advisory groups. One of the problems which I perceive is that among those from the minority community, as well as among minority staff members, there seems to be disagreement about how best to approach the issues of quality and *in*equality. It seems to me that some reflect a segregationist view and others take an integrationist stand. I would like your reaction to whether I ought to dismiss that perception or whether it is real. If it is real, do you have any advice about how we should manage the differing views?

Dean Grace: Dr. Elam has clearly drawn the relationship between quality medical education, quality medical care, and issues of equality in both systems. He has noted, "It is only when we attempt a synthesis of the two that a solution of one side seems to confound the other." In reacting to this paper, I shall focus my remarks on a careful examination of these relationships. Additionally, I will attempt to place medical education and medical care within a broader framework.

First, it is important to consider the issues of quality in education. Dr. Elam has accurately noted that quality of educational programs is essentially assured by the selection of students most likely to be successful in memorizing and reiterating facts, and this achievement is indicated by test scores. Selection and performance criteria are unidimensional; those who perform best on preadmission examinations are the same students who do well on tests over the content areas of medical education. The faculty breathes a sigh of relief when students perform well, because it is then assumed that they will be "safe" practitioners. That students have not learned to relate with patients in a humanistic way or that their view of the world is circumscribed is not commonly deemed relevant or of great importance.

Turning to the medical care delivery system, Dr. Elam argues that quality is measured by externally imposed standards. Most frequently these standards are not based on outcomes of care but on certain fixed

criteria, such as number of surgical cases of a particular type performed within a certain setting. The influence of the external reward system upon performance, the presence of an adequate number and variety of facilities and equipment, and the organization of the delivery system are identified by Dr. Elam as elements affecting the quality of care provided. Within this schema it is argued that the more highly sophisticated the system the better the care. Reiser, in tracing the development of technology in medical practice, notes, "Many modern physicians thus seem to order the value of medical evidence in a hierarchy: facts obtained through complex scientific procedures they regard as more accurate and germane to diagnosis than facts they detect through their own senses, which, in turn, they value more than facts disclosed by the patients' statements."[1] Specialization and the provision of care in the most technologically advanced setting, the hopsital, is valued as "best." The fit between the medical education system and what is defined as "quality" medical care is evident. Within this technological framework the medical system is judged to function satisfactorily. The more serious the illness of the patient, the better the medical care system functions; the more complex the technological aspects of care, the better. Conversely, the system functions at its worst in the area of health education, health maintenance, and illness detection. Linkage of patients into the health delivery network, continuity of care, development of care planning within a socioeconomic and cultural context are where the system works least well. But this system of medical education and medical care is embedded within the predominant American culture in which every problem has a specialist uniquely qualified to deal with it. Responsibility for management of problems is shifted from the individual, who sees himself as having no expertise, to the specialist, who is perceived to be all-knowing.

Dr. Elam argues that addressing issues of equality is the means of altering these qualitative orientations to medical education and medical care. The very same factors that have served as indicators of quality in medical education and medical care have resulted in large numbers of the population being considered as ineligible for access to medical education. Those who are judged least likely to succeed are those least oriented to test performance and rote memory, such as blacks, women, and non-English–speaking minorities. It is argued that inclusion of a broader range of students in medical education will aid in pursuing the issues of health service delivery to underserved communities and the aspects of health care not currently being addressed. With this as a focus, attention is placed upon identification of those

[1] Stanley Joel Reiser, *Medicine and the Reign of Technology,* Cambridge: Cambridge University Press, 1978, pg. 17.

most likely to be successful from a broader population base and modification of the curriculum to accommodate this diversified student group. It is argued that by providing a different context for the clinical practice component of the curriculum, this experience will carry over when the student enters the medical care delivery system as a practitioner. While this is certainly a valid argument, such a view begs many other confounding issues.

First, I must emphasize the importance of considering issues related to medical education in a broader context of health professions education. Currently, the burden for change in medical education and medical care is placed upon physicians alone, without realizing that solutions to the multifaceted and many-layered problems will require an array of health professionals working together to achieve some differing outcomes. Proposed solutions should be very carefully planned so that they do not inadvertently destroy some very real strengths in our current system. It is particularly important to assess the feasibility of change within the predominant societal framework. I firmly believe that there is a need for highly sophisticated medical specialists and a well-developed medical technology, and in altering the system I would hope that these qualitative aspects not be diminished. I firmly believe it is possible to alter the health delivery system to address issues of access, scope of care, and the promotion of health, while maintaining a highly sophisticated array of people and services for the acutely ill portion of the population. Both must be addressed without sacrificing one for the sake of the other.

But instead of placing the entire burden for change upon medical education and medical care, the whole array of health professionals and the contributions each can make to these goals need to be considered. I do not think the most valid use of highly prepared physicians is to be primary care providers in a variety of community settings and with a variety of patient populations. Dr. Elam has underscored the danger of an alternative that places ill-prepared individuals in those settings now underserved by professionals. But there is a middle position. Well-prepared nurse clinicians can provide superb services, in the community context, in the areas of health assessment, long-term care management, health education, and referral of patients into the medical care system. Nurses have the capabilities of addressing the issues of generalization and, linked appropriately into the network, can play a key role in the front lines of health care delivery. This does not diminish the physician's role, but instead complements his or her place in the total health care delivery system. Pharmacists and allied health professionals have their unique roles in a balanced system. Improvement of equality in health care can best be achieved if we address the issues collaboratively rather than unilaterally.

To achieve this it behooves us to find ways of addressing issues of equality both in education and in service delivery at the earliest stages of discussions. Too frequently each of us addresses the problems that we perceive unilaterally, without seeing how much easier the solutions might be if we respected the competence of each of the health professionals in the health delivery system and constructed our systems to utilize the multifaceted skills and talents of a variety of people. Instead, we make the assumption that one member of the team, the physician, is the only one with the responsibility or the capability of addressing the problems.

If this change in orientation to problem solving is a viable goal, it is important that it be built into the basic framework of health professions education. In the current education system, each member of the health professions disciplines is taught in a separate system. Nowhere in the educational process is there time (since we are so intent on seeing that students learn "facts") for students to learn to appreciate one another as bringing different areas of expertise and different orientations into the health care delivery arena. Role models of faculty in schools of medicine working with faculty in schools of nursing, for example, are extremely limited. The students pattern their behavior after that of teachers. Lacking such orientation as a basic component of their educational program, the graduates as they enter into practice have had no socialization into patterns of collaboration as the baseline of their work. As Dr. Elam has noted, development of ambulatory care as a basic component of the clinical practice experience is a key in developing this broader orientation to medical practice. I would argue that it is an appropriate beginning step. But I would also like to see settings in which nursing faculty, medical faculty, and faculty of other health disciplines collaborate in all aspects of health care delivery and thus establish the baseline of equality in both education and service delivery.

Dr. Elam: Thank you very much. I am flattered by your comments on my paper and pleased by the observations you have made. Let me begin my response, Dean Grace, by saying I absolutely agree with you that we can never solve the problem by approaching it from the point of view of one profession alone. My own program at Meharry is in fact one which trains nurse practitioners for the developing countries. We can't train their physicians on site and can only bring back a few to be trained here, so that limits us in terms of numbers, but I certainly agree with your view. However, there is a point of disagreement about how to educate health personnel to work together. I have tried several ways and have decided that if the goal is to assure interprofessional cooperation and understanding among nurses, physicians, psychologists, and social workers, for example, it is a mistake to start their training

together. You must train each discipline independently long enough to develop an individual professional identity, then continue their training together. If they begin together, they never acquire quite enough of the necessary individual professional differences, and you create a situation in which a social worker, a nurse, and a psychiatrist are on the same team, but rather than being three different professions they seem like one, having failed to differentiate enough.

Dean Grace: I totally agree with you. That is why I stressed the importance of *faculty* working together.

Dr. Elam: Now let me turn to the question of whether the physician should do primary care. I think the most important sector of the whole health care system is disease prevention; a close second to that is primary care. When patients are very sick, they don't appreciate that fact. The person who has serious valvular heart disease wants a physician who can do something definitive about that defect. But how much more important it really is to have, for example, a program in the grade school that leads both children and parents to take the steps needed to prevent the valvulitis from developing. We all recognize that this is the principal point at which intervention should occur. For that reason I think it is very important to have people from all specialties involved in primary care: physicians, nurses, social workers, and psychologists should all play some part in that segment of the health care spectrum. I think it should also be the most profitable area, in monetary terms. Since we live in a society in which money is a motivating factor, primary care is where the payoff should be. Even better, put it in prevention. I haven't figured out how to do it, but that is really where the greatest profit should be earned. If it were, that is where practitioners would be. If we have nurses running primary care programs and no physicians involved, then primary care will somehow seem of only secondary importance, at least in the eyes of patients. I say this even though in Botswana that is exactly what we are doing: the nurses work in primary care, not the physicians. Nonetheless, even there the hospital has more prestige than primary care settings. I am convinced that both are needed.

Now let me turn to President Corbally's comment about the bad physician who makes you feel good. If a physician has neither good caring qualities nor good scientific qualities he is just incompetent and is not going to be around very long. If the practitioner taking care of you is a terrific human being but doesn't know anything, he really is a fraud, one who makes patients think he is doing something useful when he really isn't. The best example of that may be the chiropractor who often impresses patients through facade rather than substance. On the other hand, if the practitioner has a good scientific background but doesn't care for patients very well he is going to get sued. I think

that in order to avoid being a fraud or getting sued you need to mix the caring and the scientific base. As a matter of fact Tinsley Harrison in *Your Future Health Care* attributes the improvement in medical education to two traditions: first, the development of medical schools in association with hospitals where teaching is centered around individual patients with spontaneous and formal training in small groups; second, the development of medical schools as integral parts of the University with an emphasis on medical science and research. These two traditions are usually identified by reference to William Osler and Abraham Flexner. Harrison says, "Because of the advances both in research and in education the quality of health care has risen sharply. This rise has occurred because of the application, both preventive and curative, of the new knowledge that first has to be acquired through research, and then disseminated through education. But this is not to say that either as regards service or education do we live in the best of all worlds."

My comment is intended to emphasize a belief that we must have in our educational programs both the scientific and the caring components. I am not certain that we are doing it very well, in part because we don't know very well how to facilitate the acquisition of caring but also because we offer the scientific part so early and base it on memory rather than on use of knowledge.

Dr. Grove asked whether it is true that there are people who see the approach to quality and equality in a segregationist mode and others who have an integrationist view. I believe that there are these two camps. Those who take the segregationist view are people who seek a political base. Individuals who take the integrationist approach have a different view of what is needed to effect change. If you look into the political world it is clear that for a minority person who wants to get elected rapidly the best place to live is in a minority community. However, a person who wants to get elected to represent a total population needs the support of all component groups, and living in a segregated community will not serve very well. The same thing is true in education. If you are trying to develop a system into which students can be admitted rapidly, a segregationist approach will be best. It was just such a system that was struck down by the Supreme Court — a system in which a certain number of places were reserved for minorities. But if you want a long-term solution to the problem this is not the way to go. Instead, it is necessary to find a way for everybody to compete, a way to choose individuals most likely to be successful in what needs to be done. That way is the most promising approach to both quality and equality. Personally I do not think that any school should follow the segregationist view, although I know that there are those who disagree with me. On the other hand, I do not think that

any school can fairly develop a program in which only a small number of parameters are employed in the selection process, for that will inevitably produce an elite student body. That we must guard against.

President Corbally: Isn't the long-range solution one in which if there *is* one parameter, or two, or three, some limited number that does predict success as an "X" — physician, accountant, or whatever the profession for which students are being selected. Our homes, our families, our elementary schools, our secondary schools, and our society would develop in such a way that when students get to the point of selection, admission groups could use a small number of parameters, and could do so without being unfair to any individual because of the backgrounds they bring to the moment of selection.

Dr. Elam: I don't think that would be best *unless* we chose a parameter in keeping with what is needed at the end. For example, if you look at Medical College Admission Test scores and compare them with later achievement, those who have high scores do well in the first two years of medical school. On the other hand, if you look at admission interview assessments there is no correlation with how well they do the first two years. But if you compare these findings with how well individuals do in residency training, then you find that the ones who did the best on the interview perform best as residents. Which one, then, should we use, if we are to use only one: that which selects students who will do well in their first two years (who will surely pass the academic requirements but won't be good as physicians) or that which selects students who may have trouble in the first two years but if they make it through will be good doctors? In my opinion we should use both.

Vice-Chancellor Schmidt: Let me turn now to all of those who have been patiently listening to others' thoughts and questions. Please use this opportunity to talk with Dr. Elam.

Questioner: Dr. Elam, you said that the definition of quality is not critical but then went on to illustrate some of the elements that have been used in its identification, such as equal access and equal opportunity. All of these, however, can be used to weed out potential health providers along the way, and thus impede the achievement of equality as well as quality.

Dr. Elam: It is for just this reason that I think the health professions cannot afford to have a narrow view of equality. They must accept the fact that different groups of people will look at different aspects. As a matter of fact, there may be some people in this room who will never acknowledge that equality has been achieved until parity has been won: if the population has 10 percent of a particular group then 10 percent of the doctors must come from that group. It will surely

be a long time before such a goal is reached, but the health professions must accept the fact that this is one of the definitions of equality by which they will be measured. My comment was intended to emphasize the importance of recognizing all these definitions of equality so that in all programs they will be considered.

Questioner: What is being done in the admissions process to identify in applicants the personal characteristics you have emphasized, things that go beyond mere scholastic achievement?

Dr. Elam: Research indicates that there is a correlation between how well people do as doctors, as reported by their residency supervisors, and how well they did on the admissions interview. This research has been repeatedly confirmed, and I think most schools now require an interview as part of the selection process. As more and more schools take seriously the findings from this procedure I think we will more and more take into account these noncognitive factors.

However, it is equally important for schools to *care for* the students they admit. If the way students were treated some years ago is compared to the way they are treated in medical school now, I tell you that there is a difference, manifested by far greater efforts to treat students as responsible adults who need caring as well as facts. If we do not behave this way then we are unlikely to develop doctors who are going to care for patients. The major problem that I see in this area has to do with the institutional reward system. Faculty members are not often rewarded for caring for students but for doing research, writing papers, even serving on committees, a variety of things which do not reinforce a faculty commitment to this caring value and practice. Students have discovered this and try to remedy the institutional failure by giving various prizes to faculty who do care.

Those are two ways in which I think we can try to encourage caring. You can't teach students to empathize; you can't simply lecture about how to empathize; you must provide an atmosphere that makes students want to empathize.

Questioner: Do the various schools and colleges on this campus use the interview as part of the admissions process?

Vice-Chancellor Grove: I can only speak with any degree of authority about the College of Medicine. A number of years ago the interview system was discontinued because it was kind of a travesty on the selection process, since those who interviewed did not know whether they were screening or recruiting. It tended to be a situation in which the interviewer concluded that those who most resembled his own personality must be good candidates. About three years ago the admissions committee began an intensive study of the interview process, to determine how an interview system might be set up which would approach

objectivity and what such a system would cost. A year and a half ago steps toward implementation of such a system were taken. It is my understanding that it will be in place for students who will be selected for the entering class in 1980. The other colleges do interview some students.

President Corbally: I can add what I think is a sad commentary on some of these efforts. It reflects the effect of our current tendency to sue on almost every issue. As surprising as it may seem to many people, the greatest pressure the University of Illinois receives for admission is to the College of Veterinary Medicine at Urbana. It is the only such college in the state, and there are only about twenty veterinary colleges in the whole country. If you don't have one in your state or if you are not in a state which has a contract with a college of veterinary medicine in another state it is virtually impossible to get in. Obviously the alternatives are very limited. Only recently has it been possible to go to Guadalajara.

Therefore applicants feel very intensely about these limited opportunities, and we began to have a growing number of lawsuits about admission decisions, particularly those related to subjective judgments. Thus, we have been pushed more and more into making admissions decisions on the basis of quantitative data that can be defended as being objective, even though we all know that numbers can be equally unreliable. This has led admissions committees in veterinary medicine to decrease the weight given to the interview as a part of the admissions process because the interview was most vulnerable to the charge that it led to discriminatory decisions. For example, it is charged that interviews discriminate against the person from a big city who did not have opportunity to become as familiar with animals as the person from the rural area, and therefore was at a disadvantage in the interview. The same problem is appearing elsewhere. Law schools increasingly take grade-point-hour ratio and the LSAT, add them together, rank candidates, and draw a line.

That is a countereffect to some of the efforts to broaden admissions criteria. But I think there is need for a great deal of effort to restudy how we can better make these decisions, knowing that, while they are all subjective, they have to be made as carefully, as honestly, and as closely related to the purpose as possible. It is surely useful to seek ways to get back to interviews and to other kinds of measures which are not easily quantifiable.

Vice-Chancellor Schmidt: It is also important to recall that Dr. Elam mentioned that our academic system seems not to be rewarding faculty who care about students. Neither has it been rewarding the role model of the great physician. As I read medical history, about the Soma

Weisses and the others who were so inspirational in the way they treated patients and how they cared for people, it seems our modern technological society has gone a little away from providing that kind of role model.

Questioner: In the course of your lecture you noted the importance of dealing both with the unknown frontiers and with providing a caring environment for students as well as patients. Perhaps this suggests that we need two types of health professionals. On the one hand we need some who will be professionally discontented, always trying to prove something, who have perhaps had unfortunate childhoods or frustrating school years but who will become the individuals who devote themselves to exploring those frontiers. At the same time there is surely no question that we need the other, with the background of nurture, who will be caring and sympathetic practitioners.

Dr. Elam: I certainly agree that we need to stimulate and develop great researchers, although I don't know how to do it. I am pleased to know you recognize that, at the Freudian level, the reason people are involved in research may be that they are trying to discover something about themselves. Freud had some words about what part their sexual curiosity played in arousing their interest in research. I don't know exactly how you do this, but however we do it I think we should. We must take into account, though, that of the great discoveries in medicine many have occurred because faculty/teachers/researchers were concerned with people. Some discoveries have surely been made by people who spent their whole lives working with mice, and we should not discount the fact some faculty members don't like to work with people. But if you look at the recent big discoveries, they were made by those who were concerned with people. I think we need to find better ways to get the two together. However, developing researchers is a very important activity. I say that we don't know how to do it because I see so many researchers who are simply compulsive types. Maybe that is the way it should be, but we also need some researchers who are concerned, who are innovative, who come up with new ideas, not just the compulsive ones who keep working until they get to be full professors.

The David D. Henry Lectures in Higher Education

"The Administration of Higher Education in an Era of Change and Conflict," by Clark Kerr, October 1972

"Can We Maintain Quality Graduate Education in a Period of Retrenchment?" by David Riesman, April 1975

"The Administration of Education for the Health Professions: A Time for Reappraisal," by John R. Hogness, April 1976

"The Education of Administrators for Higher Education," by Harlan Cleveland, April 1977

"Socially Imposed Costs of Higher Education," by Howard R. Bowen, April 1978

"Quality and Equality in Health Professions Education and Service," by Lloyd C. Elam, April 1979

Copies of these publications may be obtained from the President's Office, 364 Administration Building, University of Illinois, Urbana, Illinois 61801.