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PREFACE

We have chosen "Issues for the Eighties" as the theme for this edition of *Review of Allied Health Education*. Previous volumes concentrated on the educational advances in specific allied health disciplines with a lacing of essays of a more general nature. Because the editors believe that within the present decade certain changes in national needs, attitudes, and the economy will have far-reaching effects on allied health education on a broad front, we have assembled a select number of topics which should be of general interest to all segments of allied health as well as to others engaged in health professions education.

Some of the forces which will create change in allied health education are already at work, others seem likely, and some are speculative. It is obvious that the severe shortage of allied health personnel is over, at least for the present. Although shortages may remain in certain disciplines and in certain locales, the need overall for increasing enrollments has abated. Accompanying this lessened need has been a turndown in the economy and a conservative mood which will spell tightening if not decreasing budgets for most allied health education.

The weakened economy has not been helped in the least by a soaring health care bill which increases at a rate beyond acceptability, and whose major component is the cost of providing care to the institutionalized patients, where incidentally most allied health professionals work. Cost containment measures will exert great influence on the staffing patterns of these institutions. All of this means increasing competition in the academic and job marketplace for funds and among professionals. It means restrictions and regulations
on how resources are distributed, as well as how health care is delivered.

Pressures for change have social origins as well. All of our scientific advances in health care have tended not only to increase its costs but to depersonalize and fragment it. Our society expects its health professionals to be not only available, accessible, and affordable, but competent as well and, above all, humane. It views an expansion of primary and ambulatory care as not only less expensive than hospitalization but more comprehensive and personalized. The maintenance of competency and the movement away from traditional inpatient care when possible will have far-reaching effects on how allied health education is delivered in the future.

All of this may sound desperately grim and foreboding, and that is not the intent of this foreword. Rather we hope that an awareness of these trends will stimulate all of us to approach the future with a vigor for change and an eagerness to attack deliberately the problems facing allied health education.

With this in mind we chose topics for this volume which we considered useful in the broadest sense and authors whose knowledge and experience in these areas was respected. Pellegrino addresses the need to reinforce the core of humaneness without which total health care is diminished and in turn diminishes us all. DuVal, now so heavily involved in encouraging health promotion and disease prevention, provides a candid appraisal of where we are in this process and the challenges which need to be met.

The husbanding of resources in allied health education can be approached in a variety of ways. Hanavan in his essay on the preparation of administrators recognizes the need for more efficient management of academic allied health units. Connelly’s chapter describes interdisciplinary education as an approach to creating a receptivity for alliances in the health care setting. The theme of alliance is continued by Rousch and Hodges in their description of successful developments in educational consortia, and Kinsinger challenges the role of the community colleges as they face the eighties.

Boatman bridges the town and gown relationships through a provocative look at continuing education and what it must be in the future, while Mase explains the role of the Health Systems Agency and its importance to both health care delivery and indirectly to
education. Finally, Hamburg and Robinson discuss the potential opportunities for allied health in service and education in the primary care setting.

There is much food for thought in this volume. We hope that as with our previous efforts this new volume continues to serve a useful and productive purpose.

Joseph Hamburg
Darrel J. Mase
J. Warren Perry
MEDICAL HUMANISM:
THE LIBERAL ARTS AND THE HUMANITIES

Edmund D. Pellegrino

The distinctive feature of the intellectual history of twentieth-century medicine is its close identification with science. While the practical benefits of that identification are indisputable, we are yet to assess its impact on the more human dimensions of the medical enterprise. Indeed, there is genuine concern that capitulation to a predominantly scientific or technological ethos might endanger the "humanistic" traditions of the profession.

Rightly or wrongly, many of the perceived deficiencies of scientific medicine—its objectivity, specialization, and even its bureaucratization—are ascribed to an overinfatuation with high technology and the pursuit of knowledge for its own sake. Somehow, Sir Luke Fildes' physician tenderly hovering over the sick child is seen replaced by Sinclair Lewis' Arrowsmith, bending over broth and petri dish.

To allay these fears, and without losing the benefits of medicine's Promethean assault on disease, there is a renaissance of interest in infusing medical education with the humanities and the liberal arts. The hope is, in part at least, to restore "humanism" to medicine and thus buffer the depreciation of human values which the scientific orientation of medicine is purported to encourage.

Such a simplistic polarization of humanism and science can hardly account for the complex metamorphoses of contemporary medicine. Yet, there are some compelling reasons to warrant a more serious effort to balance medical science and medical humanism than in the past. Science and humanism reflect different ways of apprehending human existence. Medicine, by its nature, resonates between
them. It cannot rest at either extreme and still remain authentic as medicine.

In recognition of this resonance, in the last several years some eighty medical schools have introduced some form of teaching of humanities, usually as ethics, into the curriculum. It is premature to evaluate the lasting practical and conceptual impact of these efforts, but it is already clear that there is a wide variation in what is meant by medical humanism, the humanities, and the liberal arts.

It may not be inappropriate then to introduce some remarks on the history and evolution of three central ideas: humanities, liberal arts, and humanism. Their relation to each other, and their special meanings in medicine, must be clear if educational programs are to be designed with precision, and if the disappointment of unrealistic expectations is to be avoided.

*Humanities, liberal arts* and *humanism*: These are three seductive, rich and illusory words whose meanings have been interpreted variously for centuries. Almost everyone in the Western world appropriates them to dignify his or her own education or behavior. There are few self-proclaimed *inhumanists, illiberal educators, or enemies of the humanities*. When applied to medicine, these three terms take on a quasi-mystical aura even though they are more often proclaimed than attained.

The precise origins of the term *humanities* is difficult to ascertain. The term was already in general use by Cicero's time (106-43 B.C.). Through his writings it had an enormous influence on the whole history of education in the West. Cicero uses the term to encompass those studies which were most essential to an educated man, a gentleman, or free man. In Roman times this meant those studies which best prepared the citizen for a public life and were crucial to effective oratory—rhetoric, grammar, and logic, the arts of the word as opposed to the military arts or the crafts.

Cicero derived his idea of the humanities from his Greek predecessors. We can, for example, find reference in Aristotle's *Politics* (1137, 3, Book VIII) to the proper education of free citizens where the branches of education are given as: (1) reading and writing, (2) gymnastics, (3) music, and (4) drawing. This is a rather different list from Cicero's, but nonetheless, it was associated with the idea of the learning required for a free man, and one might aspire to their use in
leisure as well. For Aristotle, the right use of leisure was the proper aim of education.

The Roman encyclopedist, Varro (116-47 B.C.), had listed nine artes liberales in his treatise Libri Novem Disciplinarum: grammar, rhetoric, logic astronomy, arithmetic, geometry and music, medicine and architecture. Varro's ideal was interpreted as the basis of Roman education by some of the most influential writers of the ancient world—Seneca (4 B.C.-A.D. 65), Quintilian (A.D. 35-95), Philo Judaeus (20? B.C.-A.D. 50?), and St. Augustine (A.D. 354-430). Augustine limited the liberal arts to seven. It was Martianus Capella, however, who in A.D. 439 in his De Nuptiis Philologiae et Mercurii formally excluded medicine and architecture as too utilitarian. Cassiodorus (A.D. 480-575) and St. Isidore of Seville (A.D. 560-636) followed suit. Rabanus Maurus is credited with first speaking of the "seven liberal arts" in his De Clericorum Institutione (A.D. 819). Grammar, rhetoric, and logic later became known as the "Trivia," and arithmetic, geometry, astronomy, and music were called the "Quadrivia."

The seven liberal arts formed the framework for university education in the Middle Ages. The "Trivia" gradually became identified more closely with the "arts" since they were more general, and the "Quadrivia" became "disciplines" since they were more specialized. In some ways, the distinction approximated that which was later established more explicitly between the arts and sciences. The Trivia and Quadrivia were in the medieval university propaedeutic to the study of the professions—medicine, law, and theology, which were regarded as utilitarian, more specialized, and hence less "liberal."

In the Renaissance universities of Italy, the differentiation between the professional studies—law, medicine, and theology—and liberal studies became more sharply demarcated. The faculty who taught the ancient language and literature of Greece and Rome and who specialized in philology and the validation of ancient texts called themselves humanista. It is out of this word that the German, Niethammer, in the first years of the nineteenth century, fashioned the word humanismus. He identified humanismus with a literary and educational ideal shaped by the study of the ancient languages of Rome and Greece, and especially of Latin antiquity.

During the ninth and tenth centuries, the terms humanism,
humanities, and the liberal arts became rather more synonymous, or confused, with each other. The term humanities had been associated since the time of Aulus Gellius (A.D. 130-180) with training in the "good" arts, the ancient liberal arts. It is now applied to all the divisions of philosophy, language, literature, and history. These became "disciplines" and the ancient Trivia—logic, grammar, and rhetoric—gradually were subsumed into philosophy, language, and literature, which took their place in liberal education. The Quadrivia have evolved into the sciences, which have become increasingly separated in spirit and content from the humanities but are still considered part of a "liberal" education by many.

Today, the words humanism, humanities, and liberal arts have lost much of their specificity. There are, for example, a dozen definitions of humanism, which is no longer restricted to defining a literary or educational ideal (i.e., atheistic, Christian, scientific, socialist, psychologic humanisms). Humanism seems to apply loosely to any endeavor or concept which places primary emphasis on man and his values, though the nature of those values may vary enormously. Every discipline claims to provide a humanistic education, and none will grant this quality to be the special domain of any other.

The humanities, too, have been stretched a little out of shape. Some historians regard themselves, for example, as social scientists. Social scientists, especially the more "humanistic"—that is, the non-mathematical branches of sociology, psychology, or anthropology—want to be included among the humanities. Even natural scientists will hold that they treat their subjects "humanistically."

The same fuzziness is encountered when we try to understand what the liberal arts mean. Almost all the disciplines now hold at some point that they are essential to a "liberal" education—meaning usually a general education. The social sciences, the physical and biological sciences, assert that they teach values, critical thinking, and clear expression just as well as the humanities.

The humanities have moved a long way from their pristine position as the common and shared legacy of all educated men. They are, instead, scholarly specialties seeking out those few students who will replicate them and their disciplines. The humanities have become professionalized, and in doing so they have lost those very characteristics which in the medieval and renaissance world set them apart
from the professions. Rather than serving as instruments for teaching the liberal arts—the arts of the word—they now teach the content of a special field of knowledge. Some specialists in the humanities even universalize their own specialty, making it synonymous with a liberal education. This distorts the meanings of both the humanities and the liberal arts.

Finally, the whole idea of a liberal education underwent a dichotomy of value and purpose in the nineteenth century. Under the influence of the industrial revolution, and the utilization of engineering and science as means of improving human existence, the ancient idea that certain arts were essential to educated men was questioned. For Herbert Spencer and Thomas Huxley, the humanities came to be regarded as graceful filigrees to an education, but not really useful in the practical affairs of the world. Cardinal Newman, of course, had maintained the opposite view that the liberal arts were essential to the training of the intellect regardless of the specific focus that intellect might take. But his view was gradually eroded as the demands for mass education became universal and as education became the means of social and professional advancement.

Today, the dominant notion of most educators, in universities as well as medical schools, is that the liberal arts should be taught as a preparation for professional education. In this, they agree with the medieval view that the liberal arts are propaedeutic to specialized studies. The contemporary view differs in that it does not consider the liberal arts as intrinsic to being a good physician or allied health professional. In this latter view, contemporary medical educators are closer to the Spencerian view that the liberal arts are not directly related to practical affairs but are embellishments—worthy, indeed, but expendable, nonetheless.

The liberal arts today are mostly honored in the breach. The student is presumed to have “had” liberal education when entering medical school. That education, however genuine it may have been, is isolated from medical studies. It is not permitted to “dilute” the technical information necessary to medical practice, nor to divert the student’s energies.

Yet it is precisely as an intrinsic part of medical education that the liberal arts are most sorely needed. We are in an era in which the decisions imposed on the physician and allied health professional
demand a higher sensitivity to value questions than ever before. How then can a liberal education inform a medical education? Is it feasible to expect it to do so? In what ways?

The answers to these questions are greatly complicated by the transformations which have occurred in the crucial terms humanism, liberal arts, and humanities. Perilous as the attempt may be, I must next suggest some operational definitions of these terms before outlining how the humanities may contribute specifically to a medical education, and how they may in the best sense of the word inform it.

**SOME OPERATIONAL DEFINITIONS—LIBERAL ARTS, HUMANITIES, HUMANISM**

We have reviewed very briefly the evolution and shifting definitions of the major terms used in the perennial discourse about "liberal" education. Is it possible in the parlous state of these definitions to extract those elements most essential to a contemporary understanding of the liberal arts, the humanities, and humanism?

Let us look, first, at what is essential in the concept of "liberal arts." I see them as a set of skills which truly set us free, and without which we cannot be consciously free men in any other domain. The freedom to which I refer is freedom from the tyranny of the opinions, ideas, words and productions of other men. Rather than identifying them with the skills proper to free men as the ancients did, I prefer to emphasize that the liberal arts are skills that make us free. They protect us from being overshadowed by educated men and experts and, in a more positive vein, enable us to develop our own opinions and ideas, our own intellectual identity without which we also cannot be "free."

*What are these skills?* The first of the liberal arts is the capacity for critical thinking. This means primarily the ability to engage in dialectic, to be able to evaluate evidence, to perceive logical inconsistency, to weigh opposing views judiciously, and to follow, assess, and develop a line of argument of our own or someone else's. Without this capacity for critical thinking in public, private, and social life, we are constantly at the mercy of others who have taken the trouble to reflect critically upon their opinions and put them
into order, rejecting some, accepting others, and standing ready to
explain and justify them to others.

This first art is especially crucial in a technological society where
the expert is appealed to so readily, and where the abandonment of
dialectic is so easy to rationalize. Yet, each of us as an expert in some
narrow field recognizes just how subject we are to the tyranny of
another expert when we stray outside the perimeter of our own
expertise. We are even taught not to criticize in fields other than our
own. Yet this is precisely what is demanded of a free and educated
man. Aristotle, in his treatise, On the Parts of Animals, singles out as
the most distinctive feature of an educated man the ability to form
judgments outside the range of one’s own narrow field.

The second liberal art—or skill—and one which is in some ways
anteri or to critical thinking is the capacity to listen and read intelli-
gently. Unless we understand the nuances of words and language we
are at risk of assenting to ideas and opinions whose implications we
do not comprehend. To advance our own ideas effectively, we must
be capable of clear, if not eloquent expression, at least in our mother
tongue. To advance our ideas persuasively we need the additional
skills of rhetoric, not in its modern pejorative but in its ancient
rigorous sense. Style, the personal and individual modulation of
language which gives it distinction, is too much to ask of everyone. It
was part of the ancient concept of eloquentia. It is not always
attainable, and is expendable so long as we can use language clearly
and explicitly for explanatory purposes.

The third liberal art is the capacity to make judgments about the
beautiful, about the claim inherent in a creative work of literature,
painting, music, or sculpture, let us say. While no one can be expert
in all the “fine” arts, and only a small number can employ them
creatively, nonetheless some capacity for aesthetic judgment is requi-
site. It is the only safeguard to freedom from the judgments of others
in these matters. A painting, a play, an oration are a claim on our
sensibilities and they beg some response. The degree to which that
response is informed and personal determines the degree of our
freedom from capitulation to the artist or the professional critic.

The fourth skill essential to a free man is the capacity to make
judgments about morals—to understand, assess, and resolve conflicts
in obligations and responsibilities. Almost every human transaction
involves moral principles and intersecting systems of values. To be free of the imperialism of another’s moral system we must know how to make judgments about morals—to understand, assess, and resolve conflicts in obligations and responsibilities. Almost every human transaction involves moral principles and intersecting systems of values. To be free of the imperialism of another’s moral system, we must know how to make judgments of our own. This implies the capacity for moral discourse, for delineating moral principles and choosing our own. No free man can parrot what others tell him is “good” or “right.”

Fifth, it is difficult to be free if one cannot comprehend the notion of continuity—that is to say, of history—and the validation and interpretation of the record left by those who preceded us. The past has the capacity to imprison us if we accept it uncritically or to teach if we know how to interpret it properly. History, like ethics, is an extension of the liberal arts of the word. Each adds a special dimension to the more primary arts; ethics adds morality, and history, time. It enables man to assess claims about the true, the good, the beautiful; to judge, assimilate, and thus to locate one’s self in reference to the chains in time; to express one’s views; to engage in discourse; to persuade; to feel as well as understand human activity.

What is the relationship of the humanities as disciplines to the acquisition of the arts that makes men free? It is simply this—the traditional humanities (philosophy, history, literature, and language) are the instruments through which the liberal arts can be taught. They share this capability, but each emphasizes one of the skills more specifically than another. They each deal with some manifestation of man’s activity as man, with his subjective, conceptual, artistic, dramatic, imaginative productions. They are the modern counterparts of the ancient studia humanitatum. They enjoy this distinction not as scholarly specialties, no matter how rigorous that scholarship may be, but as educational devices. Sound scholarship is the essential prerequisite which assures the soundness of the matter upon which the liberal arts are exercised. That exercise is the substance of a liberal education. Scholarship by its nature must delimit, exclude, concentrate. To add even a jot of really new knowledge is a difficult task which is antithetical to the aims of a liberal education. It is possible, therefore, and even probable in many universities, to be exposed to the humanities as disciplines but not to be liberally educated.
Can the sciences teach the liberal arts? This is a frequently asked question these days. It is often posed by some enthusiastic scientist, himself well educated, who believes he owes that education to his scientific discipline. It is difficult to deal with the question since it is often passionately propounded. Every profession claims to be liberally educated and that it, too, must be “humanistic.”

To the extent that science is studied as philosophy, history, or literature, it could be the vehicle for teaching the liberal arts. But science as science is the vehicle for a specific method involving observation, hypothesis formulation, experimentation, and further hypothesis formulation. It must emphasize some very different attitudes of mind. Science cannot be science without attention to technical methodology, to measurement, to instrumentation, and to quantitation. This is not to deny the creativity of science, or the inherent beauty of an elegant theory of an object in nature. But science as science prescinds from these particulars when it seeks general laws and verifiable explanations of reality.

There is considerable warrant therefore for the traditional division of intellectual labors between the sciences and the humanities notwithstanding facile attempts like C.P. Snow’s to amalgamate them. To blur traditional distinctions may be attractive educationally—particularly for scientists. It can only end in the two extremes of pushing the humanities farther into specialization or diluting the quantitative thrust of science. The sciences and the humanities, like humans themselves, must learn to live amicably and constructively with their differences. Indeed it is the task of a university to generate the intellectual climate which permits the differences of each discipline to be its life work.

Finally, like the concepts of the liberal arts and of the humanities, the idea of humanism needs some clarification in contemporary usage. I have briefly outlined the origins and multiple evolutionary pathways of the original term. The mere mention of “humanism” must precipitate the question, What kind of humanism? The original sense of the term as a literary and educational ideal has been stretched beyond recognition. We must find some general characterization of the concept that underlies the multiplicity of contemporary interpretations. I like the characterization proposed by Abraham Edel. Edel refers to a “strain” or spirit underlying all forms of humans which places emphasis on the centrality of human values, the
dignity of man, the concern for the dilemmas of his existence. This strain underlies every form of "humanism," though the philosophical justification, and the definition of values and priorities among them, will be extremely variable and even antithetical.

To illustrate, Christian, socialist, and atheistic humanisms all avow a concern for human values and the dignity of man. Christian humanism derives that dignity out of the fatherhood of God; socialism sees it expressed through the organism of the state; atheism envisions man alone in the universe, creating his own values. Similar divergencies may be found in existential, literary and classical, Islamic, Chinese, Indian, psychological, and other "humanisms." A more contradictory set of "values" can scarcely be imagined than those subsumed under the rubric of humanism. Yet they all seem to strive to express a particular dedication to the humanistic "strain"—the concern for what it is to be human.

When applied to medicine, humanism usually takes two forms, as I have described elsewhere.² Briefly, these are the affective and the cognitive. In the affective, the emphasis is on the physician's and the allied health professional's empathy, compassion, sympathy, and a sense of identification with the needs, dilemmas, distress, and the psychosocial assault manifest in illness. In the more cognitive interpretations, the emphasis is sometimes on the physician and allied health professional as an educated man and his conversation with the larger implications of medicine for and in culture, sometimes on the traditional, classical, or literary educational ideal, and sometimes on a better understanding of individual and social value systems and ethics.

Such a separation of medical humanism into affective and cognitive components is understandably offensive to many people, and quite artificial. It does at least define the spectrum along which varieties and shades of emphases may be placed however. So whenever we hear a clarion call for more "humanism" in medicine, or for a resuscitation of "medical humanism," we must ask, What kind? Only in this way can the emotionally laden discourses be kept within some bounds of intellectual propriety. One must decide whether to argue about the philosophical justifications for one or another brand of medical humanism, or to understand the rich content of the term and explore its practical implications for medical education and practice.
Most of those who want medicine to be more humanistic would like to see both components combined in one ideal and compleat physician. Prototypes would be Sir William Osler, no mean classicist in his own right, as well as an empathetic physician and teacher, or Albert Schweitzer, the symbol of the compassionate physician, who was also an accomplished organist and Bach scholar. Schweitzers and Oslers are rare, but they stand as asymptotically approachable symbols of how the cognitive and affective may be indissolubly united in one physician.

Can the humanities inform medicine? Every medical student cannot expect to attain the degree of affective-cognitive synthesis symbolized in a Schweitzer or an Osler. What then should the realistic goal be for a medical school concerned with the issues implicit in the current call for a return to medical humanism? What role do the humanities and liberal arts play in achieving these goals? How can the traditional disciplines inform medicine?

Every school should strive to give every medical student the opportunity to develop either, or both, the affective and cognitive components of medical humanism. That opportunity should occur pari passu with medical education, even if the student has "had" a liberal arts education. The liberal arts as we have defined them are not implanted forever by a college education. More than the sciences, the humanities need to be assimilated and appreciated as part of personal existence. They mature with lived experiences; they are constantly in need of refurbishment, recultivation, and reinforcement.

Medical studies offer an especially fertile setting for this refurbishment of a liberal arts education. The student is committed to a specific course of study. If he can appreciate that those studies are crucial to being a good physician, he cannot argue about their "relevance." Moreover, the very nature of the decision-making process underscores the choices physicians and patients must make among values. Medicine also is becoming almost exclusively technological in its methods; it focuses on the concrete, the practical, the objective. It provokes the sensitive student to seek some balance of fact with value—for it is the dynamics between facts and values which constitute the very essence of human decision-making. Finally, the daily life of medicine can become an unrelieved technicist desert without the watering of the human spirit by literature and the arts.
In short, the medical student, the physician, and the allied health professional have many reasons to welcome a reinfusion of the liberal arts, whether previous exposure was successful or not. In either case, the humanities can inform medicine, as we can see by reflecting a little on precisely what is meant by "inform."

First, it does not mean to impart information. There is enough of that in a medical education to satisfy the hungriest fact-famished soul. I am using the word in a more ancient and, I must say, a scholastic sense—that is, to put a thing in order, to give form to something, to imbue, impregnate, and impart a shaping spirit. Taken in this sense, I believe the humanities are essential and not just a filigree to medical education.

The instruments through which this process of informing takes place are the humanities traditionally conceived—philosophy, literature and language, history. When taught with integrity, these studies "inform" the practice of the profession the special attitudes of mind conveyed by the liberal arts. These are the indispensable intellectual antidotes to the overwhelming technicizing potentialities of contemporary medicine.

*Philosophy* inculcates the capacity for internal and external dialectic which enables the physician to reflect on his acts, to understand their essential nature, and to weight the propositions of colleagues. Literature opens to the physician and allied health professional the way to creative interpretation of the human experiences of happiness, illness, hope, and despair.

Literature can simulate these experiences in the reader—inducing empathy, something which the physician in his striving for objectivity may too easily exclude. *History* locates the physician and allied health professional, his patient, and society in a moment of time and a frame of geography and culture. Philosophy, literature, and history all particularize and thus humanize by forcing the physician and allied health professional to focus on the felt reality of identifiable and credible human experience. They are avenues not only to the freedom of the physician and allied health professional as a person but to medical humanism in the broad sense. The humanities, in short, thrust human values before the physician and allied health professional insistently, inevitably, intensively, and immediately.

The physician and other allied health professional cannot ever
forget that values are at the heart of the medical enterprise. All the art and science of medicine ultimately converge on a decision which is "right" and "good" for a particular patient, here and now. Medicine as medicine is concerned with action, not the conclusion of a scientific syllogism, or the demonstration of a general law of nature. The scientifically "right" is ultimately subservient to what is "good" and "worthwhile" in this patient's system of values.

Medicine is therefore a moral enterprise, and whatever studies help physicians and allied health professionals to think clearly and sympathetically about human values must be relevant and thus intrinsic to medical education. It is this realization that accounts for the great resurgence of interest in bioethics. Physicians are slowly coming to understand that ethics is a formal discipline, a branch of philosophy, not a set of autonomic reflexes about what is "good." In the medicine of today, ethics represent the minimum exposure to humanities, as essential to being a physician as the clinical and basic sciences.

While the humanities are intrinsic to medical education before, during, and after medical school, we must not forget their more fundamental role in the education of the physician and allied health professional as a person as well as medical professional. The humanities "inform" life as well as the profession. They are in short avenues to the "life of satisfaction" of which Alfred North Whitehead spoke so eloquently. They enhance, enrich, deepen, and sensitize us to our own experiences of life, opening the possibilities of aesthetic and intellectual delectation of a kind to which only the cultivated intellect has access.

In the midst of this paen of praise for the humanities I must hasten to dispel two serious misconceptions about the relationships of the humanities with humanism and humanitarianism. The first is that the study of the content of the humanities will by itself confer that strain of concern and capacity for empathy with the work and experience of man which humanism subsumes. The humanities, let it be said, can be taught and studied nonhumanistically and even inhumanly. Philosophers who reduce all the eternal questions to mere mathematical logic or linguistic analysis, sociologists who take pride in value-free, "everything goes" conceptions of human society, the deterministic historians, the teachers of history and literature as
branches of psychoanalysis—these are all trends away from the humanities as instruments of the liberal arts. Valuable as such studies can be—and they should not be disparaged—they incline toward reductionism, historicism, scientism, and psychologism, and must therefore be antithetical to the kind of humanistic and liberal education to which I have been referring.

The second fallacy is that the study of the humanities will make humanitarians of its devotees. Love of mankind may be encouraged by such study, but the history of humanistic scholarship is peopled by enough misanthropes, cads, and charlatans to dampen any such romantic illustions. Aulus Gellius, the second century grammarian, recognized this clearly when he distinguished humanitas, the study of the "good arts" from philanthropia, the love of mankind. We will not assure sensitive and responsible physicians and allied health professionals simply by insisting that they read Homer, Vergil, or Shakespeare.

As we look back over the long history of the relationship of medicine and the humanities, we can now discern several transformations and perhaps even a cyclic tendency. Medicine in its early days was so closely intermingled with one of the humanities—philosophy—that it had to disengage itself forcefully and even painfully. Over the centuries, the "studies that free" evolved, and became, in the middle ages, propadeutic to all professional education. In the practical-minded turn of the nineteenth and twentieth centuries, the liberal arts came to be relegated to a less central role—commendable if available but surely not essential to so practical an exercise as medicine.

Now the very progress of medicine and the potentiality of its technical triumphs make the humanities not only propadeutic but intrinsic to medical education. A new and stronger independent medicine can interact with mutual benefits with the humanities without fear of being overwhelmed. They can inform medicine; medicine can inform them too, with the richness of its phenomenologic and concrete knowledge of man. Perhaps Varro was right in the first place—medicine may well belong among the humanities. Martianus Capella, who sundered it from them, may have done patients, physicians, allied health professionals, and society a singular disservice.
Ten years ago medical education was literally being torn apart by demands for reform. Innovations were begrudgingly introduced but have since then been compromised, quietly dismantled, or absorbed. I do not think this will be the case with the current programs of ethics and humanities in medicine. The intellectual history of the profession will record that in the 1970s medicine began to comprehend its peculiar position of resonance between science and humanism, and took pains to assure the balance of intellectual capabilities such a privileged position demands.

NOTES

1. This chapter is based in part on the Paul Cudmore Lecture presented by Edmund D. Pellegrino in 1978 at Dalhousie University.
Approximately thirty years ago, the World Health Organization defined health as "a state of complete physical, mental and social well-being, and not merely the absence of disease." While this definition has its share of critics, none has offered a fully satisfactory substitute. The most likely explanation is that, while there is little disagreement that health is more than the absence of disease, finding a positive rather than a negative way of expressing this has proved elusive. In terms of what follows, health can be considered as the ability to achieve and maintain somatic, psychic, and social harmony with an ever-changing environment; in other words, health is the capacity to establish equilibrium with one's surroundings.

Ironically, health is not an intrinsic part of traditional medicine, whether allopathic or osteopathic, just as it is not a part of the several ramifications of medicine through other health professionals. (The single exception may be dentistry, where there has been such tremendous contemporary interest in preventive maintenance.) This should not be surprising; traditional medicine is founded on the basic sciences geared to structure, function, and pathology, and its clinical expressions are concerned with disease. This is not to say that health professionals are not interested in health; indeed, as individuals, many pursue good health as a desirable, personal objective. Rather, the focus of medicine is disease because that is what patients bring to the health profession.

There are others, however, whose primary concern is health rather than disease. While some of these may be novelists or other writers, food fadists, exercise buffs, or gurus from the Far East, the great bulk are health educators with recognized standing through national organizations such as the American School Health Associa-
tion, the School Health and Public Health Education sections of the American Public Health Association, the Society of Public Health Educators, and the Association for the Advancement of Health Education. This latter is one of the offsprings of the American Alliance of Health, Physical Education and Recreation whose own history is, in a way, illustrative of the interesting history of the development of health education in the United States as a part of athletic departments, physical education, and recreation activities. While health education has enjoyed representation on the national scene for many years, the impetus given to it within the last decade is without parallel.

What has prompted this extraordinary growth? Following World War II, the United States began to make extraordinary investments in research and development across the entire field of science and technology. The effect of this investment was to generate new knowledge at a rate that made it impossible for any single individual to encompass it. The result was that an individual could no longer achieve or maintain competence in his own chosen field of endeavor. In contrast to what had happened over the first 175 years of the growth of the United States, this change produced a constriction of individual independence and a heightening of interdependence. In a word, specialism rather than generalism.

The effect of such a change is invariably the same—one loses more and more personal control over the many factors that impact on his or her own life and, instead, turns to a neutral body to solve problems which, as an individual, one might formerly have taken on by himself. In the United States, this took the form of rapidly increasing federal dominance which, because of its accompanying demand for accountability, increased the centralization, or socialization, of decision-making and the loss of individual privacy. In a few short years, the United States moved from a meritocracy, wherein each individual could pursue his own interests to the extent that his effort, talent, strength, and resources would permit, to a state of egalitarianism, in which the objective became an equality of results rather than of opportunity.

When one combines this massive social and political change with the instant communication that characterized the post-World War II years—such that the enormous problems of the world were visited on
each of us in our own living rooms—the result was depersonalization and alienation to a degree that we had never previously experienced.

There were two reactions to this alienation. The first was a personal and individual rebellion that was characterized by increased individual license, exemplified by such activities as the free speech movement, the appearance of new dress codes, the arrival of the hippies and yippies, the acceptance of what some would call outrageous music, pornography, an increase in crime—not only against individuals but especially against property—a disruption of behavior in schools, and antiestablishment protests. It was almost as if individuals were seeking ways not only to express themselves but to count, to be seen, to be heard, to have an impact.

The second reaction was a collective rebellion in which, along with organized protests, there was a revolt against institutions such as the church, university, marriage, and business—because they seemed irrelevant. Further, mutual interests in these protests began to congeal and take form, as occurred with black power, affirmative action, women’s liberation, gay rights, and the grey panthers.

Sooner or later, it was inevitable that such movements would find redress through public policy. Civil rights and civil liberties were redressed principally through the courts. Meanwhile, the United States Congress greatly increased both the number and breadth of social programs geared to benefiting individuals and defined population groupings. As our central government searched for ways and methods to translate our concerns into social programs, health issues became paramount. This was not unreasonable. Many years ago, Disraeli had observed that “health is power,” and there is certainly no current disagreement that health is more than a good—it is a necessity. Further, America was a nation that had the capability to provide some of the best medical care in the world, and the reasoning was that there did not seem to be any reason this care should not be made available to everyone. This idea received a special emphasis in the documents that emerged from the White House Conference on Aging in the mid 1950s which stated, clearly and without equivocation, that access to health care services should be a universal right.

As our nation entered the 1960s, the rhetoric relative to a more equitable distribution of health care services was translated into a national policy along two lines. First, there was a large investment in
the supply side of the health care delivery system exemplified by increased hospital construction, the enhanced development of existing types of health manpower and a stimulus to develop new forms of health manpower, a marked increase in biomedical research, the creation of regional medical programs for the purpose of communicating the fruits of the new research to those who needed it, comprehensive health planning for the purpose of rationalizing the distribution of health care services at the community level, the construction of neighborhood health centers, mental health centers, and so forth. Second, there was the removal of financial barriers to medical care through congressional enactment of the Kerr-Mills Bill, followed by Medicare, Medicaid, the Emergency Medical Services Bill, and others.

In spite of these remarkable efforts to translate the changed public mood into a national effort, the programs adopted by the government created their own problems, the complexity of which did not lend themselves to ready solution. For example, the investment in research produced the technological imperative that characterizes contemporary medicine. The new knowledge and technology heightened the expectations of the public, which resulted in an increase in demand, and as demand increased so did costs. Worse, these large expenditures culminated in a situation of diminishing returns characterized by the expenditure of more dollars for the benefit of fewer people and a lack of evidence that a general improvement in health had paralleled the investment. Perhaps the biggest irony of all is that the resulting medical advances resulted in a change in the list of principal causes of morbidity and mortality that was characterized by a displacement of infectious diseases by disorders that were chronic, incurable, and often ascribable to individual patterns of living and lifestyle that were not amenable to traditional medical intervention.

It is interesting to note that, at just about the same time, our neighbor to the north was experiencing a similar situation, and in a remarkable publication entitled *A New Perspective on the Health of Canadians* the Canadian Minister of Health, Mark Lalonde, observed that there were four major elements that contributed to disease and death: (1) inadequacies of the health care system, (2) human biological factors, (3) environmental hazards, and (4) behavioral and life-
style factors. American scientists, using this categorization of the elements that contributed to disease and death, attempted to assess the degree to which each was a contributor to our problems in the United States. It was their conclusion that inadequacies of the health care system were responsible 10 percent of the time, human biological factors accounted for 20 percent, environmental hazards 20 percent, and behavioral and lifestyle factors 50 percent.

Our nation's reaction to these new problems was first evident as the 1970s were ushered in. It took three forms. The first was characterized by restraint, regulations, and controls. Regional medical programs were repealed, and there was an impressive cutback on hospital construction and a phasing out of support for manpower training. Certificate of need legislation arrived, as did rate review, rate setting, and prospective reimbursement. New arrangements for distributing medical care that were presumed to control costs—such as HMOs, foundations, and IPAs—were fostered; and currently hospital revenue caps and national health system arguments are raging.

Our second reaction was to begin, consciously, to focus on risks. Federal intervention relative to risks took the form of laws directed at air quality and water pollution, environmental safety, the creation of the Occupation Safety and Health Administration, the Consumer Product Safety Commission, and other like agencies.

Third, in 1971, sensitive to the fact that the capacity building years of the 1960s had not been successful in satisfying the public demand for access to health care services, the Department of Health, Education and Welfare initiated a movement to make the consumer a third, and equal, party in the solution to the problem. The initial step in this movement was the creation of a President's Committee on Health Education. Its report, published in 1973, concluded that health was a treasured, individual entity for which each individual must ultimately accept personal responsibility. It further concluded that people should have access to whatever information might reasonably be of assistance to them so that they might make informed decisions on matters that had an impact on their health. To accomplish this, the committee recommended that a specific entity be created in the private sector—a National Center for Health Education—and, in parallel, that a focal point within government be created to coordinate all federal efforts in health education. In 1974 the
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Bureau of Health Education was created within the Center for Disease Control in Atlanta as an expansion of the former Clearing­house on Smoking and Health; in 1976 the Office of Health Information and Health Promotion was created in the Office of the Assistant Secretary for Health, and in the same year the National Center for Health Education was established in the private sector with home offices in San Francisco. The increasing commitment of HEW to health promotion and disease prevention ever since has been gratifying, and the recent publication of Healthy People from the Office of the Surgeon General is testimony to these efforts.

It was in the context of the foregoing that health education, as a discipline and a profession, began to flourish. As noted above, its roots as a discipline can be traced to physical education and athletics. And while this situation still pertains in some settings, the current movement is to develop health education as an academic discipline in its own right with representation in junior colleges, four-year institutions, and graduate schools. In some instances, health education has achieved independent departmental status within education, liberal arts, and science, or, in at least one case, as part of the health sciences. Active engagement in research, the pursuit of role definitions, interest in credentialing and licensure, the continued growth of the national associations of health educators, and the impressive contributions of voluntary health agencies bear witness to the vigor of the health education movement.

An additional lift has been given to the health education movement by the diversity of support it has received from provider organizations such as the American Medical Association, the American Hospital Association, the American College of Physicians, and the American Academy of Pediatrics. Industry and business are beginning to recognize the value of health educational efforts at the work site because of its impact on morale, absenteeism, and productivity, and the American Council on Life Insurance and the Health Insurance Association of America have established an Advisory Committee on Health Education to their Clearinghouse on Corporate Social Responsibility.

Government has also made an important entry into this scene. Beyond the observations made above about the Federal Bureau of Health Education and the HEW Office of Health Information and
Health Promotion, almost all state governments have now developed health education programs within their state departments of health. Recently, the Food and Drug Administration has announced that it plans to require patient package inserts in many, if not all, prescription drugs. The National Heart, Lung, and Blood Institute and the National Institute of Mental Health are deeply involved in programs of public education. The High Blood Pressure Initiative is an example.

Health Education has also been characterized by the arrival of proprietary entities involved in smoking cessation, weight control, dieting, and so forth. There has also been impressive evidence that consumers, themselves, are increasingly captivated by the significance of health as evidenced by the contributions being made by health activists and by activated consumers who are jogging, playing paddle tennis, seeking out more wholesome foods, and so on.

Sociologists, writing on the subject of major social movements, have described stages through which such movements progress. It would appear that health education is a major social movement in what sociologists refer to as Stage I, which is characterized by groping, a deficiency of clear definitions, a lack of coordination, and the absence of truly identifiable leadership. No one currently active in the field of health education could reasonably doubt that, at least in some measure, this is an accurate description of contemporary events in the field, but at the same time health educators are equally persuaded that their movement does indeed represent a powerful new social force.

The matter of definitions should not be allowed to pass lightly. Earlier, comment was made about health as representing an entity substantially broader than the absence of disease, and a working definition was offered. To many, education is similarly ambiguous and can mean, at the least, the transmission of information and, at the most, a change in behavior as a consequence of having transmitted that information. Professional educators and behavioral scientists remain in disagreement over this fundamental point, although in considerable measure the importance of the point is brought home when one considers health education. There are those, for instance, who believe that the purpose of health education is to transmit information about health to persons who are uninformed so that
they can make independent and informed decisions about matters that bear on their health. At the other extreme, there are those who believe that the purpose of health education is to change peoples' behavior—that anything short of this represents failure. Inasmuch as behavior is ordinarily an expression of individual values, this approach creates additional problems about which more will be said below.

Consistent with our concern about definitions, it is appropriate to ask what health education might reasonably include as falling within its jurisdiction. At the irreducible minimum, there are five elements: (1) risk identification and disease prevention; (2) patient education (the education of a patient about the problem for which he/she is a patient) and holistic care (the recognition and management of illness expressing itself through an individual person within the context of that person's life circumstances); (3) medical self-care, which is an extension of traditional medicine designed to orient the potential patient to manage early illness by himself/herself and, through the use of algorithms, to determine when professional help is necessary; (4) alternatives to traditional care such as, for instance, self-improvement, gestalt therapy, wellness, and so forth; and (5) the promotion of health as a personal responsibility in which individual decisions can make a difference, and health citizenship in which factors that impact on health cannot be controlled by any one individual.

As noted above, movements at this stage of development are still sufficiently disorganized as to exhibit instability; further, they often contain the seeds of their own destruction. History bears this out as one looks at other social movements whose destiny it was to change cultures. Consider, for example, the Vikings, the Crusaders, and all missionaries. Health education is no exception, and at this point in its maturation it is vulnerable to at least five problems to which those involved in health education are now beginning to address their attention. These problems can be enumerated as follows.

First, there are serious deficiencies in the research base currently underlying the movement. Stated differently, what health educators believe to be true is not yet sufficiently backed with hard science. The implication of this is that, for a while, health educators will be obliged to promote health on the basis of faith and common sense.
For the same reason, the movement is vulnerable to exploitation by hucksters and quacks. History is replete with examples of movements that were taken over by elements that are less than credible when such movements were not well grounded with knowledge.

Second, the health education movement may create expectations in areas where it can neither deliver nor assure results. Predominant among these is the expectation that health education can lead to reduced costs in the illness-care industry. Inasmuch as health education represents a new service, its adoption will impute new costs to the industry, and at least at this time there is little evidence that it will reduce the use of the system to a degree sufficient to offset those new costs. Increased longevity and enhanced quality of life are other expectations that some hold out for health reasons.

Third, there is the possibility that health education will destroy itself from within its own ranks because of its challenge to existing turfdoms and the insecurity that accompanies the arrival of persons assuming new roles within well established professional systems.

Fourth, there are important political and moral considerations associated with the health education movement that have yet to be resolved. "Do-gooding" is often counterproductive, and there are many who associate health education with do-gooding, especially when it is conducted in the absence of a solid basis of science. Similarly, to assign increasing responsibility to individuals to make decisions that have an impact on their health inevitably leads one to considerations of fault and blame. The recent espousal of proposals for a "fat tax," or higher insurance premiums for smokers, are illustrative of such reasoning. Health education—and particularly health promotion—may involve a spectrum of activities from simple facilitation through persuasion, manipulation, and even coercion, and this may have the effect of invoking concerns of paternalism in a society that is still committed to individual freedom. We have not yet achieved the wisdom to determine when the public good should override the right of individuals to make free choices, or when the centralization of decision-making is acceptable. The contemporary history of the automobile seatbelt is illustrative. In 1968 Congress mandated that new automobiles must contain seatbelts. A subsequent survey indicated that 4 percent of the American public used them. In 1970 the Congress responded by requiring that a buzzer be
installed in the dashboard of new automobiles to remind drivers to buckle up. A subsequent survey revealed that the utilization rate of seatbelts had only increased to 7 percent, and therefore in 1972 an interlock was mandated so that one could not start his automobile engine unless the seatbelts had previously been buckled. Perhaps to no one's surprise, 59 percent of the American public were subsequently identified as using their seatbelts, but in a later survey it was found that the rate of use had fallen to 33 percent. Apparently getting the message, Congress repealed the interlock mandate but, in a remarkable demonstration of contemporary political philosophy, mandated that by 1983 the problem must be resolved by eliminating individual choice through the installation of devices that would protect the automobile driver and passengers by involuntary means such as airbags. In this same vein, there is the issue of the propriety of using public funds to achieve behavior modification, an issue rather neatly characterized in Anthony Burgess's novel, *The Clockwork Orange*.

Fifth, and in some views the most serious, contemporary culture is antithetical, or inimicable, to good health practices. By way of testimony, it is apparent that where scientific evidence appears to be incontrovertibly in favor of good health practices, the ultimate results appear to be the poorest. For instance, there are few people who smoke cigarettes who do not know the consequences, and the rate of recidivism after participation in smoking cessation programs is high. Compliance with medical regimens for the management of hypertension is reported as being approximately 50 percent; reduction of obesity is, in most instances, only temporary. This is not terribly surprising when one considers that our contemporary culture has for years been based on a set of values that are not necessarily congenial to health. Consider, for example, that stories of stress and competition are often the most admired topics of award-winning motion pictures and television plays; that epicurean and gourmet cooking are the stuff of which community reputations are made; that good food is hard to find—instead, there has been a marked proliferation of fast and convenience foods; that processed foods fill every supermarket freezer, and empty calories are big business. The cocktail party is an essential part of everyone's daily schedule, whether at conferences or meetings or as an event that precedes dinner at the
home of a friend. Contemporary advertising pushes us away from independence and into a mode of dependency with its focus on drugs, hygienic products, and other goods available to fill and meet every need.

Pornography, while reportedly not an inducement to crime, is hardly accepted as a component part of good mental health and yet is rampant. Television viewers thrive on violence, and music loud enough to deafen an elephant is standard fare. Horsepower is king and sports are worshipped from the living room sofa, preferably with a beer in hand. Clearly, in such a cultural environment, the efforts of the health educator must be considered an uphill battle.

To recognize the existence of problems within any major movement is to invite solutions, and those who are currently involved in the health education movement are actively at work devising and implementing solutions to those problems. Generally speaking, the solutions are likely to take the following forms.

First, there will be an increased stimulus and support for research in health education. Health educators will begin to join with other hard sciences in the pursuit of information that will increase the credibility of their product. The reason for this is obvious. If there are no hard data forthcoming to demonstrate that a change in lifestyle and habits improves health, reduces costs, enhances productivity, and generally improves the quality of life, it follows that the movement will lose its current support and will have nowhere to go. One can only get a limited amount of mileage out of common sense unless it is also backed with evidence. The only commodity that has generally been accepted on faith alone is religion. A tangential concern is that if hard data are not shortly forthcoming, the currently popular field of health education and health promotion will be especially vulnerable to invasion by hucksters, who are quick to recognize the existence of an unmet popular demand and are quite prepared to convert that demand to money-making schemes.

Second, it is essential that both the techniques and the programs through which health education are delivered be strengthened and, along with patient education, added to the regular armamentarium of traditional providers. The recent publication of a survey conducted by Yankelovich, Skelley and White, Inc., at the instigation of General Mills, entitled *Family Health in an Era of Stress*, reports that the
single most trustworthy source for information about health identified by those surveyed is their physician. Such a high level of credibility cannot be ignored; instead, it should serve as an entry point for health education efforts. In spite of suspicions to the contrary, there is strong evidence that physicians and other health professionals are becoming increasingly receptive to the merits of adding health education to their practices for the benefit of their patients.

Third, over time, the values that currently underlie our culture must be modified. This is most likely to occur by following three paths. The first is to learn to accept health as more than the absence of disease; indeed, to promulgate health as the ability to maintain a dynamic equilibrium with an ever-changing environment. Health must also be sold as achievable through attitude. (That the profile of disease and morbidity are different for Mormons, Seventh Day Adventists, and Christian Scientists provides strong support for such a view.) Health must also be recognized as a personal responsibility that cannot be assigned to some external agent. And it must be seen that a right to health cannot become a reality until one learns to accept the responsibility that attaches to such a right.

There is already some evidence that a change in the values that underlie our culture is possible. Consider, for example, that barely a decade ago the smoker enjoyed the unequivocal right to smoke where and as he chose. With the intense public exposure of new information that sidestream smoke is at the least offensive and at the most harmful, and with the assertion of individual rights such as to breath clean air, the smoker has been moved to a posture of defensiveness. With the sanction of law in some instances, nonsmoking areas are now standard in airplanes, many restaurants, public buildings, and at many work sites.

The allied health worker is in a peculiarly excellent position to aid and abet the efforts of the health educator, especially because the credibility that attaches to the physician by a patient is automatically conferred upon all who work as physician-extenders. Thus, if each allied health worker who is in regular contact with patients were to reinforce the concept that health is the personal responsibility of each of those patients, views and attitudes would change. The challenge and the opportunity in this regard are great.
The growing importance in the twentieth century of continuing education in higher education is related in part to the change in American society from simple agrarian to a very complex technological society which could not function without a highly skilled vocational and professional work force. Consequently, there has been an increasing demand for education in this country over the past two hundred years. At the time of the founding of this country, formal educational needs were minimal and were largely limited to preparation of ministers, physicians, and lawyers. Essential work skills were learned from elders and apprenticeships. As the nation expanded and became more complex, the value of education and a literate people for the development of a democratic nation was recognized, and more emphasis was given to establishing a formal system of education accessible to all citizens.

Until recent times the pace of developing new knowledge, technology, and processes was measured in centuries. During the eighteenth and nineteenth centuries, with the evolution of many of the sciences, the pace of discovery of new knowledge and applications of this knowledge to the development of the human community in this new nation increased sharply, literally exploding in the twentieth century. This in turn had a significant impact upon the educational enterprise, and especially upon professional education. In the late nineteenth century, for example, education of physicians was limited to few months to a year or so of formal education. Upon completion of this basic, formal education, such as it was, the individual was considered prepared for a lifetime of professional practice. So it was with other professions of that period. But with the dawning of the nineteenth and twentieth centuries, not only was there rapid devel-
opment of new vocations and professions, but there was a realization that a single period of basic, formal education was not adequate for a lifetime of professional practice.

Thus, in the latter half of the twentieth century, the concept of recurrent and/or lifelong education evolved. Professional education could not end with completion of a onetime, formal, basic professional program in an educational institution. Now it was recognized that professional education must involve a lifelong process of expanding and refining knowledge and skills in light of newly discovered knowledge, technology, and practice. It became increasingly apparent that basic entry level professional education might soon become outdated. To maintain professional competence an individual must continue to learn, for accompanying the rapid expansion of much knowledge is also equally rapid obsolescence of its long-term utility.

Recognition of this situation has contributed to the growing importance of continuing education in higher education by post-secondary institutions, professional associations, industry, including the health industry, governmental agencies, employers, and society in general. More recently it is generally agreed that much of the current emphasis on continuing education is related to professional accountability. A practicing professional who has been trained to some basic entry qualification level of employment is expected to keep that knowledge and skill up to date. To insure that certain health professionals remain up to date, continuing education requirements are being imposed upon health practitioners by governmental and voluntary credentialing agencies and professional associations.

The challenge to those who provide continuing education for helping the individual to maintain intellectual fitness is immense because requirements for competency, the nature of the health problems, and the interface between them are constantly changing—and at an ever accelerating pace. For this reason, continuing education is an essential ingredient which must be related to both preparatory entry level professional education and to the changing needs of the health industry.

Not only is the provider of health services concerned with change affecting his or her profession. He or she is also confronted by a public which is demanding more services, accountability from each
profession, and a voice in decisions concerning how health services will be provided.

Until recently, the decision to keep up with new developments in one's professional area and in the health field generally was an individual decision. This is no longer the case, and individual practitioners, professions, credentialing agencies, and employers are being held accountable for the quality and competence of services which are provided. Professional societies and credentialing agencies are reexamining their functions and requirements for membership and continued authorization to practice for their respective members and are mandating that their respective members participate regularly in a certain amount of continuing education during specified periods of time with the expectation that this will affect the quality of services rendered.

A major dilemma is that there is no valid evidence to support the contention that this will actually be accomplished if one participates in continuing education programs. Apart from this is also the problem that few if any of the health professions and especially the allied health professions have a systematically planned program of continuing education to provide for the demonstrated continuing educational needs of its members. What is available is a "cafeteria" offering of educational programs planned to meet perceived needs, many of dubious quality and appropriateness, from which the participant may attempt to obtain intellectual nourishment.

**Purpose**

Continuing education is a generic term which has been used to describe a loosely grouped collection of educational activities or experiences designed for adult audiences who have specific educational needs and interests. When applied to the health professions, continuing education generally refers to education beyond the basic, professional entry level curriculum. It may be identified as the formal or informal training an individual professional undertakes after the end of basic professional education; or it may be the training undertaken after completion of specialty education. For the health professional, it usually implies an effort to improve or to maintain a professional competence to practice an existing profession
Continuing education should be one means by which health care personnel gain knowledge and skills so they can maintain and improve their performance in patient care or in patient related activities. Because basic preparation for entering the health industry may range from a few weeks of on-the-job training to formal education leading to associate, baccalaureate, and graduate degrees, the range and complexity of continuing education programs must be extensive.

As pointed out previously, the expectation for participating regularly in continuing education is maintenance of competency throughout a lifelong professional career. There is no question but that a professional must continue to acquire new knowledge in his profession and be prepared to deal with job changes, new fields, new problems and priorities, career dislocations, and other factors that influence one's ability to practice a profession. The expectation of maintaining competency has influenced credentialing agencies and professional associations, as well as state legislatures, to mandate participation regularly by health professionals in continuing education programs. The logic of this requirement is illustrated by recent action of the Minnesota Special Projects Task Force of the Minnesota Human Services Occupations Advisory Council. This Task Force was charged by the Minnesota Legislature to develop credentialing policy for use by the regulated health and human service occupations. One area of policy development included continuing education, which was defined as "any educational program or experience beyond entry to practice designed to assist an individual in maintaining the level of competence, knowledge, or skills and attitudes necessary to perform his/her professional responsibilities in a manner consistent with the most recent advances in the field." This definition reflects both the intent to maintain initial competency levels of practice as well as the continued learning necessary to keep up with advances in the field. It is significant that this definition recognizes that continued education may be one important resource that is available to assist an individual in maintaining competence. It does not suggest, however, that competency will be maintained solely on the basis of participation in continuing education, as is too often implied when mandatory continuing education is imposed upon a profession. This defini-
tion places primary responsibility for maintenance of an acceptable level of competency with the individual practitioner. The difficulty arises when an agency, which has imposed a continuing education requirement for recredentialing or membership, is unable to validate that competency has indeed been maintained and can be demonstrated as a result of participation in continuing education. Finding an acceptable means to validate competency of practicing health professionals is a major issue which must be resolved if credentialing is to have value.

The purpose of continuing education is aptly put by the Minnesota group and reflects the ultimate goal of most groups concerned with continuing education for health professionals. Its purpose, the Task Force group states, is "to promote optimal health services through improvement of the quality, quantity, and cost effectiveness of health care." The task force goes on to suggest that in recognition of the Minnesota licensing board's responsibility to protect the public, participation in continuing education by health professionals is a reasonable requirement for licensure renewal. License for life, the task force suggests, is no longer appropriate because of changing technology and a changing society; and it is the responsibility of the health professional to provide the best health care possible at the least cost to the most people.

California is another state which has mandated a continuing education requirement for physicians licensed by the California State Board of Medical Quality Assurance. Certain types of courses approved by the California Medical Association, American Medical Association, and American Academy of Family Physicians are approved automatically for satisfying this requirement. Programs and courses offered by other organizations and institutions are required to meet the following criteria in order to be acceptable to the division on an hour-for-hour basis:

1. Faculty—The course or program organizer(s) shall have a faculty appointment in an educational institution accredited or approved pursuant to Section 94310 or 94312 of the Education Code. The appointment may be in disciplines other than medicine but directly related to the practice of medicine. The curriculum vitae of all faculty members and all other organizers must be kept on file.

2. Rationale—The need for the course and how the need was determined shall be clearly stated and maintained on file.
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3. Course Content—The content of the course or program shall be directly related to patient care, community health or public health.

4. Education Objectives—Each course or program shall clearly state educational objectives that can be realistically accomplished within the framework of the course.

5. Method of Instruction—Teaching methods for each course or program shall be described, e.g., lecture, seminar, audiovisual, etc.

6. Evaluation—Each course or program shall include an evaluation method which documents that educational objectives have been met, e.g., written examination or written evaluation by each participant.

7. Attendance—Course organizers shall maintain a record of attendance of each participant.

Random audits will be made by the division of courses and programs submitted for credit in addition to courses for which a complaint is received. Responsibility is placed on the participant to insure that the course meets the division’s criteria for acceptability. There is no assurance that participation in a course which has been approved as complying with the criteria listed above will improve the quality of care or practices provided by the participant. It is likely, however, that the quality and appropriateness of the course provided will improve if these standards are applied diligently.

Reservations about mandatory continuing education seem to be based on some of the following points: (1) It is doubtful whether most quality problems lend themselves to solutions through participation in continuing education; (2) there is major concern over resource and dollar cost effectiveness of continuing education; (3) there is major criticism about current requirements which tend to emphasize quantity rather than quality; and (4) there is grave doubt about the technical and logistical feasibility of adequately evaluating the impact of continuing education programs.

A further concern relates to the need to help the public distinguish between minimal standards of acceptable performance for each of the health professions and delivery of high quality professional services. State licensing and other professional registries have primary responsibility for assuring minimal levels of competency. The ability of these agencies to do this has been challenged. It is the responsibility, however, of professional health schools and professional organizations to sponsor and implement programs of continuing education which help the credentialing agencies carry out their functions and to develop mechanisms for assuring both continued practitioner com-
petency and high quality health delivery. Although universal support for mandatory continuing education is lacking, there seems to be strong support for voluntary participation by most if not all providers of professional health services.

The American Hospital Association (AHA), for example, firmly supports the policy of voluntary continuing education for health care professionals. In 1978 the AHA House of Delegates approved a set of guidelines designed to help state legislators, professional groups, and others evaluate requests for the passage or implementation of mandatory continuing education legislation. AHA believes that the guidelines will help to (1) determine whether the problem behind the request is real; (2) insure that there is an effective plan to resolve the problem; (3) identify the level of commitment, financial and organizational, necessary to implement the plan successfully.

**Program Development**

Program development for continuing education must be improved immeasurably. This is not a solo role for any one group. Professional organizations must encourage their respective members to participate in continuing education, and such organizations must work cooperatively with educators and other groups providing programs. Educators, on the other hand, should cooperate with practitioners, professional organizations, and employers to identify knowledge, practices, and techniques which should become the focus for many continuing education courses. In developing programs, there is a need for the professional associations, educational institutions, commercial organizations, proprietary educational groups, and health care institutions to work closely with registration and licensing boards in assessing continuing education needs. Furthermore, each discipline should strive to develop a systematic master plan for continuing education for its members.

Often essential steps in the planning process for development of a course in continuing education are overlooked, neglected, or dealt with very superficially. A typical model in the program planning process should give consideration to the following: (1) Identification and assessment of educational needs of the target population; (2) identification of the goals for the program; (3) delineation of specific
objectives to be achieved by the course, usually in cognitive, affective, and psychomotor terms; (4) academic development of the course, including content, methodology, sequence of instruction, and selection and involvement of faculty; (5) course production and implementation; (6) procedures for evaluation of process, content, and participant learning outcomes; and (7) procedures for course and system improvement. If each of these elements is given careful consideration in the course development process, the quality and appropriateness of the educational experience for the participant should be enhanced immeasurably.

Assessing demonstrated needs of an intended audience for a course in continuing education is difficult, time consuming, and costly. A variety of approaches, such as the following, may be utilized for this purpose: (1) Professional associations and credentialing agencies may identify educational content within parameters of current practice for specific disciplines; (2) a survey of practice needs may be made from a problem oriented record system or by a professional standard review organization; (3) content may be suggested from research findings and changes in health care delivery systems; (4) content may be suggested by practitioners on the basis of self-study and self-assessment surveys. Programs frequently will not be pertinent to the needs of participants and have limited educational value because too little attention has been devoted to assessing the specific needs of the target audience.

Each program or course should be so developed that it will be possible for each participant to demonstrate competence with the content and skills presented in the course. Too frequently this is not the case, and attendance is considered an adequate performance measure for satisfactory completion of the course. In fact, it is not uncommon for a suggestion to be made that imposing an evaluation procedure on the participants which would attempt to measure learning outcomes is undignified. If the decline in esteem and criticism of professions by both the public and from within the ranks of the respective profession are to be stilled, then the purpose and evaluation of the effectiveness of continuing education programs and experiences must be analyzed in terms of learner outcomes.

Four levels of evaluation appropriate for continuing education have been suggested by Brown and Uhl. These are as follows: (1)
institutional evaluation is the fourth level evaluation; (2) program or course level is the third level evaluation; (3) learner evaluation (by examination or testing) is the second level evaluation; and (4) patient care evaluation is the first level evaluation. This last level is most difficult to evaluate and, in many instances, may be impossible if not impractical for most continuing education courses offered at this time.

Brown and Uhl caution that accreditation of an institution to offer continuing education tends to lend special status and credibility to the standard type of courses, lectures, panels, and seminars so frequently offered and certifies that they actually have value, whereas when measured, these programs usually are shown to produce no significant change in the participant's behavior or improvement in patient care. For this reason, these critics take a dim view of mandatory education which requires participation in such courses. This view, which is shared by many others, is not likely to change unless some measurable outcomes from participation in continuing education can be demonstrated in qualitative terms.

**PROGRAM FORMAT**

Continuing education programs are packaged in many formats. Primary reference in this discussion is given to the short-term, non-academic credit programs. Formats in which continuing education activities are likely to occur include the following: didactic lectures before a large audience; use by an individual of journals, audio and video tape programs; telephone networks, closed circuit television, information hotlines, and specially prepared educational materials; self-assessment instruments provided by professional associations; courses that have been tailored by an educational institution, professional association, hospital, or other health agency, proprietary and industrial group; attendance at professional meetings and staff training conferences; and participation in programs designed for individuals such as a clinic or fieldwork activity. Other activities for which little or no credit is given but which in individual cases can be quite effective are self-instruction, reading and informal group instruction, and mini-residencies. The latter seem to be provided more frequently for physicians, nurses, and allied health personnel, and are very effective learning activities, although the number of persons who can
take advantage of this type of continuing education is limited by availability of training centers, number of students who can be accommodated, and cost.

Continuing education programs can be divided into four groups: (1) general basic review programs which are related to the knowledge and skills that are expected of entry level positions; (2) basic specialty programs which focus on knowledge and skills associated with a specialty area of practice; (3) role related programs which relate to the practitioners role and competencies associated with that role; and (4) problem oriented programs which are usually interdisciplinary.

Programs vary in length from two or three hours to several days or weeks, and they may be a sequence of learning experiences planned and offered periodically over a span of several months to a year. The most frequently used model tends to be a short course of two to five days. Invariably the purpose of these activities is to convey information and to provide a new training skill which can be learned in a short period of time. Rarely are courses of this type able to achieve goals affecting attitude or behavioral change.

Another characteristic of the short course is that it is usually designed with a specific audience in mind and is often offered outside the traditional academic setting in a community or work setting appropriate for the participants. When this is done, it is greeted with enthusiasm by busy health providers who are unable to leave their practice sites for prolonged time. Also, these courses are more likely designed to meet demonstrated educational needs of the participants.

An analysis of some five hundred short-term, nonacademic continuing education programs offered annually by health science schools, institutes, and centers in the Division of Health Affairs, University of North Carolina at Chapel Hill, reveals that at least 50 percent of these programs are offered in communities throughout the state which are convenient for the intended audiences. Many of these were scheduled regularly at hours convenient to staff on the premises of hospitals, health departments, and other health agencies where they work. Case study materials used in these courses for teaching/learning purposes are frequently drawn from the participants' work setting, which tends to personalize the experiences for the student.
Faculty from the University of North Carolina at Chapel Hill travel to local communities to present programs suggested by the health practitioners. Because these educational events are conducted on a regularly scheduled basis in the participants' home community and address problems of immediate concern to them, there is good participation in the programs. Furthermore, because case study materials utilized in the educational programs are often provided by the participants, it is believed that these educational experiences meet urgent needs of the participants whose interest in learning at this time is high. It is also believed that there is a good relationship between what is learned and application to practice.

The State of North Carolina is unique in some respects because of its extensive, well established, and accepted Area Health Education Center (AHEC) program. This system provides a network throughout the state for offering continuing education to meet the needs of health practitioners, even those practicing in remote, rural areas. It provides a linkage regionally through a network of relationships between each of nine regional AHECs and health care facilities, practitioners, and educational institutions within each local region as well as throughout the state. Each of the regional AHECs is linked together through the central AHEC office located on the campus of the University of North Carolina at Chapel Hill, a major academic health center with professional schools of dentistry, medicine, nursing, pharmacy, and public health and special institutes and centers. Linked into this system are the academic health centers at East Carolina, Duke, and Wake Forest universities, schools of nursing and allied health throughout the state, and the extensive public community college system and some private institutions with academic health programs.

The uniqueness of this system is that it provides a means for identifying a continuing education need anywhere in the state by an individual or a group of health practitioners and almost instantly correlates this need to the vast education resources represented by the institutions associated in the AHEC network. Each of the regional AHECs has a local multidisciplinary staff and educational facility which serves as a nucleus for planning and implementing educational programs. This particular model, which has been so successful for meeting the continuing education needs of health practitioners in
North Carolina, is suggested for consideration by other states.

Educational innovations in continuing education are too extensive for any significant discussion here. Opportunity is provided in continuing education courses to test new approaches and technologies to the learning process that might be considered inappropriate or threatening in the more formal didactic setting. While many new approaches to learning are being explored, many are still in embryonic stages of development. It is believed, however, that many of the experiences gained from these experimental approaches in continuing education will have an important impact upon the more traditional educational practices in the future.

Units of Measurement

In recent years, an attempt has been made to establish a unit of measurement and to use this to record satisfactory completion of a continuing education course. The idea for the CEU as a unit of measurement for continuing education was an outgrowth of a national planning conference in 1968 which involved thirty-four national organizations from education, business, government, and the professions. The conferees were in agreement that a nationally accepted unit was needed to reduce the confusion and fragmentation inherent in the use of a variety of systems for recording and reporting continuing education activities. An outcome of this conference was the creation of a national task force charged to determine the feasibility of a uniform unit of measurement for continuing education and, if appropriate, to develop a proposal for such a unit. Following two years of deliberation, this task force agreed on the feasibility of a uniform unit and developed the concept and defined the continuing education unit to the point where it was ready to present to the professional field of continuing education for reaction and testing.

A pilot project was developed to test the unit, and late in 1971 the Southern Association of Colleges and Schools revised Standard Nine on Special Activities in its guidelines for accreditation and incorporated the concept of the continuing education unit. The revised standard, which related to extension, public service, and continuing education activities in the member institutions, included
the following statements: "The continuing education unit should be used as the basic instrument of measurement for an individual's participation in an institution's offering of noncredit classes, courses, and programs . . . The CEU records will serve as part of the full-time equivalent student account for the institution." With this action, the CEU became a part of the reporting system for the colleges and universities that are members of the association.

The value of the CEU as a uniform unit and method of reporting continuing education was recognized by several national professional organizations, which recommended that the CEU be used for recording and reporting such activities. Among the organizations which have recommended use of the CEU were the American Society of Allied Health Professions, the American Nurses' Association, and the National Association of Boards of Pharmacy, as well as many professional organizations, institutions, and regional and professional accrediting associations. According to the Council on the Continuing Education Unit, over one thousand colleges, universities, professional societies, associations, corporate training departments, and other instructional units are now awarding continuing education units to more than two million persons annually. The council, which replaced the Task Force on the Continuing Education Unit, with the encouragement of the National University Extension Association, the Education Testing Service, and other organizations, was formed to place the monitoring, refining, and future guidance of the CEU activity in a self-reviewing, nonprofit organization led by people active in broad areas of lifelong learning. The council, it should be pointed out, is not an accrediting body. However, institutions and organizations following the CEU guidelines and criteria for providing continuing education and for awarding CEU for completion of programs may become institutional members of the council and be authorized to use the council's certification mark in their printed materials.

The background of the origin of the CEU has been discussed briefly to reflect the intense concern for a standard unit of measurement for continuing education which became apparent in the late 1960s and early 1970s as the continuing education movement gained momentum. Each unit of measurement model mentioned here is similar to that suggested for the CEU, which defines one continuing
education unit as "ten contact hours of participation in an organized continuing education experience under responsible sponsorship, capable direction and qualified instruction." Each element of this definition is an integral part of the larger concept of developing an educational experience worthy of being documented in permanent form on the record of the individual participant.

Although the elements for the development of creditable continuing education programs are implied in the definition of the CEU, the major value, as well as criticism, is that it is largely a quantitative unit of measurement. It is not a qualitative unit of measurement for continuing education, nor are the other units of measurement previously identified and in use today.

The CEU is to be awarded for satisfactory completion of the continuing education activity as determined by the program director and using criteria for satisfactory completion which were developed by the planning group for the program. Satisfactory completion may require evaluation of the performance of the participant, or it may only require attendance at the activity. Evaluation of performance may involve demonstration or actual performance of the skill or information acquired, a project or written report, or a written or oral examination of the material to be mastered. Satisfactory attendance does not involve any attempt to evaluate learning outcomes from participation in the activity. CEU guidelines suggest that when participant performance is evaluated, the individual permanent record may carry the performance evaluation, either in terms of a traditional letter grade, in terms of a numerical grade, in terms of a pass or fail grade, or by some other designation. In practice, this is rarely done.

All too often, little or no effort is made to determine what the participant has learned from participation in a continuing education activity. Evaluation all too frequently takes the form of a "happiness" or "satisfaction" instrument in which the participant comments on general characteristics of the activity. This, of course, is not an evaluation of what the participant has learned. A participant in continuing education activities over a period of time may acquire a collection of CEUs or contact hours and still have learned little or nothing from the experiences. Furthermore, unless the content of the educational experience is related to the individual's practice situation, the educational effort may have limited value to the
participant for use in keeping up-to-date or for maintaining competency at an appropriate professional level.

Professional agencies and associations requiring participation in continuing education frequently are reluctant to grant credit to an individual for participation in an educational activity unless the agency is given an opportunity to review objectives, course content, methods, evaluation procedures, and faculty for each course for which credit is sought. This requirement creates a problem for the providers of continuing education, especially when they are called upon to provide this data for a multidisciplinary participant group. To resolve this problem, some universally acceptable procedure for evaluating or accrediting programs must be found. One approach would involve designation of content for programs by the professions for satisfying membership and credentialing requirements. Another would be to accredit continuing education providers who meet established standards and who would develop appropriate quality programs which would utilize evaluation methods to measure participant performance as suggested in the CEU guidelines. Unless some acceptable procedure is found for evaluating continuing education courses, groups have every reason to be skeptical of the appropriateness and quality of many programs.

College and university providers of continuing education are often criticized by the health professions as being more interested in generating revenue than in producing appropriate, quality programs. Other criticisms relate to the utilization of faculty who are considered to be ineffective teachers of adult students. These criticisms cannot be ignored, for they affect development of continuing education programs needed by practitioners who wish to be kept abreast of developments in their areas of practice. Professional associations and regulatory agencies will have to be more aggressive in identifying areas of needed education relevant to practice and in taking steps to see that quality education is available which is appropriate for meeting these needs. If standards such as those suggested for the CEU are adopted, and if there is sufficient monitoring of the provider to insure that these standards are being followed, then all concerned could have more assurance that quality, appropriate continuing education will be available to the health practitioner.

As stated previously, continuing education is not the prerogative
alone of either professional groups or education institutions, but must be a product resulting from cooperation between all groups concerned. The recently formed National Commission for Health Certifying Agencies may be an instrument through which some of the changes needed in continuing education can be brought about. This commission was formed for the purpose of establishing guidelines for member agencies that credential health professionals. An early agenda of this commission must include how to evaluate competency and the relationship continuing education should have to credentialing health manpower. Should this commission fail to provide guidance for these two issues, its basic purpose for existence will be very difficult to justify, as will the continued emphasis on mandatory continuing education. Furthermore, unless continuing education providers sponsoring CEU programs take responsibility for the program, instructor, and student performance evaluation, credentialing based on participation in continuing education could become meaningless.

Records

An appropriate universal record-keeping system for participation in continuing education is not operational at this time. Some educational institutions have established a record-keeping system for participation in CEU approved programs sponsored by these institutions. Likewise, some professional associations have made arrangements for maintaining records for their respective members. All of these efforts are in a very embryonic state.

Dates and locations of noncredit continuing education programs vary widely, as do courses, and include many institutions and agencies. The flexibility of continuing education programs, which is so attractive for students, creates severe record-keeping problems. Up to the present time, maintaining records has been largely an individual participant responsibility.

Because increasing numbers of professionals are taking continuing education programs to meet credentialing and membership requirements, a need has been created for a system to maintain complete records of noncredit education. Demands for professional accountability mandate that records must be maintained in good order.
To help resolve the problem of a national record system, the American College Testing Program launched in 1978 the National Registry Service (NRS) as a record center for continuing education offered by professional associations and noncollegiate organizations whose members are required to participate in continuing education. Almost immediately, it created a sister service for colleges and universities called the National Registry for Continuing Education (NRCE) to meet record-keeping needs of accredited institutions involving continuing education. This registry enables the individual's continuing education experiences to be viewed as a whole. It also serves institutions offering continuing education by providing each with summary reports on the nature and extent of their own efforts. The NRCE makes no attempt to evaluate courses but is simply a registry of continuing education activity.

Both services can provide permanent, computerized records of noncredit education. Students may request transcripts and keep track of their accumulated units. The NRCE is a national system which enters on a student's record information about continuing education activities completed at any participating institution. Thus it is possible through this system for all of a student’s continuing education courses, no matter where they were completed, to appear on a single comprehensive transcript. In principle, the NRCE may fulfill the need for an effective record system for continuing education for some individuals and institutions. The acceptability of this system will be tested in the years ahead.

In principle, each educational institution should be clearly responsible for maintaining complete and accurate records of continuing education earned by its students, but this cannot be accomplished unless there is universal acceptance of a uniform unit of measurement such as the CEU. Furthermore, as has been done for the Carnegie unit, educational institutions should foster development of a nationwide capability of lifelong records that are readily transferable from employee to employer, from one area of the country to another, and from one time period to another. This effort, if integrated with a national system such as the National Registry for Continuing Education, would provide the universal record system for continuing education that is so urgently needed.
PROSPECTS

This review of continuing education is not exhaustive, nor has each of the issues presented been discussed in depth. The general objective has been to provide the reader with some appreciation of the status of continuing education and problems which must be overcome if it is to fulfill a meaningful role in higher education. Above all, continuing education must not be isolated from the mainstream of higher education.

What is the future of continuing education, and what must be done if it is to emerge as a meaningful educational component of the system of postsecondary education? *Continuing education must be considered an essential component of the system of higher education which has an obligation to provide for the total education an individual will require throughout a lifetime of professional practice.* Furthermore, continuing education should be considered as important, if not more important, than basic professional entry level education when considered in the context of a lifetime of professional practice. One important aspect of continuing education from this viewpoint is that it becomes a logical extension of entry level education to the profession, and as that education changes over time, so must continuing education. The relationship of continuing education to entry level education is obvious for the individual who over a span of time desires to keep updated with changes in the profession. Just as the educational program for preparation to enter a professional field is related to the scope of practice of that entry level, so too must the continuing education program relate to current scope of practice if its major objective is to update participants in that field.

Continuing education must go beyond an objective of maintaining currency in a professional field. To do otherwise will result in narrow programs of limited forms. As a linkage with entry level education, it must build upon that education by providing educational opportunity for participants to pursue advanced, specialized education as well as to explore problems and issues which could not be incorporated into the preparatory educational program. These problems and issues may be related to practice models, changes in the health care system, and quite often will involve interdisciplinary,
problem-solving studies. Furthermore, continuing education provides an opportunity to break out of the traditional mold of higher education and to use innovative approaches in the educational process not traditionally or easily associated with formal postsecondary education.

Just as there are appropriate procedures for evaluation of what participants have learned in traditional, formal courses in postsecondary education, so too must such procedures be established for participation in continuing education. Evaluation which registers only attendance is not adequate. If continuing education is evaluated on these terms, then it is anticipated that problems relating to the appropriateness and quality of the courses offered will continue to exist.

The concept of linkage between basic and continuing education for health practitioners must be carried out also in planning and conducting continuing education programs. It becomes apparent that continuing education is not the sole domain of any one group—education institution, health profession, or health industry. Rather, it is a program calling for the closest cooperation among all of these groups. Obviously, education institutions, particularly those which offer professional health curricula, must have an important role in continuing education. They cannot ignore the views of the other groups, nor can the groups assume this responsibility without heavy reliance on the educator. Maximum successful development of continuing education will depend on the degree to which these groups cooperate and plan together.

Because continuing education has become an essential element in the total educational process, a satisfactory record system must be established that will record a lifetime of educational experience. Inherent in this system must be a quality, not just quantity, standard unit of measurement. To be effective, this system must be uniformly acceptable and as valid as that system which is maintained by colleges and universities for resident students. While the individual must assume some responsibility for maintaining information of participation in continuing education programs, an official record of participation in such programs must be maintained by the institution or agency providing the program. This could take the form of an institutional transcript or of a transcript provided by an agency.
which correlates such data from a number of participating agencies and institutions.

Finally, continuing education must be viewed for what it is—an opportunity for the participant to acquire additional knowledge and skills, to gain new insights into his professional practice, and to gain an appreciation of, and perhaps to alter, his or her attitude and behavior to professional practice. Continuing education is one means by which an individual may keep up to date and strive for competency. Mandating such education seems paternalistic and should be unnecessary for the responsible professional. In the final analysis, it is the maturation and attitude of the individual which will determine whether or not competency will be maintained.

NOTES

2. Ibid.
3. "Continuing Medical Education Requirements for Physicians Licensed by the California State Board of Medical Quality Assurance, October 1977," mimeographed, pp. 4-5.
Community colleges across the land have become increasingly involved in providing education for allied health personnel as the number of colleges and their size have increased. Of equal importance has been a steady shift in the curriculum focus of many community colleges. Over the past decade they have put less emphasis on preparation for transfer to baccalaureate programs in other institutions and assigned ever more resources to career education for direct entry into the work force. The shift has provided the community colleges with an educational capability for occupations training seldom enjoyed to the same degree by other postsecondary institutions. The community college occupational programs "are usually characterized by a well-organized faculty interacting with trades advisory committees; sequenced curriculum patterns; separate facilities; and controlled student recruitment, admission, and placement procedures. This affords program heads a power not often seen in the liberal arts curricula." Other factors that have involved community colleges in the training of allied health workers are the well-known growth of the fields themselves, increased federal and state financial support for allied health programs, and the economic pressures on some health delivery institutions to discontinue allied health training programs. Add to these the educational philosophy of most community colleges calling for development of responsive educational programs when requested by community organizations and agencies, and you have a dynamic combination of catalytic forces.

In an effort to anticipate the future role of the community colleges in allied health education, there are several key questions that can form the framework for a discussion of the topic: How
extensive and what is the nature of the current involvement of community colleges in preparation for the allied health fields? What are the anticipated developments in the next decade that may influence the amount and nature of community college education for allied health? What can community colleges do to assure that they are prepared to respond effectively to the educational challenges they may encounter in connection with the allied health field?

The base from which the community colleges will need to plan for the decade ahead is extremely sketchy. The data are not as comprehensive and reliable as one would desire. However, there are some generalizations, drawn from what is documented, that can help in providing a picture of allied health education currently offered by community colleges. Approximately 17 percent of the sponsoring agencies for allied health education across the nation are community colleges, as shown in Figure 1. The majority of the training programs are still in hospitals and clinics (62 percent), while the rest of the sponsoring agencies are divided among colleges and universities (11 percent), medical schools (5 percent), United States government institutions (2.5 percent), special schools (1 percent) proprietary schools (1 percent), and blood banks (.5 percent). These figures reflect only programs accredited by the American Medical Association Council on Medical Education and do not indicate the size of the programs, which tends to be considerably larger in higher education institutions than in hospitals and clinics. Still, they do suggest the locus of educational sponsorship.

Community college administration often combines associate degree nursing (ADN) programs with allied health programs. Most community colleges first entered the health field with the development of an ADN curriculum. Therefore, the growth of that activity may be significant.

In 1942 eight pilot ADN programs were launched. By 1978 the number of ADN programs in community colleges had grown to 677. In that year the programs graduated 37,069 students—more than any other type of educational program leading to state licensure as an RN. The community colleges are clearly capable of responding to new requirements for health personnel if the case for additional personnel in the field is clear.

To date community colleges have concentrated on preparing personnel to serve as radiologic technologists (with 155 accredited
Figure 1. Distribution of Sponsors of Allied Medical Educational Programs: Hospitals and Clinics (62%), Junior/Community Colleges (17%), Colleges/Universities (11%), Medical Schools (5%), U.S. Government Institutions (2.5%), Special Schools (1%), Proprietary Schools (1%), Blood Banks (.5%).

Source: Allied Medical Education Directory, 6th edition.

programs), respiratory therapists, dental auxiliaries, medical assistants, medical record technicians, laboratory assistants and medical laboratory technicians, in that descending order. However, a large number of other growing programs, such as technicians for the visual care field, are also offered.

Major issues for community college involvement in the allied health field relate to the level of preparation appropriate for a two-year college and the relationship of its curriculum to the curriculum offered by four-year institutions whose programs provide an educational career ladder. How these issues are resolved will have much bearing on the way in which community colleges develop
programs for the preparation for the allied health fields in the 1980s.

As Burton Clark of Yale has observed, no society has figured a way to confer equal status on all occupations, nor on the schools that prepare individuals for them. Institutions that train for the higher status professions are perceived as higher status schools regardless of their faculty and curricula. Thus it may be conjectured that "in the 1980s the community colleges will lose some of their career programs as state colleges offer them or as the professions for which they train begin requiring the baccalaureate; by the end of the decade nursing, dental hygiene, and some of the human service programs may move out."3

There also is reason to believe community colleges will use their considerable expertise in occupational education to resist these shifts and to maintain the highest possible level of preparation for health personnel at less than the baccalaureate level. To do this, many community colleges will need to develop better modules for the liberal arts components of the allied health curriculum. Technical training can be offered effectively by health service agencies and single purpose schools. The educational capability of a comprehensive community college must be adequately utilized to justify their continuance in the allied health field.

The cost of instruction will become an increasingly important issue for community colleges in the eighties. The special subsidies that have been available for allied health programs, beginning with the federal Allied Health Professions Personnel Training Act of 1966 and including vocational education funds applicable to allied health training at the technical level, may not continue to be available to the same degree, if at all. The comparatively high cost per unit of instruction in the allied health field must be addressed more vigorously if educational institution policymakers are to continue providing financial support for allied health programs. The unique nature of this type of education—extensive clinical experience, one-to-one instruction, repetitive practice of motor skills—keeps the costs high. However, with few exceptions, community colleges have not adequately applied the potential of better simulations, self-instructional modules, personal learning contracts, and a variety of multimedia learning aids that may substantially modify instructional costs without jeopardizing quality.

The shifts in how America deals with health needs in the eighties
Robert E. Kinsinger

will have even more effect on allied health education in community colleges than will finances, educational philosophy, policy and technology, credentialing changes or any of the other issues that regularly influence decisions. There is substantial evidence that yet another dramatic change in health services is already under way. Following the earlier change from concentration on infectious diseases to the focus on heart, cancer, and stroke, has come an awareness that what individuals do to and for themselves is as important to the national level of health as the services available to the ill; hence, the new emphasis on health promotion. The shift from hospitals for the bulk of health care to a growing variety of out-patient services is clear. Cost containment also has moved up rapidly in health planning priorities, spawning new developments such as health maintenance organizations, health service agencies, professional service review organizations, and a wide variety of proscriptive health delivery systems.

Of greatest influence on the future of health care may be the startling way in which the United States population will soon be comprised of a record number of older Americans. The greying of America is an often heard theme, but its impact on health care, and education for health personnel, has had insufficient analysis in terms of its implications for community college educational planning.

In 1776, only 20 percent of the newborns in the United States were expected to reach age 60. Today, only 20 percent will not reach 60. More than 24 million of our citizens now are over 65. By 2020, that figure will have doubled so that one out of five will be 65 or older. During the decade from 1965 to 1975 the death rate dropped 16 percent for those 65 to 74. The drop was 10 percent for those 75 to 85, and over 25 percent for those beyond 85. Thus, it is estimated that by the year 2020, physicians will be required to devote 75 percent of their time attending to the medical needs of this growing segment of America.4

What do all of these anticipated changes portend for community colleges and allied health education in the eighties? Probably a radical change in demand in terms of both numbers and kinds of allied health personnel will require shifts in curriculum, student admissions, clinical affiliations and, most of all, more and better preparation of instructors and counselors.
A number of community colleges have already taken steps to deal with several of the challenges that will face them in the eighties. Some college study committees are trying to anticipate the new demands for increased technical level personnel to serve in outpatient settings and provide care for the elderly, handicapped, and particularly the mentally ill, who have been released from institutions in consequential numbers. (Just a few years ago over half the hospital beds in the United States were occupied by mental patients.) The more thoughtful community college planners recognize that cost containment pressures may force a more careful analysis of the level of personnel truly required to provide health care and to engage in health promotion. Such analysis may result in a greater demand for auxiliary personnel to ensure that highly (and expensively) trained physicians and dentists concentrate their advanced knowledge and skills in a manner that optimizes benefits to patients.

Community college planners should also be working closely with the universities that are endeavoring to provide allied health instructional personnel and academic leaders for the field. The allied health instructional personnel centers are essential to the community colleges. No instructional program is any better than the quality of its faculty. Of equal importance is the way in which the community college faculty coordinate curriculum planning with the health service agencies and professional leaders who will employ the community college graduates. The importance of the working relationship between education and service agencies is a major emphasis of the National Commission on Allied Health Education, which recommended that “alliance in service and education should be strengthened, based on an appreciation of the interdependence of all health occupations and an understanding of their roles, functions, and special contributions.”

Of perhaps greatest importance to the future of allied health programs offered by community colleges are two concerns also identified in commission recommendations: “Education should be linked to practice through role delineations,” and “the establishment, expansion, and termination of allied health programs should be based on manpower requirements, adequacy and efficient use of available resources, and collaboration within and among educational and other institutions.” The community colleges that are best able to
serve the allied health needs of the eighties will have standing committees concerned with monitoring the implementation of these two recommendations. The rapid changes anticipated in health delivery and the shifting relationship among the many health workers providing for America’s health needs will call for swift and appropriate educational responses. Community colleges must be able and willing to alter curriculum as the field changes, and to terminate programs ruthlessly as events render educational offerings obsolete. Every educator knows that this is one of the greatest challenges regularly faced by educational planners. However, without an effective mechanism for swift curricular modifications the allied health programs of the eighties will be helplessly out of time with reality. Thus they will serve neither their students nor the health needs of society effectively. Innovative responses to changing needs will be required. A few examples will serve to illustrate the kind of experimentation that must characterize the community colleges’ approach to allied health education in the decade ahead.

In some instances colleges are unduly influenced by one or two local health practitioners who need an assistant or two with appropriate skills and knowledge necessary for providing adequate health care. The need may result from an expansion of practice or demands for new services. Thus the practitioners petition the local community college for the inauguration of a traditional curriculum or a new offering to meet their labor needs. This seems a logical and legitimate request to a community educational service consistent with the mission of a community-based educational institution. However, action should be preceded by an adequate survey of demand for such personnel beyond the limited request and an analysis of possibilities for modifying an existing health related curriculum to add the new skill. (It is particularly important to distinguish between demand—unfilled positions for which employers have budgeted funds and need—representing services that ought to be provided for individuals and the public.) Otherwise the college may unwisely launch another expensive monument to proliferation and eventually face the inevitability of Agnes Allen's Law: Almost anything is easier to get into than out of.

One well-developed plan has responded to limited demand by designating, within a regional consortium of colleges, a single institu-
tion to serve the region with highly specialized programs for health personnel. This serves well to avoid low, uneconomical enrollments being spread over many colleges.\textsuperscript{6} Demonstration projects are preparing and evaluating multiple competency health technicians. These important experiments are tackling the problem of overly narrow technical speciality occupations.\textsuperscript{7} In another instance, community colleges and a university medical center have combined forces to form a circuit-riding faculty to serve a limited demand for health personnel in a specific community.\textsuperscript{8} After a year or two, when adequate numbers of personnel have been prepared, the program moves on to another community college which is facing a similar, limited demand. In the statewide experiment, dentists in several community college service areas have indicated a need for dental hygienists, but within twelve to twenty-four months after a community college program is established, the requirements are fully met. The expensive dental hygiene laboratory, operatories, and other equipment are mobile, as are the faculty, who were recruited with the expectation of a periodic change of residence.

In summary, the community colleges must be extremely flexible and willing to make rapid curriculum changes within their allied health programs during the decade ahead. While there will be growing demands for new allied health personnel, there will also be major decreases in allied health personnel requirements in some settings and for some types of service. Curriculum alterations must be carefully planned to avoid, among other traps, Kinsinger's Law of Proliferation: \textit{It is easier to develop a new occupation than to modify one which already exists.}

The community college must be prepared to study its specific educational service area constantly, as stressed by a recent study of the Southern Regional Education Board: "A bumper supply of health personnel in the region will not necessarily assure adequate supply at the community level. Already there are indications of ample numbers of health workers in some metropolitan areas, while at the same time rural hospitals are crying for nurses, laboratory technicians and other allied health specialists. Saturating the market with ever-growing numbers of graduates may not be the most effective means of solving the distribution problem."\textsuperscript{9}

Finally, there are at least two comprehensive national studies and

Community colleges have a great opportunity for serving a substantial part of the demands for allied health personnel in the years ahead. However, their full potential will be realized only if they are sufficiently responsive to rapid—and sometimes dramatic—shifts in health service requirements and, accordingly, are able to alter their educational enterprise quickly and appropriately.

**Notes**

7. Multiple Competency Clinical Technician Project, School of Public and Allied Health, University of Alabama at Birmingham, and Rural Allied Health Manpower Project, School of Technical Careers, Southern Illinois University at Carbondale.
8. University of Kentucky Mobile Associate and Applied Science Dental Hygiene Program.
PARTNERSHIPS, CONSORTIA, AND LINKAGES
IN ALLIED HEALTH EDUCATION.

M. Alton Hodges and Robert E. Roush

This chapter is about collaboration between and among allied health educators and their respective institutions. It is drawn from both a review of selected literature on the subject of cooperative arrangements among educational institutions and from the personal experience of the authors, the chief allied health administrative officers at their respective institutions contiguously located in the Texas Medical Center in Houston, Texas.

This essay was not designed to be a full treatise on collaboration among educational institutions, but is a general overview of the subject with specific attention given to examples and discussion pertinent to health related institutions and programs. It is hoped that the information and perspective presented here will stimulate greater thought and motivation to create interinstitutional arrangements that can meet students’, consumers’, and institutions’ mutual needs for high quality, cost-effective education in allied health.

The three key words in the title of this chapter are basically synonymous. They, along with other terms, contribute to the jargon used to describe interinstitutional relationships in higher education. Partnerships, consortia, and linkages refer to arrangements—specific and general, official and unofficial, formal and informal, publicized and ill-known—whereby two or more institutions collaborate in the address of a common need, interest, or problem. “Cooperative Arrangements,” as one reference encapsulates these terms, between institutions of higher learning are almost as varied and diverse as the institutions themselves and the constituencies they serve.
Cooperative arrangements can, for convenience of discussion, be compartmentalized into the three types of institutional alignment suggested in the title—partnerships, consortia, and linkages—and will be referred to here as Types A, B, and C, respectively. The remainder of this chapter attempts to define and describe Type A, B, and C relationships: Examples used are those within the Texas Medical Center and elsewhere. Following the next section on the characteristics and purposes of the three general types of institutional relationships is a section on future projections for higher education and what the authors believe these may portend for allied health.

**Patterns of Cooperative Arrangements**

The various patterns of cooperative arrangements can be classified, as previously mentioned, as Type A, small, informal *partnerships*; Type B, regional/urban groupings labeled *consortia*; or Type C, special purpose groupings which *link* institutions. A Ford Foundation-funded study conducted by McKeefery on behalf of the American Association of State Colleges and Universities found 170 groupings of 775 different public-private institutions currently engaged in inter-institutional cooperative arrangements. While the study was only of public-private school relationships, the 775 institutions represent almost 29 percent of the (then current) 2,700 postsecondary institutions in the United States. Thus the classification (Types A, B, and C) of the array of cooperative arrangements found through the study can be assumed to be fairly representative of higher education.

*Type A.* The simplest, most informal arrangements involving two or perhaps three institutions in near geographic proximity are labeled as partnerships. The McKeefery study cited 65 partnerships involving 141 campuses. The arrangements between the 65 partners cited in the study were often accomplished by mutual understanding rather than by written formality. In many cases, the relationships were long-standing ones. The basic advantage of small, informal partnerships is that their small size and proximity make it possible for each of the institution’s personnel to know each other and each other’s problems.

A non-health-related example of a Type A cooperative arrangement is the relationship between Oachita Baptist College and Hender-
son State College, both of which are located in Arkadelphia, Arkansas, seventy-five miles from Little Rock. Similar in size with 2,500–3,000 students, the two schools permit cross-registration and jointly sponsor many cultural activities.¹²

Four health-related examples of Type A cooperative arrangements have been compiled by the authors to illustrate similarities as well as differences in this category. The School of Allied Health Sciences, the University of Texas Health Science Center at Houston, and Baylor College of Medicine’s Center for Allied Health Professions joined hands a few years ago to acquire federal funding and establish a Regional Training Program in Emergency Medical Services. Administered by the University of Texas, the program conducts training programs to produce paramedic personnel, continuing physician education in emergency care, nursing school and medical school undergraduate coursework in emergency care, and emergency medical technician/paramedic recertification programs. Through the cooperative arrangements with Baylor the EMT program has access to a major trauma center in the city, to some key physician and allied health faculty and clinical education supervisors, and to an experimental animal physiology laboratory that augment and enrich the quality of the education program provided by the University of Texas.

Other instructional program cooperative arrangements deal specifically with the issue of transfer credits—in this sense, credit without evaluation of each student’s case by the receiving institution.⁵ Through such partnerships full faith in and acceptance of each other’s instructional quality is manifest. Students’ mobility and academic flexibility are improved by such arrangements. An example is the University of Texas School of Allied Health Sciences at Houston and the Houston Community College’s development of an interinstitutional agreement that allows graduates of one-year, post-high school certificate programs at the School of Allied Health Sciences (histological technician; electroencephalographic technician; respiratory therapy technician) to be automatically credited with thirty semester hours of academic work toward a sixty-semester-hour Associate of Applied Science in Health Technology degree from the Houston Community College. Students may claim this option without regard to whether they first complete the community college
sequence or the health occupational training sequence. A newer agreement between these institutions will allow graduates of a twelve-week paramedic training program at the School of Allied Health Sciences to claim twelve semester hours credit toward either the AAS in health technology or the AAS in fire prevention and safety degree at Houston Community College.

Another example of a Type A cooperative arrangement is the Annual Lecture in Allied Health jointly sponsored by Baylor College of Medicine and the University of Texas at Houston. Each year the authors select a leading thinker and philosopher in allied health to deliver a presentation to students and faculty of the two institutions. Students and faculty from other colleges and universities in the region and the Houston High School for the Health Professions are also invited to attend. This activity has been extraordinarily successful in publicizing the presence of allied health in this very "medicine" oriented community, and in reinforcing interdisciplinary awareness and an interinstitutional spirit of cooperation.

A fourth Type A example is the Houston High School for Health Professions (HSHP)—a joint venture between the Houston Independent School District and Baylor College of Medicine. The first of its kind in the nation, the HSHP was begun in 1972 in one of Baylor’s medical school lecture halls and later in some portable buildings on a contiguous temporary location provided by the Texas Medical Center, Inc. Without most of the traditional extracurricular activities, the school nevertheless, provides a full three-year accredited high school curriculum which includes health-career oriented course work along with advanced scientific courses. Students learn first hand the real nature of most health professions and are thus better able to choose certain health fields and the appropriate postsecondary training requisite for entry. Baylor facilitates the HSHP’s use of its affiliated teaching hospitals and other Texas Medical Center resources. Recently, the Houston Independent School District had a construction bond issue approved by the voters and, on land donated by the Texas Medical Center, Inc., completed a $6 million facility for use by the HSHP and the Houston Community College allied health programs.

Type B. The McKeefery study\textsuperscript{12} identified forty-four regional groupings ranging in size from six to twenty colleges banded together for mutual benefit. Taking names that characterize their urban area
or sector of the state or region in which the campuses are located, such consortia may be characterized by the following: (1) they are often governed by a council of institutional representatives; (2) they may be tied together by a budget which contracts with those who jointly teach; (3) they may provide for the use of each other's equipment, libraries, and conference areas; and (4) they may merge services allowing them to become larger volume buyers of goods and services. The factor common to all the groupings studied was a territory with little or no overlapping of boundaries. The frequency of exchanges increases with geographical proximity.

A non-health-related example of a Type B cooperative arrangement is the Five Colleges, Inc., in Massachusetts comprised of Amherst, Smith, Mt. Holyoke, Hampshire, and the Amherst campus of the University of Massachusetts. Located in a series of contiguous towns (a bus trip from one end to the other takes only twenty-five minutes), the five schools cross-register students in the thousands, provide for faculty exchanges, operate an intercampus bus system, and have one FM radio station and a single newspaper serving all five campuses.

Three health-related examples of Type B cooperative arrangements illustrate this category. The Eastern Virginia Health Education Consortium is a comprehensive cooperative arrangement among six institutions in the Tidewater area of Virginia. Participants include the College of William and Mary, the Eastern Virginia Medical Authority, Hampton Institute, Norfolk State University, Old Dominion University, and Christopher Newport College. Beginning in 1973, the consortium strove to realize three goals: (1) minimize duplication; (2) relate health programs, regional hospitals, and educational institutions to an operational framework; and (3) use scarce resources in the most efficient and appropriate manner.

One of the primary activities of the consortium has been to develop an extensive plan for allied health education programs at the associate, baccalaureate, master's, and doctoral degree levels. For the some forty degree programs involved in this plan, there exists a designation for each that identifies roles and responsibilities of each consortium member. Whereas each consortium member may participate in any degree program created, each program must be identified as one of the following: (1) lead institution—a home campus program
of one of the consortium members; (2) cooperative institution—individual institution degree program, with significant sharing of staff, facilities, and coursework; and (3) joint degree—single degree program with each participating institution providing about equal parts of the education of each student.

The Washington Consortium is comprised of representative colleges and universities from the states of Washington, Alaska, Montana, Idaho, and Oregon. Sponsored jointly by the University of Washington's College of Education and the Health Sciences Center, the consortium work is supported partially by funding from the W.K. Kellogg Foundation. It is functioning to improve instructional competence among allied health educators and aid curricular revision. Some of the activities include: providing regional programs for faculty development, assisting in curriculum development, providing consultative services in allied health, publishing scholarly writings on health sciences education, and promoting cooperation and sharing among health science education programs in the region.

The definition applied to Type B arrangements (consortia) here describes well the very interesting organizational structure of the Texas Medical Center, Inc. (TMC), in Houston. The TMC is a consortium of some twenty-eight health-related institutions, including two complete academic health centers and components of two other universities. These institutions comprise one of the largest and most sophisticated medical centers in the world. Administered by a board of directors broadly representative of the internal institutions and the community, the staff of TMC manages a commonly held and supported comprehensive medical library; an intercenter and extracenter shuttle transportation system; a common hospital laundry; intercenter parking for all institutions; security services; student dormitories for three universities; centralized facility planning and land allocation; and a broad range of special purpose interinstitutional committees and task forces addressing topics varying from the acquisition and distribution of blood and its components to recreational facilities and programs for students and staff.

Type C. A special purpose or emphasis is what links the institutions which comprise this category of groupings. The sharing of activities without reference to proximity is what chiefly characterizes Type C cooperative arrangements. The common link may be a
PARTNERSHIPS, CONSORTIA, & LINKAGES 63

campus in Europe, a medical center, or an artist's studio in Paris.12 A non-health-related example of a Type C cooperative arrangement is the Committee on Institutional Cooperation (CIC) comprised of the Big Ten Universities and the University of Chicago. The CIC has facilitated the opportunities for doctoral students to take studies on more than one campus via a traveling scholar program.12

Four examples of Type C cooperative arrangements illustrate this category. One of the best-known arrangements in allied health education is the Linkage Program of the Regional Technical Institute and some twenty-four community/junior colleges in the state of Alabama.1,2 The Regional Technical Institute is a unit of the University of Alabama at Birmingham's School of Community and Allied Health which was expressly created to provide the highly specialized and comparatively costly technical health-related instruction, including clinical practica, in fourteen less-than-baccalaureate allied health programs. This statewide agreement combines the resources of the Alabama Junior College System with one of the major academic health centers in the South, eliminating unnecessary program duplication and consolidating efforts to distribute health care personnel more adequately. Students successfully completing the linkage program receive an associate degree from their junior/community college and a professional certificate from the Regional Technical Institute.

Another linkage program that was created for one special purpose is the Allied Health Education and Administrative Leadership program involving Baylor College of Medicine, the University of Houston, and Texas A&M University.7 This program, originally funded by the W.K. Kellogg Foundation as an Allied Health Instructional Personnel (AHIP) Center in 1972, offers access to the respective curricula, personnel, and facility strengths of the participants for the benefit of veteran allied health workers seeking upward mobility through the pursuit of master's and doctoral degrees in education and administration. Baylor College of Medicine has primary coordination responsibility for the program and provides course work specific to health and medical care. This course work is accepted as on-campus course work rather than as transfer credits at both Texas A&M and the University of Houston. Both Texas A&M University and the University of Houston offer the allied health core courses and manage student enrollment and degree plans. Via the multilateral
linkage, graduate students admitted to this program have access to courses at other institutions without formal admission or additional tuition. The spirit of cooperation among the three institutions comprising this linkage program, and between them and numerous less formally aligned institutions, makes possible the placement of graduate students in administrative and teaching internships in allied health at several area institutions, such as the University of Texas Health Science Center, Texas Woman’s University, the Houston Veterans Administration Medical Center, the Houston Community College, San Jacinto College, and the University of Texas Medical Branch in Galveston.

A geographically close proximity linkage program exists between the University of Texas Medical Branch School of Allied Health Sciences and Galveston College, the local junior college. Through an interinstitutional contract, the Department of Associated Health Professions was created at the School of Allied Health Sciences to administer the clinical education and practicum affiliations for students enrolled in Galveston College allied health programs. Faculty are jointly recruited and appointed, and the School of Allied Health Sciences department and the Galveston College department have a common chairperson. Galveston College offers the academic work and grants the associate degree via a budget from student-formula funding for the programs through the Texas Education Agency. The School of Allied Health Sciences provides clinical instruction, grants a professional certificate, and receives funding for their department from Galveston College through contractual agreement.

The fourth Type C example is the cross-registration among several institutions in or near the Texas Medical Center, Inc., in Houston. This began as an informal practice of cross-registration among components of the University of Texas Health Science Center, Baylor College of Medicine, and Texas Woman’s University. The program was later widened and formalized to include the University of Houston and Rice University. In this arrangement, the student’s identity remains with the home institution; tuition and fees are paid only to the home institution at the home institution rate. A simplified system of recording admission and reporting grades among the participants facilitates this arrangement, making available to students vast instructional resources while imposing nonsignificant added demands on the institutions.
Summary of Types of Relationships. Irrespective of whether cooperative arrangements are labeled Type A, B, or C, the McKeefery study described more than a hundred different activities in which institutions commonly collaborate. The ten collaborative activities most frequently mentioned were as follows: cross-registration, coordinated advisement, including common course listings, faculty exchange or joint use appointments, visiting scholars and artists-in-residence, shared classroom facilities, joint majors, shared library use, faculty development, community support and cultural events, and loan of administrators. Given appropriate situations, allied health educators should be able to envision numerous ways some of their programs could fit into the broad categories of cooperative arrangements presented in this section.

Characteristics of Successful Cooperative Arrangements

From a review of the literature on the subject of consortia, there appear to be several basic ingredients necessary to insure success. A fundamental ingredient for success is that institutional participation be voluntary. Second, the goal of the collaboration must be common to the institutions. Third, through their collaboration, the institutions should expect to realize mutual gain and benefit.

McKeefery listed five key factors characteristic of the successful cooperative ventures he studied. These are:

1. Geographical Proximity. This is essential for easy access to cooperative activities. Library resources, courses, and cultural events must be close to where students and faculty live and work.

2. Complementary Resources. It is important that each has something to share that will enrich the learning possibilities for the group, even though balanced reciprocity is not always possible. In like-kind institutions there is often a glut or a shortage of the same services and resources.

3. A Climate of Understanding. This results from adequate information flow and the good will of those who participate in the joint venture. This also requires a muted level of competition and a desire to improve the quality of the other partners and the community.

4. A Special Service No One Campus Could Provide. Many joint
activities are related to a critical mass or a unique facility. Urban centers, cultural events, use of expensive equipment, and specialized departments flourish under group management.

5. Presidential Support. The responsibility rests with presidents to balance the risks and benefits of partnership and communicate leadership decisions to colleagues, governing boards, and state government.

Holland et al.\(^8\) report that the regional consortium approach to the coordination and management of health manpower training programs holds promise for economies of expenditures for education plus improved quality of the education process. However, there are potential problem areas in such consortia that must be recognized and resolved or prevented: the maintenance of effective interinstitutional communication; overcoming traditionalism; overcoming institutional vested interests; and gaining political acceptance.

According to Holland, the improvement of the quality of health care delivered is tied directly to regional educational consortia through their ability to: raise the quality of personnel trained; increase opportunities for career mobility, and therefore personnel satisfaction; reduce personnel turnover among delivery-of-care institutions; and facilitate quick response among educational institutions to changing delivery-of-care personnel needs.\(^8\)

Holcomb and Roush\(^7\) attribute the reasons for the success of their joint graduate programs with the University of Houston and Texas A&M University to these factors: singularity of purpose, institutional compatibility and commitment, adequate funding, stability of program personnel, successful student performances, and the continued need for the program. Two other factors are important enough considerations to have been mentioned in the literature: these are (1) success is proportionate to the specificity and manageability of the consortium's objectives;\(^9\) and (2) the "prestige" of the institutions is a powerful dynamic vector operating in consortia relationships.\(^17\)

In summary, arrangements in which each participating institutions can contribute its particular expertise and resources toward a common goal with expectations for mutual benefit might well describe a successful consortium.\(^7\)
While the authors do not purport to be prognosticators of higher education's next decade, we nevertheless feel that certain trends in higher education may be portents for allied health. The most ominous of the trends can be stated succinctly: declining enrollments and rising costs. While neither of these is a new problem, the magnitude of their impact is, and new methods to cope with them effectively must be sought and developed.

New National Center for Education Statistics projections indicate that total college enrollment will reach a peak in the fall of 1981 and decline 5.5 percent from that point by 1988.11 For 1988, compared to 1979, the projections show: part-time enrollment up 3.7 percent with full-time enrollment down 9.3 percent; private and public institutions' enrollments down by 7.4 and 3.1 percent, respectively; and enrollment for men down 3.7 percent, women 4.3 percent.11

Halstead's Higher Education Price Index shows that goods and services for which the typical college or university paid $1,000 in 1970 cost $1,794 in 1979. Assuming that the average rate of costs increase by no more than the 6.7 percent of the 1970s, the same goods and services will cost $3,444 in 1989.11

According to Magarrell, the consequences of declining enrollments and rising costs could lead to: many faculty members being squeezed out of their jobs by retrenchment, reduction in force, or financial exigency; many administrators finding their programs folded or merged into other units; many graduate students failing to find faculty jobs; and many trustees being forced to close their colleges.11

Allied health education is faced with many of the same probabilities higher education in general faces over the next ten to twenty years. Shifting student enrollment patterns and rising costs will stress institutional and some specific occupational training programs' abilities to survive and prosper. It may therefore be helpful to explore some alternatives for optimizing the utilization of available resources; for holding down or reducing costs of education and related activities while maintaining or improving quality among those activities.

Some of the alternatives that may help allied health educators
cope with the problems just mentioned may be found in the preceding presentation on cooperative arrangements. Consortium approaches to the potential problem of an overproduction of manpower may be the solution to the call for convergence of occupational categories and services made by Pellegrino.\textsuperscript{14}

Collaborative efforts need not be just interinstitutional; they most certainly could and should be intraitstitutional—among various health-related professions—to avoid Perry's "identity of one" syndrome. Paraphrasing Perry's quote "that the starting point of discussion not be based on the relationship of the professions, but rather the relationship of the profession to the patient," is the way to think about achieving the goal of having each health profession recognized for what each can contribute to the system.\textsuperscript{15}

Some of the ways in which the allied health professions can contribute their full potential to a better system is through collaboration on such important areas now emerging to the forefront of national emphasis as gerontology,\textsuperscript{3} prevention,\textsuperscript{16} and consumer health education.\textsuperscript{18} Examples of specific arrangements for interinstitutional cooperation are many. Colleges and universities could conduct allied health education programs by offering degree programs granted jointly, providing course work for greater student numbers, and, through sharing faculty, give added dimension to the programs. Some institutions could agree to cross-list courses and programs on their respective campuses, identifying parallel and completely compatible courses available either by permission or automatically.

Institutions in close geographic proximity, such as within the Texas Medical Center, find it advantageous to encourage collaborative activities among faculty. Frequently, such collaboration evolves into joint academic and research proposals, courtesy faculty appointments, greater faculty resources, heightened attractiveness to students, and curricular enrichment. It is hoped that improved patient care is also a result.

**Summary**

Collaborative efforts between and among allied health educational institutions offer creative opportunities for a continually improved education product in the best of times. However, as allied health
education moves into the decade of the eighties, the resources available to higher education will diminish; thus the quality of education will depend increasingly upon the most effective use of available resources. Cooperation will not be a luxury but a necessity.\textsuperscript{13}

Perhaps the rationale for those attempting cooperative arrangements is best expressed using the policy statement drawn by the Kalamazoo Council of College Presidents: "The presidents are committed to the principle that their institutional diversity represents one of the great strengths of the American system of higher education. They are also committed to work together to insure that they make the best use of their resources, serve the community in ways that are complementary rather than competitive and through selective planning and joint programs and joint use of resources that they increase the level and quality of service to their students, faculty, and community."\textsuperscript{12}

\textbf{References}


"In the interest of efficiency and productivity, the sharing of resources will be both a necessary and attractive characteristic of health education in the future. Likewise, it can be anticipated that interdisciplinary education in the classroom and in the patient care setting will eventually become routine. Academic planning by one profession in isolation is a luxury of the past."¹ Alvin Morris, Executive Director of the Association of Academic Health Centers, presented this thought to the Institutional Members Spring Meeting of the American Society of Allied Health Professions in April of 1977. Morris was establishing the necessity for interdisciplinary education from an economic point of view, looking toward the possible decrease of federal monies to support health science education.

M.J. Elmore, Dean of the School of Nursing, University of Nevada, Reno, speaking in Houston in 1972, quoted Hans Mauksch as saying that "the concept of the total patient and the recognition of the importance of the relationship between the whole of human experience and the disease condition itself, all argue for the fact that, in the last analysis, every single person who comes in contact with the patient, does practice medicine. Modern insight into the nature of man has vistas, urging a reorganization of medical care with a new and larger meaning for the concept 'the medical team'."² Thus the case for interdisciplinary practice—that is, the "team" approach—was made, based on the needs of a changing technology and delivery systems.

Health literature of the late sixties and seventies is replete, with calls for "interdisciplinary," "team," and "collaborative" approaches
to health care delivery. However, not every voice has been positive, as evidenced by the “Commentary” column of the Journal of the American Medical Association, which stated that “the practice of medicine is not a team activity, however well-intentioned and trained, the members of the supporting services may be.”

Each of these statements is illustrative of the various facets of debate (economics, delivery of care, and professionalism) surrounding the concept of interdisciplinary activity, be it practice or education.

The concept was perhaps most succinctly stated by Dana and Sheps when they wrote: “Clearly, a doctrine of interdependence has been prescribed for the professions, developed partly by the professions themselves, through scientific exploration and clinical practices that affirm the inter-relationship of social, biological, and behavioral relationship between poverty and ill health.”

Studying the interdisciplinary concept—and specifically the role, function, and outcome—as it relates to Allied Health Education requires the exploration of these issues as a part of larger parameters which surround the issue of interdisciplinary education. There are perhaps three essential “developmental” parameters which should be explored: (1) the definition of interdisciplinary education; (2) the historical development of interdisciplinary education as reflected in the literature; and (3) the present state of the academic art in interdisciplinary education.

**Definitions**

There is a function of the human condition that requires that all things investigated be defined. Interdisciplinary education is no exception. As background to obtaining a definition for interdisciplinary education in the health sciences, one must search the literature in three distinctive areas: higher education, general health science, and allied health.

*Higher Education.* Academicians in higher education have documented their thoughts on interdisciplinary studies for at least the past fifty years. Institutions such as Harvard and the University of Chicago have attempted large-scale interdisciplinary curricula with varying degrees of success and failure. In the search for terminology
to define the meaning of interdisciplinary education, several key phrases are constantly mentioned in the literature—"integration," "problems," and "real world."

Wolman stated that "the rational for interdisciplinary studies is based on the common observation, that problems in the real world are not separable into disciplines." J.R. Gass, Director of the Center for Educational Research and Innovation, in writing the Preface to the study report, Interdisciplinary: Problems of Teaching and Research in Universities, pointed out that "the guiding principle is not the need to demolish the disciplines, but to teach them in the context of their dynamic relationships with other disciplines and with the problems of society." The objective of interdisciplinary studies was perhaps most succinctly described by McGrath when he reviewed the University of Chicago efforts: "the chief objective was not to turn out mathematicians, historians, or psychologists, but educated men and women who, through acquaintance with the great works of all time and cultivation of the 'intellectual virtues,' would be equipped to lead intelligent, personal and civic lives." Carrying this concept of a theme further, he states: "To convey the notion of genuine interdisciplinary work, the word 'integrated' might be more appropriate because it connotes wholeness. This is no finicky debate over educational terminology. If interdisciplinary studies are to achieve their proper educational objectives, a sense of integration must be provided."

Synthesis of these thoughts into concise definitions has been summarized in the report, Interdisciplinary: Problems of Teaching and Research in Universities. In the study, two approaches to defining interdisciplinary related terms were provided. These approaches, in definitional and system configuration, are presented in Table 1. The key is the differentiation between multidisciplinary and interdisciplinary, which is made on the basis of "coordination."

Higher education has thus determined a sense of direction that says that interdisciplinary education is needed to teach students in academic settings how to solve problems of real life. But the major objective is not to improve the specific discipline the student is studying but to improve the student as a person when he completes the study of the discipline.

General Health Science. The general health science literature
Table 1. Definitions and Systems Related to Terms Commonly Used in Dealing with Interdisciplinary Activities in Higher Education.

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
<th>System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discipline</td>
<td>A specific body of teachable knowledge with its own background of education, training, procedures, methods and content areas</td>
<td>One-level, one-goal; no coordination</td>
</tr>
<tr>
<td>Multidisciplinary</td>
<td>A variety of disciplines, offered simultaneously, but without making explicit possible relationships between them</td>
<td>One-level, multigoal; no cooperation</td>
</tr>
<tr>
<td>Pluridisciplinary</td>
<td>The juxtaposition of various disciplines, usually at the same hierarchical level, grouped in such a way as to enhance the relationships between them</td>
<td>One-level, multigoal; cooperation but no coordination</td>
</tr>
<tr>
<td>Interdisciplinary</td>
<td>A common axiomatics for a group of related disciplines introducing a sense of purpose; teleological interdisciplinary acts between the empirical and pragmatic levels, normative interdisciplinary between the pragmatic and normative levels, purposive interdisciplinary between the normative and purposive levels</td>
<td>Two-level, multigoal; coordination from higher level</td>
</tr>
<tr>
<td>Transdisciplinary</td>
<td>The coordination of all disciplines and interdisciplines in the education/innovation system on the basis of a generalized axiomatics (introduced from the purposive level down) and an emerging epistemological (&quot;synepistemic&quot;) pattern</td>
<td>Multilevel, multigoal; coordination toward a common system purpose</td>
</tr>
</tbody>
</table>

(medicine, dentistry, nursing, pharmacy, public health, etc.) does not reflect the generic thinking of the higher education literature, relative to interdisciplinary studies but instead plunges directly into reporting on the application of interdisciplinary activity in the form of the term “team.” It is interesting to note that in this field of the literature, there is an almost purposeful void in use of the term “interdisciplinary,” with the term “team” used with near-reckless abandon.

Like the authorities in higher education, the general health science authors provide a rationale for “team” that revolves around resolving real world problems relative to the delivery of patient care. George, Ide, and Vambery, in attempting to define a conceptual model for a comprehensive health team, stated: “The health professions can no longer protest their rigid, traditional functions. They must look at functions in light of the overall objective of patient care: to identify and meet patient needs so that achievable health goals for the patient may be reached. Health professionals must be cognizant, that they cannot independently identify or fulfill all areas of patient care needs. They must accept the abilities and contributions of others.”

David Kindig, codirector of the Institute for Health Team Development, in presenting an excellent overview of the development of Health Team Delivery of Primary Care, offered the following: “The team approach for delivering such a wide range of services was initially conceptualized in the Family Health Demonstration. Because . . . the general practitioner in 1950 was not qualified for the complexity of modern practice and because the internist was too highly specialized in scientific medicine, to carry out the ‘caring’ function that general practitioners performed so well, other professionals had to be included in such a health care practice.”

Both Kindig and George et al. speak of the “team” as a mechanism for applying professional skills to a problem related to patient care, suggesting a coordination factor as proposed in Jauntsch’s definition of interdisciplinary in higher education (Table 1). Each of them also alludes to the need for “team” as a result of the limitations of professions to respond to specific needs.

Specific attempts to define “teams” in health care settings, run a spectrum of response: “The team, therefore, is a transitory social
system, consisting of a number of persons working together for a defined and mutually accepted program in which each member understands and accepts his health care functional contribution.”

“The interdisciplinary team is a social invention of some importance; it is a way of providing more effective help to more people who need it.”

“A team is a group of individuals who must work together collaboratively and interdependently, to accomplish their work tasks at all, or well, or efficiently.”

“We define team as two or more persons performing functionally related tasks in pursuit of a common goal or goals.”

“Teams are really nothing more than groups of different individuals working together on a common task or problem.”

The general health science literature thus generally outwardly addresses not the concept of interdisciplinary education but the need for the delivery of services through a structured interdisciplinary approach labeled the “health care team.” Teams as defined thus are basically “things,” groups of people structured to perform tasks that individuals cannot perform alone. “Goals,” “collaboration,” “interdependence,” and “tasks” are common terms found across the spectrum of definitions of “team.” Team, then, as a concept becomes restricted to structural professional activity toward a specific patient care goal such as primary care, family medicine, or mental retardation. Slater asserts that “teams are defined as much by their processes, as by their content, or tasks.”

Allied Health. The allied health literature, like the general health science literature, is notable for a lack of publications relating to “interdisciplinary education” as a term. Specifically, the allied health authors have chosen to deal with the term “core” particularly in regard to the phrase “core curriculum.” The entire Summer 1973 issue of the Journal of Allied Health was devoted to the concept of “Core in Allied Health.” A review of that journal provides no definitive answers in comparing the concept of “core” to the definitions of “interdisciplinary” (“team”) offered previously in the higher education and general health science literature. “Core” is presented basically as a concept of common information based upon the rationale that all allied health students must have some mutual information needs in areas such as the basic sciences or ethics. Economics (better utilization of faculty, classrooms, laboratories)
and career decision-making are generally offered as the distinguishing objectives for the core concept in allied health.\textsuperscript{17} Harmon and Quinones summarize the situation thus: "We strongly believe that the core curriculum . . . for Health Careers provides the foundation for related information that is generic to all health categories and occupations, and serves as a corollary to the specific curriculum designed to give the student the necessary knowledge and skills in his prime area of interest. The skills and training needed to perform a specific job can then be built upon by incorporating speciality training and clinical practice."\textsuperscript{18}

Seeking to quantify a definition of interdisciplinary education, Daniel Clark, writing in the participant workbook for the training institute, "Planning for Interdisciplinary Education" conducted by the Center for Interdisciplinary Education in Allied Health at the University of Kentucky and sponsored by the Department of Health, Education, and Welfare, stated: "Interdisciplinary education is that process which develops as its ultimate outcome the collaborative and interdependent action among two or more persons of different disciplines, revolving around accomplishment of tasks or achievement of goals which could best be achieved through such effort."\textsuperscript{19} Clark then goes beyond the limitations of "core" and presents interdisciplinary education as a generic concept of collaboration, interdependence, and task accomplishment similar to those concepts offered in both higher education and general health science literature.

\textit{Summary and Synthesis}. In literature of the health sciences (including allied health) there is generally little direct information regarding the term "interdisciplinary education." Health science authors have appeared to be more concerned with the delivery mechanisms of health care (team, etc.) than with the process of preparing students for participating in such endeavors. There are two terms in the health science areas that do somewhat reflect the concept of interdisciplinary and they are "team" and "core." When making a comparison of these terms and the generic definitional efforts of the author in higher education the following distinctions might be made:

Core: A body of teachable knowledge which has generic use by a number of disciplines and as presented in the academic realm is primarily a one level, one goal system with information as its major objective.
Interdisciplinary: An application process emphasizing collaboration, interdependence, and task orientation by more than one discipline and as presented in the academic realm is primarily a two level, multi-goal system requiring coordination from a higher level with goal attainment as its major objective.

Team: A highly structured organization of skills utilizing a specific body of information with an application and coordination process to achieve a specific purpose, typically in a patient care or research area.

These three terms should not be used interchangeably. "Team" should be construed essentially as a combination of "core" (information on a generic issue—primary care, family care, etc.) and "interdisciplinary" (the process of applying the information in obtaining the specific patient care goal). "Interdisciplinary" activity does not have to be "team" related nor does "team" have to be "interdisciplinary." "Core" activities basically do not result in an action oriented activity.

Interdisciplinary then is not a subject matter. Its objective in application is not the improvement of the discipline of the student but the improvement of the student's ability to apply that discipline in specific and perhaps limited situations.

LITERATURE AND HISTORICAL DEVELOPMENT

The historical development of the concept of interdisciplinary education can be traced through the literature by following the development of two trends: (1) the expansion of health care system, and (2) the movement of professional education into institutions of higher education.

The Literature. Kindig projects the initial development of formal collaborative or team delivery of health care as initiating in the late 1940s as the Montefiore Hospital primary care, home health program was initiated utilizing physicians, nurses, and social workers. Formal expansion came in 1954 with the Family Health Maintenance Demonstration and in 1964 with the Neighborhood Medical Care Demonstration. Collaborative efforts in the delivery of rehabilitation, mental health, and public health services were also prevalent during this 1940-1964 period. While collaborative or team delivery
of care was taking place in the provider system, the health science education literature during this period was very quiet in reporting events taking place in academic settings to prepare practitioners for an interdisciplinary practice. The literature before 1970 in the health sciences emphasizes interprofessional collaboration and communication rather than interdisciplinary delivery of care. Early efforts in this direction were predominantly oriented to physician-nurse (and sometimes social worker) education. There were some reported efforts during this period to expand the audience for teaching collaboration to other than physicians and nurses, but these were not great in number.

Beginning in the early 1970s the health sciences literature appears to explode with articles using the terms “team” or “interdisciplinary” in their titles (see bibliographies in The Whole Team Catalogue, Center for Interdisciplinary Education in Allied Health, University of Kentucky, Lexington, Kentucky 1979). Although technology relative to the delivery of patient care appears to be a central reason for this expansion, it is also important to remember the great proliferation of health discipline programs in higher education at this time. As these programs have been brought into formal teaching settings, the skills and knowledge taught have increased and problems of professionalism and roles have developed.

Allied health is perhaps most exemplary of this expansion, confusion, and cry for recognition. The literature of allied health is greatly lacking in reporting on concepts of interdisciplinary education. Writing in the “Potential Patterns” column of the Journal of Allied Health, Francis Hanavan pointed out that, “with a few notable exceptions such as some of the rural based projects like ‘Kentucky January,’ one is dismayed to note the conspicuous absence of meaningful cooperative efforts which link allied health practitioners with physician and nurse manpower.” The basis of Hanavan’s dismay could be rooted in the paucity of literature produced by allied health educators regarding interdisciplinary education. Using the Journal of Allied Health as a major source of generalist literature in allied health education, one can well understand Hanavan’s comments. In its first six years of publishing (25 issues) the JAH has accepted 178 articles, of which only 9 (5.1 percent) include the term “interdisciplinary” or “team” in their title or content. Further examination of these JAH
articles reveals that only 5 of the articles reported on the specific instructional programs of academic institutions. Allied health educators, as evidenced in their literature, do not appear to be heavily involved in the interdisciplinary education process.

The general health science literature does show, however, that allied health students are part of the interdisciplinary programming of other disciplines. It becomes evident that the leadership for the development of interdisciplinary experiences for students has principally occurred in organizational units other than those focusing on allied health.

A major exception to this has been the nonrefered literature as typified by the "Potential Patterns" column of the *Journal of Allied Health*, the *Health Team News* newsletter of the Institute for Health Team Development, and the *Prospectus for Change* newsletter of the Center for Interdisciplinary Education in Allied Health. This element of the literature has reported consistently on interdisciplinary projects, particularly in allied health.

The *Events and Activities*. In order to trace effectively the development of interdisciplinary education, a chronology of events and activities were compiled by the Center for Interdisciplinary Education in Allied Health of the University of Kentucky and published in *The Whole Team Catalogue*. Examination of the chronology of events identifies five major forces in the shaping of the current state of interdisciplinary education: Professional Organizations, the federal government, students, private organizations, and academic institutions. It should be kept in mind that a sixth force, the practice setting, has been predominantly responsible for the emergence of the preceding five. It appears that the initiative for interdisciplinary activity did not occur within the research and development capabilities of universities but as a response to a practice need for delivery of care.

Professional Organizations: One of the earliest organized approaches to dealing with the issue of collaboration among professionals was carried out by the American Medical Association and the American Nurses Association as they initiated in 1964 a series of national conferences dealing with collaboration in practice between the two professions. The national conference series for professional nurses and physicians was carried out in 1964, 1965, and 1967 with
the eventual outcome of this effort being the establishment in 1971 of the National Joint Practice Commission. The Joint Practice Commission was established as a formal communication between the two disciplines to assist in the development of collaborative practice efforts. Through research and communication, the commission has dealt with issues of collaboration and conducted three additional national conferences (1972, 1975 and 1978). Throughout the fourteen-year history of the efforts of the AMA and ANA to work together there does not appear to be a major formal effort to extend this professional commitment into the academic programs of the two disciplines they represent. It is also of interest to note that no other professions have emulated this approach.

The Federal Government: The interdisciplinary practice and education movements have been heavily subsidized by the federal government since its highly visible entry into health science education and health delivery in the mid-1960s. Federal efforts have not all been coordinated and have come from a number of sources such as the Office of Equal Opportunity and other components of the Department of Health, Education, and Welfare. OEO was one of the first federal agencies to support interdisciplinary activity with the Yale-New Haven Medical Center project involving medical, nursing, and social work teams in neighborhood health centers in 1966. The OEO guidelines issued a precise call for the use of the team approach for delivering care: “New ways should be sought to develop, train, and utilize a health team that is innovative in both structure and function. The concept of supporting staff should go beyond traditional roles and might include physicians assistants, family health workers, health visitors, community health aides and others. . . . The program should demonstrate new roles in the health-related professions and test realignments of the orthodox relationships between primary and supporting personnel.”

Although specific funds were not labeled for interdisciplinary use, a number of academic institutions through various special project grant mechanisms in mental health, medicine, nursing, and allied health were able to secure funds to develop projects related to interdisciplinary activities. In 1974 under the auspices of the Health Professions Education Assistance Act, the Bureau of Health Manpower, Health Resources Administration, organized an Office of
Interdisciplinary Programs. That office had as a prime responsibility the administration of the Health Manpower Education Incentive Awards Program (HMEIA). HMEIA was charged with fostering approaches to teaching interdisciplinary primary care to students. That program, although only funded in 1975, was replaced in 1976 by a general special projects authorization as a part of PL 94-484. The HMEIA program made sixteen awards from FY 1975-76, none of which went to allied health institutions. Medical schools were the primary grantees, with one college of nursing and several private groups also receiving awards.

Other federal agencies such as the Regional Medical Programs and Appalachian Regional Commission have also provided support for interdisciplinary education projects and for conference activities. Federal initiatives in funding have consistently been on a project basis with minor evidence that institutional funds have supplemented or replaced federal dollars. Federal projects appear to have been primarily oriented toward specific clinical activity goals, such as rural care and primary care, with the approach mechanism being interdisciplinary.

Students: Leadership for the development of many interdisciplinary projects has come from students. The Student Health Organization's summer projects in the inner cities of Chicago and Los Angeles in 1966 were among the first interdisciplinary activities established. Funded by OEO, these projects apparently gave incentive to the Student American Medical Association (SAMA), which in turn developed the MECO program (Medical Education Community Orientation). MECO, although primarily for medical students, gave SAMA a community experience base which led in 1972 to the development of the SAMA-ARH Affiliated Student Health Project (a summer project) which in turn became in 1974 the SAMA Foundation Health Team Training Project (a year-round effort). Thus, for some ten years national organizations of health science students, primarily medicine, have been conducting interdisciplinary projects which have included allied health students. In almost all cases the projects have revolved around delivering a service to an underserved area or population. The students have been successful in obtaining financial support from federal and private foundation sources.

SAMA (renamed the American Medical Students Association) has
also attempted to work with academic institutions—Kentuckiana Metroversity, Eastern Virginia School of Medicine, Medical University of South Carolina, and University of Colorado—in establishing campus based credit curriculum. Each of these projects has also included allied health students where they were available.

As an outgrowth of SAMA experiences, students organized the Institute for Health and Society in 1969. The institute, which lasted for four years, was successful in obtaining federal and foundation funds for developing teaching materials oriented toward community health and team approaches to community health.

Campus-based student groups such as those at the universities of Minnesota, Alabama, California at San Francisco, and Columbia have also brought pressure to bear on faculties and administration to develop interdisciplinary experience opportunities. At Columbia this effort has resulted in a student-operated didactic course, while at Minnesota an elective offering of fourteen courses has been developed. Students have thus been a viable force in development of interdisciplinary experiences in academic and community settings. Service has tended to be the predominant objective in the majority of these activities.

Private Organizations: The response of the private sector to the development of interdisciplinary education has been interesting. Foundations such as Robert Wood Johnson, Kellogg, and Ittleson have been generous with financial support for interdisciplinary educational activities. AMSA and universities have been major recipients of support which enabled them to carry out much of their programming.

Through the support of the Robert Wood Johnson Foundation, the Institute for Health Team Development (IHTD) was founded in 1973. That organization was built on the premise that a central resource could provide the development of educational strategies, content, and training of faculty which universities could then use in preparing students for interdisciplinary approaches to the delivery of primary care. Communications on interdisciplinary activities through a national information network was also a focus of the IHTD, in the hope that the development of even more activities might be encouraged. The IHTD model of development was based on training interdisciplinary faculty teams which would then be prepared to teach
and provide role models for students on university campuses. The model mandated that medical center campuses be the focal point of its activities, thus limiting the potential participation of allied health institutions in its activities.

The National Academy of Sciences through its Institute of Medicine recognized the emergence of interdisciplinary education as it conducted a national conference, "Educating for Health Teams," in 1972. The Association of Academic Health Centers has also recently entered the interdisciplinary arena, calling for interdisciplinary education to be a component for federal funding.26

Recently a new approach to fostering interdisciplinary education has emerged with the organization of the Commission on Interdisciplinary Education and Practice in Columbus, Ohio, and the New Health Perspectives in Seattle, Washington. The commission is a membership organization made up of academic representatives of five colleges of Ohio State University (Education, Law, Medicine, Nursing, and Social Work) as well as three theological seminaries and several state organizations. Its objective is to educate professional students on the problems of individuals and society that require interdisciplinary solutions, on ethics, and on the changing relationships between consumers and professionals. It has established a relationship with Ohio State and offers credit courses on campus and continuing education courses off campus. New Health Perspectives is a group of faculty members from the University of Washington whose HMEIA funds lapsed, but who want to continue their efforts in developing interdisciplinary education through the private sector.

Private organizations have thus made their chief contribution through financing activities, but a new order might be on the horizon as represented by the commission and New Health Perspectives.

Academic Institutions: Regardless of the incentives or leadership provided by the other predominant forces in the interdisciplinary movement the ultimate activity level sooner or later occurs in the academic institution. With a few exceptions academic institutions have approached interdisciplinary education in one of two ways: (1) departmental project (course) basis or (2) institution wide administrative unit for development and/or implementation.

The greatest activity has occurred on a departmental project basis with external funds providing the apparent motivation for develop-
ment. The University of Colorado and the University of California at San Francisco have the longest track record in the literature for developing interdisciplinary educational experiences for students. Still, the efforts in both these institutions appear to be fragmented and not part of planned institutional curriculum. Typically, this approach to interdisciplinary education is based on a clinical experience conducted most often as a summer program or part of an on-going clinic. There are didactic offerings reported by many academic centers which tend to focus on subjects such as ethics and health care systems. What the literature does not report is what has happened to many of these projects when the external funding has ended.

Institution-wide administrative units have been formed at the University of British Columbia, University of Pittsburgh, University of Pennsylvania, Kellogg Community College, and Lehman College, CUNY. It is interesting to note that while there were very few allied health institutions conducting departmental project activities in interdisciplinary education reported in the literature, four of the five institutions choosing to organize an institution-wide administrative unit were predominantly allied health.

Perhaps the basic model for developing administrative units for interdisciplinary activity in an academic setting is that of the University of British Columbia. Initiated in 1968, the Office of Interprofessional Education in the Health Sciences became the first campus-wide developmental unit specifically for interdisciplinary education. Working through faculty and student committees the OIE developed coursework and clinical experiences for students of all disciplines.

The School of Health Related Professions at the University of Pittsburgh formed a Department of Health Related Professions Interdisciplinary Programs in 1973, while in 1972 the Kellogg Community College initiated a semester-long curriculum program, “Health Technology 10—Integrated Services,” for all students participating in the six discipline programs of the Division of Health Technologies. Both these efforts appear to be basically “core” concepts but attempt to mold that into a true approach to interdisciplinary education.

Both the University of Pennsylvania and Lehman College developed an “Institute” approach to interdisciplinary education. The Institute on Interdisciplinary Health Care Practice was organized by
the University of Pennsylvania in 1972 to develop and offer courses throughout the medical center. Lehman College in 1975 organized the Health Professions Institute primarily for social work, nursing, health administration, and then medicine in the final clinical years.

It was stated earlier that there were exceptions to these two main approaches to interdisciplinary education in academic settings. There are four exemplary exceptions which should be mentioned:

1. The University of Nevada, Reno: UNR embarked in 1969 on perhaps the most ambitious effort at interdisciplinary education in the country. Their effort has been to structure completely the curriculum of medicine, nursing, and certain allied health disciplines in a total sequence of both core and interdisciplinary learning experiences throughout the four-year process of each discipline. Working in a coordinating administrative role, the UNR project office has developed courses and curriculum models and implemented the program.

2. The University of Kentucky: In 1972 The College of Allied Health Professions initiated the “Kentucky January Program.” Originally an extramural intersession course with community assessment and team development as its major goal, the Kentucky January Program grew into a national program with students in eighteen disciplines from nearly twenty colleges and universities participating. It was one of the first allied health centered interdisciplinary education programs. Ultimately it developed clinical experiences as well as community assessment. From the Kentucky January experience the college developed a National Center for Interdisciplinary Education in Allied Health. The center, the only one of its kind, has a mission of serving as a resource center for other institutions in preparing strategies, materials, and experiences for students and faculty in interdisciplinary education. It has conducted workshops, provided consultation, and operated programs for students as a part of its mission.

3. The Medical College of Georgia: Beginning in 1973, through a Kellogg grant, MCG initiated a pilot project to educate a select group of medical, nursing, and physician assistant students together in a common two-year curriculum. The students spent one semester in common courses, including team orientation, then the next back in
their discipline. After some minor play in the literature the program apparently was disbanded.

4. The University of Minnesota: At the behest of the students on campus, the administration of the university formed a faculty committee from all disciplines which began the development of common courses for students throughout the medical center. Using allied health as an administrative focus, fourteen elective courses of an interdisciplinary nature were ultimately developed basically topical and didactic in nature.

Academic institutions have played the role of "manufacturer" in the process of interdisciplinary education, typically responding to "consumer demand" (students, funding incentives, etc.) but not aggressively researching and developing the product. Allied Health academic units have particularly not been aggressive in developing interdisciplinary education programming. It appears that interdisciplinary education because of its "project" nature has not developed into an integral component of health science education.

**Present State of the Academic Art in Interdisciplinary Education**

There is probably no concept of education which has such diverse meaning to educators as interdisciplinary education. In an era of defining and establishing professions interdisciplinary activities seem to encounter very specific philosophical problems relative to the goals, objectives, and approaches used to carry them out.

*Educational Process.* Interdisciplinary education as an active educational application process deals with real world issues, as opposed to theoretical issues, and is larger in context than a specific discipline. The interdisciplinary courses themselves are generally characterized as: focusing on selected commonalities among disciplines; generally invoke an activity level; are problem oriented; sacrifice depth for intensity and rigor; generalize minor points in order to accommodate multiple types of students; attempt to provide realistic approaches to subject matter; and require facilitative, not directive, teaching.²⁷

*Content Objectives.* The previously mentioned concepts tend to deal with the learning processes involved in interdisciplinary educa-
Content objectives, as reflected in reviewing the health science literature, particularly as they relate to team, tend to fall into four areas: (1) improving students' understanding of other health professions, i.e., what can they do; (2) having students learn to work together as a team; (3) developing the students' understanding of group process and its dynamics; (4) some content or subject matter, such as ethics or primary care.

The predominant content focus in team (interdisciplinary) education in the health sciences has been relative to group process, particularly in the context of team activities. Rubin, Fry, Plovnick, and Stearns in their work at developing teams, both in industry and health, have determined that the issue of interdependence is key in developing good, efficient joint, collaborative or team efforts. Participation in this type of setting then requires students be taught to deal with the four problem areas created by interdependence: (1) different goals and priorities ("What are we supposed to be doing?"); (2) role responsibilities and specialization ("Who is doing what?"); (3) effective, efficient procedure for group decision-making, problem-solving, and communication ("How do we accomplish our work?"); (4) interpersonal issues (trust, need for support, etc.) ("How does it feel to work around here?"). Rubin et al. consider group process as only one component of the skills needed for functioning in the interdisciplinary setting.

Jacobsen in her study, "Perceptions of Interdisciplinary Health Professions Education within Health Sciences Centers," found that the vice presidents of academic health centers felt that there were seven most important objectives to be achieved through interdisciplinary education. (1) Prepare the health professional student to deliver coordinated health care. (2) Develop a common philosophical frame for shared values and goals. (3) Develop a mutual respect for various members of the health care team. (4) Develop willingness to share responsibility for planning and delivery of patient care with multiple health professions. (5) Orient the student to the various professional roles in order to facilitate cross-disciplinary communication and planning of health care. (6) Develop a common language among health professionals. (7) Demonstrate the delivery of team health care.

Teaching Strategies. Each author and each program has made
some decisions relative to what should be in the interdisciplinary course, but more often than not interdisciplinary becomes the application made and not the content. Recognizing that a variety of teaching strategies were being implemented under the rubric of interdisciplinary education, the Center for Interdisciplinary Education in Allied Health constructed the taxonomy of teaching strategies shown in Table 2 for dealing with Rubin et al.’s problems associated with interdependence.

This approach reinforces the concepts of interdisciplinary education being an action, real world process. This table does not suggest that straight delivery (lecture, etc.) is inappropriate in interdisciplinary education but that learning outcomes are better as the students’ participation level increase. Application of these teaching strategies rarely occurs in an integrated fashion. Interdisciplinary coursework is usually either didactic or clinical, in nature with little integration of the two approaches in some sequence.

Programatic Examples. One of the exemplary efforts in allied health, in interdisciplinary strategies, was initiated at the University of Connecticut in 1973. A two-semester sequence of coursework was developed, the first semester focusing on common disciplinary issues, with students participating in large lecture situations then breaking into small interdisciplinary groups for discussion. A team project is required as a part of the course, thus intensifying participation. The subject matter is related to team concepts, health care organization, and consumerism. In the second semester students are allowed to choose topics of interest through mini-course offerings. These courses are also essentially didactic but are done in small groups. In the summer of 1978, the University of Connecticut developed a clinical experience for students who had participated in the didactic work, as an application of that content they had learned.

At the University of Kentucky a similar two-semester sequence called “The Allied Health Colloquium” has been developed. Ohio State University offers a one-semester didactic course on health professions and their functions. These efforts are probably representative of the vast majority of interdisciplinary efforts being made in allied health.

One of the exemplary efforts at attempting to integrate didactic and clinical approaches to interdisciplinary education, was the “Phil-
Table 2. A Taxonomy of Teaching Strategies and Their Potential for Attaining Strong Learning Results in Interdependent Problem Areas.

<table>
<thead>
<tr>
<th>Teaching strategies</th>
<th>Problem area</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Goals</td>
</tr>
<tr>
<td>Straight delivery</td>
<td>Very low</td>
</tr>
<tr>
<td>Participation</td>
<td>Low</td>
</tr>
<tr>
<td>observation</td>
<td>Medium</td>
</tr>
<tr>
<td>Seminar</td>
<td>Medium</td>
</tr>
<tr>
<td>Simulation</td>
<td>Medium high</td>
</tr>
<tr>
<td>Research team</td>
<td>High</td>
</tr>
<tr>
<td>Patient care team</td>
<td>Very high</td>
</tr>
</tbody>
</table>

Philadelphia Interdisciplinary Health and Education Program” (PIHEP) developed by the Pennsylvania College of Podiatric Medicine. In this program students took a semester course (didactic) in health issues and teams then during the next semester participated in a clinical team program as a part of various clinics in the Philadelphia area, in an effort to integrate the two teaching approaches.

Interdisciplinary programs in academic centers break down roughly into four major models of presentation:

1. Common Issue: Typically a didactic approach in the classroom setting using a combination of lecture and small group discussion with a focus on a common issue, i.e., health care systems, ethics, etc.; generally emphasizing information exchange with limited or no collaboration or interdependence required of students.

2. Case Presentation: Typically a problem-solving approach utilizing a patient or topical area which permits inputs from a number of disciplines; can be a real case or simulated activity; generally initiates role sharing, information sharing, and the early stages of collaboration and interdependence; does not require actual delivery of service or activity.
3. Team, Research: A more intensive problem-solving approach focusing on the need to produce a product at the completion of the activity, generally a project oriented program, normally focusing on community type subject matter (paper, directory of community services, etc.); intensifies interdependence and collaboration with introduction to role differentiation.

4. Team, Patient Care: Generally takes place in a clinical setting with students participating in a collaborative, interdependent manner focusing on the delivery of patient care, utilizing referral techniques and with a major focus on a team approach.

These four approaches are typical of the current stage of development of interdisciplinary courses offered in academic institutions.

Alex Dukanis and Anne Golin of the University of Pittsburgh conducted a survey of academic programs in allied health, dentistry, medicine, nursing, and social work to determine the extent of curricular provisions for teaching about the function of health care team in professional schools. Table 3 depicts the result of that work. It is interesting to note that while 90 percent of the respondents indicated that it was important to have specific teaching about the health care team only 34 percent offered such coursework. Social work and nursing were the most prolific in offering such courses. Only about one third of the allied health programs responded that health team functioning was a part of their curriculum. This study, while not universal in application, does provide some clues as to the extent of team (interdisciplinary) oriented courses.

Outcome Issues. The progress of interdisciplinary education as an accepted component of a health science program appears to be impeded as a result of inadequate measures for resolving two questions: (1) What competencies should an interdisciplinary educational experience create in students? (2) What are the appropriate evaluation measures that should be used in determining if the competencies have been met? The literature is essentially silent on these two issues. Kindig, Rubin, et al. and others would insist that generic skills relative to group dynamics, interpersonal relations, dealing with interdependence, and so forth are the fundamental competencies to be gained from an interdisciplinary experience. Others would argue that these are inherent human characteristics not teachable.
Table 3. Curricular Provisions for Teaching about the Function of the Health Care Team in Professional Schools (percentage answering yes to the questions).

<table>
<thead>
<tr>
<th>Question</th>
<th>Allied health (n = 22)</th>
<th>Dentistry (n = 24)</th>
<th>Medicine (n = 24)</th>
<th>Nursing (n = 29)</th>
<th>Social work (n = 25)</th>
<th>Total (n = 124)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is it important to have specific curricular provisions for teaching about the functions of the health care team?</td>
<td>94</td>
<td>88</td>
<td>79</td>
<td>93</td>
<td>96</td>
<td>90</td>
</tr>
<tr>
<td>Have you considered including such a course or unit?</td>
<td>90</td>
<td>79</td>
<td>70</td>
<td>72</td>
<td>84</td>
<td>79</td>
</tr>
<tr>
<td>Do you have such a course or unit?</td>
<td>32</td>
<td>21</td>
<td>25</td>
<td>41</td>
<td>48</td>
<td>34</td>
</tr>
</tbody>
</table>

does not appear to be a major research effort in determining these competencies, so the issue of competencies is left to the individual academic program for resolution. Evaluation then becomes a critical issue in terms of placing the interdisciplinary program within the context of the academic institution. A lack of ability to deal with these two questions has made the proliferation of interdisciplinary programs difficult.

NOW AND TOMORROW

Interdisciplinary education as we know it in allied health today is whimsical and capricious; it is guided by no consensus of purpose or standard. As an educational concept it has minimal legitimacy because of its lack of roots in a given discipline. The need for its implementation comes from the practice setting and not the educational sector, thereby perpetuating its less than definitive existence. Philosophical commitments from administrators, faculty, and students are necessary for the interdisciplinary concept to remain vital.
A rethinking of the allocation of educational resources is essential to the survival of the concept.

Allied health, having emerged from the technological explosion of the early sixties, has developed as one of the largest and most complex components of health manpower in this country. It has grown and multiplied with little or no coordination or basic goals related to the development of a comprehensive health care delivery system. The component disciplines have an extremely varied developmental history with uneven power bases, role functions, and outcome objectives. As these disciplines have increased in both numbers and varieties they have been assimilated into a variety of academic institutions. Once gathered under the academic umbrellas, they have diffused themselves further through separating their educational preparation in the various levels of academia. Concurrent with this pattern has been a change in focus of certain components of the health care delivery system and changes in the role and scope of disciplines outside the allied health disciplines. Resurgence in the demand for more accessible health care has created within the delivery system changes in its demands for personnel at the time the allied health professions were securing their position within the former delivery system. Each piece of this puzzle has brought about a varied call for bringing the professions together in an interdisciplinary fashion. The academic response to this call for bringing the disciplines together has been great and typically conducted in a piecemeal fashion. Resolution of this problem should come in allied health through the following steps:

1. Recognition that an interdisciplinary approach to education is a legitimate learning concept has a variety of levels of application and outcomes and is important to producing a quality graduate of all allied health disciplines.

2. Administration in allied health units must devote resources and incentives to the development of an interdisciplinary concept concert with a faculty acceptance of the interdisciplinary philosophy where applicable within the scope of the respective disciplines.

3. External controls of allied health education, accrediting bodies, funding sources, etc., must reexamine their approaches to implementing their control on allied health education and make provision for flexibility which will provide incentives rather than
penalties for incorporating the interdisciplinary approach into the various allied health educational programs.

4. Preparation of allied health educators should include content and experiences which will acquaint them with the interdisciplinary process of teaching and learning.

5. In those allied health disciplines where applicable, a reexamination of clinical education should take place with more emphasis placed on total delivery of care as opposed to a specific focus on discipline provision of care.

6. Recognize that periodic change in trends of health care delivery patterns are imminent and reoccurring, thus flexible approaches to educational preparation such as the interdisciplinary approach are essential to the continual growth and maturity of the allied health disciplines.

NOTES

8. Ibid., p. 6.


24. Winter 1974, SUNY-Buffalo; Winter 1975, University of Kentucky; Fall 1976, University of Connecticut; Spring 1977, San Diego State University; and Spring 1978, University of Minnesota.


28. Irwin Rubin, Ronald Fry, Mark Plovnick, and Norma Stearns, "Improving the Coordination of Care: An Educational Program," *Hospital and Health Services Administration* 22 (Spring 1977): 59-60.


At the risk of creating an overschematicized simplification, I am emboldened to compare the challenge of allied health administration to that of those would be leaders who have struggled for years to unify the Balkan states. Think if you will of the continuing plight of Austria, Bulgaria, Greece, Albania, Turkey, and Yugoslavia. Once secure members of the Turkish and Austro-Hungarian Empires, these nations now cling tenaciously to their separate identities while being continously buffeted by political and economic maelstroms generated by their more powerful neighbors in Europe and Asia. Once united, these nations are now separated by barriers created by geographic, linguistic, religious, and economic differences. Each nation finds it necessary to struggle heroically in order to maintain its independence—and yet separately their sovereignty always seems to be in jeopardy. Separately, these nations’ survival is jeopardized, but should they reunite to share resources and serve as allies against incursions by superpowers, they would represent a significant world force. Alas! These nations speak different languages, are fearful of cooperation (lest some perogatives be lost in the necessary trade-offs), and hold tenaciously to time-honored customs.

How does all of this relate to the role of the allied health administrator? Consider, if you will, the substitution of the labels occupational therapy, medical technology, radiologic technology, and physical therapy for those of the Balkan states mentioned above. Like the Balkan Peninsula, the geography of allied health is difficult
to define. Who is included in this organizational collective? More critically, the question may be expanded to how may these disparate units be forged into a powerful force? The sundry allied health professions are all too similar to the Balkan states in the forces which divide them and the subsequent perils they face. Considered separately, selected professional groups may be found to be clinging desperately to those hard fought gains they currently enjoy, and yet the failure to cooperate threatens their continued sovereignty.

What manner of person can take in hand the task of uniting these constituencies? Do we instruct our search committees to identify candidates wearing academic gowns embroidered with a stylized S à la Clark Kent? Certainly the task is one of herculean dimensions.

**The Administrative Challenge of the Allied Health Concept**

During 1966, the Eighty-ninth Congress, responding to President Lyndon B. Johnson’s design for the Great Society, enacted twelve major pieces of health legislation. Prominent among these landmark laws were Medicare (Public Law 89-97) and the Allied Health Professions Personnel Training Act (Public Law 89-751). The confluence of these two new laws presaged a major new recognition of the role of allied health manpower in the delivery of health service.

The Medicare legislation which declared that health care was a human right set the stage for an unprecedented demand for health care services. The Allied Health Professions Personnel Training Act recognized the fact that the need for allied health manpower was real and critical and provided a base of support to increase the quality and quantity of allied health professionals.

Responding to the twin stimuli of an identified critical shortage and the promise of federal support for programs, two-year and four-year colleges embarked upon a crash program of expansion.

Beginning with a handful of schools—three, I think—in the era before 1966, we find the expansion to thirteen founding schools in 1967, and then a virtual avalanche of new schools in the decade following. In the two-year period from 1967 to 1969 alone, two thousand new programs were established to train allied health manpower. (McTernan, 1972)
What we have witnessed is a typical overreaction which has been a hallmark of our uncoordinated national system of higher education. Recall if you will the response of the nation's colleges to Sputnik in the expanded legislation for the NSF which resulted in a virtual deluge of new programs in physics, engineering, and modern languages. Anyone who has been a participant in the academic community for the past ten years can readily identify the problems created for institutions and individuals which followed this pellmell expansion.

The decade of growth we have witnessed in allied health closely parallels the experiences of the NSF. We are beginning to experience difficulty in placing our graduates in much the same way physics Ph.D.'s were hard to place in 1972. Contributing to this untrammeled growth has been the popularly held view by many college administrators that allied health programs offered salvation in a time of crisis. How many small liberal arts colleges do you know that have recently attempted to convert a sagging chemistry department to medical technology? When was the last inquiry you had from someone wanting your help to start a program for left ventricle therapist? This kind of thing is partially due to the fact that funding was available for allied health programs in a time of shrinking federal support, and these curricula held the promise of relevance to a generation of discouraged students.

In times of strife we are all easy victims of slogans, those catchy word combinations that so easily circumvent analysis and soon become the ill-considered basis for rhetoric which is used more for our own comfort rather than as a philosophical basis for sound planning. At the risk of being branded as the worst of heretics, I will suggest to you that at this juncture in the development of allied health education we as allied health administrators have allowed ourselves to become victims of slogans. Look around you and ask the objective question of where does the adjective allied fit into the programs we have called allied health. Ask yourselves if we are not guilty of utopian thinking.

Karl Mannheim offers this definition of utopian thinking: "Utopian ideologies are situationally transcendent ideas which never succeed 'de facto' in the utilization of their projected contents and though they often become the good-intentioned motives for the
subjective conduct of individuals, when they are actually embodied in practice, their meanings are most frequently distorted.” All too often we are guilty of promoting utopian ideologies when we blithely talk of the allied health team, core curricula, or now primary care. Do we know what they mean and have we sincerely attempted to implement these ideas? (Mannheim, 1936)

The time has come for allied health administrators to translate their faith into practice. Unexamined faith accompanied by slogans will no longer be sufficient for the stormy future.

One of the heresies of the early Christian church was the antinominalism heresy which posited “by faith alone are ye saved.” In many respects we are guilty of practicing a similar heresy. Yet the lessons of history teach us that the truest test of faith is found in the crucible. I would suggest that the present era is a time which will indeed test the faith of us all. The old verities of the allied health team and the core curricula and the newer gospels of primary care and consumer education can only be meaningful if allied health administrators are able to transmit them from salvation themes into functioning realities.

During the next few years, we in allied health must be prepared to meet significant challenges in the following areas: shrinking or at best stable federal support, severe economies at the institutional and statewide levels, new demands for performance that will require expanded responsibilities, implementation of a true team approach to delivery of health care services, and possible annexation by stronger powers. The future will demand that we reassess our concept of allied health and begin to translate slogans into viable programs. The mantle of leadership in this task will fall on the shoulders of the allied health administrators. Let us examine the resources which are available to us now or that can be developed for the future.

HISTORICAL EVOLUTION OF THE ALLIED HEALTH ADMINISTRATOR

In the beginning there was the draft. As colleges and universities became aware of the concept of allied health, the leaders of these schools cast about for someone within their circle with the promise
of being an entrepreneurial type who could pull together a few existing programs and perhaps take the lead in founding new programs. Traditionally when it comes time to select a dean, the university's most usual source of candidates is the faculty (Eble 1978, Ferrari 1970, and Dibbeden 1968). When universities created the new deanships for schools of allied health professions, they typically found that faculty in the preexisting allied health programs did not have the traditional academic credentials for a dean's level appointment and they turned elsewhere. As was often the case, a decision was made to draft a convenient microbiologist, physician, or one of the newly emerging professional educational administrators to handle the task of setting up the new division. A study conducted at the University of Buffalo in 1975 (Wilson, 1977) confirmed the fact that those persons currently serving as allied health deans were indeed drawn from sources outside what have been identified as the allied health professions. Indeed, if one were to examine the career development of those people who currently serve as allied health deans, these trends continue to prevail. It is probably unique in the academic experience to find that a number of professionalized administrators (persons drawn from doctoral programs in higher education administration) with limited or no faculty experience have graduated from adjunct positions as assistant deans to the deanship of new programs. A recent commentator (Whitlemore, 1980) has noted the potential for abuse which is inherent in the trend toward the employment of "professional" administrators.

Only now, following a period of approximately fifteen years of intensive vertical development of graduate level programs and professional maturation, are we beginning to see the emergence of potential deanship candidates from the ranks of allied health faculty. While this may be regarded as a healthy and even an overdue development, it too represents a mixed blessing. As faculty members become steeped in their own professionalism, there is the danger that their vision may become too narrowly focused within and thus hinder their ability to consider the cooperation necessitated in the allied health concept.

It is indeed propitious that as we face the challenge of the eighties that a broadened base of qualified candidates can be identified in the pool of potential allied health administrators. Despite
these developmental trends, the recently completed study of the National Commission on Allied Health Education still felt constrained to identify the need for leadership development as one of the key challenges for the future (NCAHE, 1980). The next section of this essay will examine some of the principal resources currently available.

**Training Resources for Leadership in Allied Health Administration**

A review of the literature reveals that the concept of the dean as an academic leader has received a good deal of attention. However, most of what has been written may be fairly characterized as broadly descriptive, even reminiscent, in its treatment of the subject. Research-based studies which describe specific roles or competencies needed by the dean are not adequately addressed in the literature. There is, however, some concurrence that the most appropriate preparation for those who would aspire to the deanship should include extensive teaching coupled with some administrative experience. Interestingly enough, my own experience in conducting a postdoctoral training program to prepare allied health administrators indicates that the best predictor for success as an allied health administrator has been previous experience in an administrative role.

Historically, the most productive source of allied health administrators has been candidates who have been drafted from related positions in science or educational administration. At the conjectural level, this may appear to be somewhat suspect, but I would be seriously remiss if I failed to note that this source of leadership has served the developing schools exceedingly well. In fact, some of the most distinguished contributors to the literature on allied health education are representative of this group.

It is quite likely that because deans are not bound by the parochialism of a single discipline (a factor which regrettably is often magnified in the emerging professions that are scrambling for purchase in the academic hierarchy) their perspectives may be sufficiently cosmopolitan to address the extradisciplinary concerns implied in the concept of allied health. In fact, it is probably this characteristic
which will continue to make candidates with these disciplinary backgrounds outside allied health attractive to search committees striving to identify leadership. We may safely conclude that drafted deans will continue to be a principal resource for the foreseeable future.

**INSERVICE DEVELOPMENT RESOURCES**

Recognition of the need to develop leadership at the departmental level and for the preparation of subadministrators has led to the establishment of a number of inservice training opportunities. Following the example of the Association of American Medical Colleges (AAMC) and the American Council of Education (ACE), two professional associations with a commitment to fostering allied health education have developed inservice training schemes.

The American Society of Allied Health Professions has for the past several years sponsored a series of short-term workshops designed to help allied health educators develop leadership and educational program administrative skills. The ASAHP workshops have been made available on a regional basis and tend to focus on topics such as manpower data resources, legislative trends, conflict management, human and financial resource management, and the development of strategies for change in allied health educational programs. These workshops have proven to be popular with subadministrative types such as assistant deans and adventitiously oriented faculty members.

The second major resource, which is a more recent entry (1976) into the market for inservice development, is the American Association of State Colleges and Universities. The AASCU workshops are designed to develop or strengthen the capacities of allied health professionals to serve in administrative and supervisory positions. To date, this organization has conducted twenty one-week workshops designed to establish first-level competencies in management planning, legislative, and legal areas. A unique aspect of the AASCU approach is the provision for a subsequent level of special topic institutes which build and extend upon the first level competencies in areas which include: cost analysis, resource acquisition, student recruitment, and research skill development. By and large, the
AASCU workshops have attracted a constituency similar to that addressed by the ASAHP workshops.

In addition to these two major sources, individual universities have offered single short-term workshops featuring issues of related interest such as clinical evaluation and ethics which also develop administrative related skills.

When contrasted with the two models of AAMC and ACE referred to at the onset of this section, the presently available inservice resources may be judged to fall short in a number of areas. Two areas of primary concern should be addressed. These difficulties revolve around the related issues of a perceived lack of depth and lack of continuity. As is the case with most continuing education efforts, there has been no commitment toward developing an integrated approach which would specify a series of specific administrative competencies and toward developing a strategy of cyclically available programs that would allow interested participants to develop their abilities systematically. Almost total reliance on a single source of funding (HEW Bureau of Health Manpower) is also deemed to be a problem, in that criteria for participant support may be too restrictive. Moreover, all indications point to the questionable nature of the long-term commitment of this agency to this type of program.

On the positive side of the ledger, these inservice programs have whetted the appetites for academic leadership of an underutilized resource pool of manpower. These institutes have also put in place a professional contact system which will be a major resource for those who aspire to administrative positions. A number of students of academic leadership have identified the resource network as an important element in the qualities of effective leaders (Richman and Farmer, 1974; Baldridge et al., 1978).

As we look to the future, these inservice development activities will prove to be critical resources. Efforts should be made to consolidate the gains made as a consequence of these programs and to develop a more comprehensive approach. Important consideration should be given to the establishment of a formal career development scheme which incorporates a coordinated internship approach such as found in the AAMC and ACE programs. The ASAHP would be the most logical agency to sponsor a program of this nature.
PRESERVICE PREPARATION OF EDUCATIONAL LEADERSHIP

Despite the relative recency of the allied health component of the educational enterprise, remarkable advances have already been made. With the support of the W.K. Kellogg Foundation, centers for the preparation of allied health leadership were established at seven major university centers. A primary goal of these centers has been the identification and preparation of faculty to staff the rapidly emerging allied health education programs. Many of the graduates of these programs have already begun to emerge in leadership positions at the departmental level, and a significant percentage of these new type faculty have assumed middle level administrative positions as curriculum coordinators and program directors. This group of faculty hold considerable promise as a resource to fill future vacancies as allied health deans (Kellogg, 1978). The Baylor program which prepares its graduates at the doctoral level can already point to a number of its graduates who have assumed responsibility as deans of divisional directors for allied health programs.

A unique program is one based at SUNY at Buffalo which is focused at the postdoctoral level and includes a one-year rotating internship with structured experiences in several nationally prominent schools of allied health and in administrative agencies in Washington, D.C. The graduates of this program have begun to make substantial contributions as deans and in governmental agencies concerned with allied health education. This program might well serve as a model for the formal training program called for in the previous section on inservice resources.

In addition to the Kellogg centers, which take an interdisciplinary focus, one can also point to educational activities within the sundry allied health professions as holding considerable promise for the development of future leaders. Along with the almost exponential horizontal expansion of basic programs in the allied health professions of the seventies has come a more recent trend of vertical curricular development. While this has been most evident in the move from hospital-based training to the associate and baccalaureate level, we are now beginning to witness strong pressures to evolve graduate level programs. Considerable pressure exists within the individual
profession to establish graduate programs which are specific to the needs of the individual professions. As graduates of these programs find their aspirations awakened by graduate study, a greater percentage of new faculty will find themselves propelled into doctoral level study. Ample evidence of this trend can be found in advertisements in professional journals for departmental chair positions which now specify doctorate preferred. The impact of this trend will be the production of more traditionally qualified academics who will then be actively recruited for administrative positions.

The confluence of these two trends will result in a broader, more discipline oriented pool of applicants to choose from in selecting allied health deans. The development of a broader pool of applicants is a very positive sign for the continued evolution of the allied health professions. They will bring important new insights to the problems of developing stronger integration of didactic and clinical instruction and can be expected to contribute to the development of more meaningful alliances among the various allied health professions.

Our orientation should be sufficiently pluralistic to believe that each of the resources cited above will continue to bring its unique influences to bear on the evolution of leadership for the allied health professions. The future is fraught with uncertainties and will demand dedicated stewardship if the allied health professions are to realize in the decade which lies ahead the bright promises which have illuminated our path in the seventies. Projections for the eighties must take into consideration social and economic changes which will challenge the allied health administrator. The next section of this essay will analyze some of the most significant of these problems.

Derek Price, commenting on the state of American science, notes that nothing in science or nature can grow exponentially. As surely as this is true of particles in an accelerator or fruit flies in a bottle, it applies as well to the growth of health care costs and the proliferation of the allied health professions. We find ourselves now being faced with the preemtoriness of a change in growth patterns which will demand our best efforts. Certainly there are gloomy prophets at large in the land who will counsel the end of the allied health era.

There is no question that institutional changes are in the offing. We can, however, be confident that the future will be marked by
increases in the quality of the individual allied health professionals which were only dreamed of in the sixties and seventies.

In all the ages of academic man, none has been as ripe for sweeping change as the present era which will confront the allied health educator. Pressures for equity in the receipt of health care services and a veritable revolution of rising expectations on the part of the emerging allied health professions are on a collision course with a changing economic climate. The expansionist mood of the sixties has yielded to a newer economic philosophy of cost containment and the spread of the "Proposition 13" approach to legislation. The next two decades seem likely to find this country witnessing a major shift in health care employment (Mahoney, 1980). These changes will include but not be limited to an emphasis on delivery of primary care services, a shift away from the hospital environment, extended care sites, and the development of clinical alliances to deliver services which will emphasize interprofessional cooperation in order to achieve cost effectiveness.

As a new generation of leaders takes these challenges in hand, proactive imaginative leadership will be needed. The challenges we face will not be new. A previous generation of "statesmen" have enumerated our goals for the future. I refer you specifically to the words of the pioneer spokesmen for allied health who are listed in the references of this chapter. There is remarkable congruity among the issues cited by the Report of the National Commission on Allied Health Education (1980) and others such as Darrell Mase (1978, 1979), Edmund Pellegrino (1977), and Warren Perry (1978) who have helped to point the way to the future.

However, there is a new factor to be considered that will significantly alter the climate in which the allied health administrator must function. With the end of an era of growth for growth's sake, and with the powerful pressures for cost effectiveness, difficult decisions will be called for, and the allied health administrator of the eighties must be able to provide leadership in areas of academic planning where they have been previously reluctant to become directly involved. My discussions here stem from a baggage of assumptions which take it for granted that, in the main, allied health deans have involved themselves with administrative tasks of planting the seeds of new programs and sprinkling a kind of academic "rapid grow" on
existing programs. In the positive growth climate of the seventies, this was an all-consuming task. Now, however, these leaders must begin the more demanding next phase of pruning, and grafting which will be needed to enhance the quality of the yield and realize the rich promise of the past.

It is time to unite the Balkans. The individual professional disciplines are now sufficiently strong to weather the stress of cross-breeding. Moreover, the past decade has witnessed the development of a more mature group of faculty who can, with the proper encouragement, begin to work more cooperatively toward common goals. I do not argue here for such things as core curriculum which may in fact be a communication disruptive phrase, but rather for the development of more meaningful alliances in education and practice. These alliances should respond to the challenges of improved quality of health care services and may involve as few as two groups functioning together or as many as our collective imaginations can embrace. The quintessential task of allied health leaders is to begin encouraging their faculty to think beyond the artificial fences of the professions which we erected to assure our individual security during the growth years. This will require more flexibility in curricula, encouragement of joint appointments, and the development of new approaches to clinical education which foster communication and cooperation. One large trunk included in the impedimenta of my previously referred to baggage of assumptions is a strongly held belief that health care teams already exist and that the real challenge is to improve communication among the team members. In some instances (viz. acute care teams) we may look to the physician for leadership, while in other teams (viz. rehabilitation) nontraditional team leaders such as physical therapists may begin to emerge.

Along with the vertical development of allied health curricula must come innovative new approaches to continuing education. Here once again, the allied health dean has the opportunity to cross the phobic barriers of the past and implement truly allied health approaches.

Finally, after more than a decade of experience with the concept of allied health, a reexamination of this notion is in order. Can we enumerate the positive and negative aspects of grouping professions together under the banner of allied health professions? I believe that
even despite the failure to address issues of cross-fertilization, the positive aspects of our brief history as “allied health professions” outweigh the negative aspects. The challenge now that we have achieved maturity is to develop strategies which will more fully integrate our potentials with the other members of the health care team. With enlightened leadership, this is now an exciting possibility.

SUMMARY AND RECOMMENDED COMPETENCIES FOR THE ALLIED HEALTH ADMINISTRATOR

Machiavelli’s *The Prince* has long been a fruitful source of inspiration for students of management. One of the most often quoted lines from Machiavelli goes something like this: “There is nothing more difficult to take in hand, more perilous to conduct or more uncertain in its success than to take the lead in the introduction of a new order of things.” This quotation, which forms the subtitle of this essay, also summarizes the difficult challenges facing the current generation of allied health administration. Stripped of our slogans and faced with the sudden confrontation by both legislators and academia, we must now prove that the allied health concept can become an operational reality and not merely an administrative description.

The decades ahead will demand a new style of vigorous leadership from allied health administrators. Yet a comprehensive study of the interaction between the forty-one allied health deans and their faculty (Wilson, 1977) indicated that these administrators believed they were not providing the kinds of leadership in academic affairs they thought was needed. A parallel type of study of liberal arts deans (Schuh, 1974) reached a similar conclusion. Indeed the literature on the role of the academic deanship has characterized the dean as more of a caretaker than a leader (Conway, 1978; Dibiden, 1968; and Gould, 1964).

The heterogeneity of their “Balkenized” constituency coupled with a well-entrenched tradition of nonintervention in academic affairs further confound the challenge of leadership. Allied health administrators must redefine their leadership role in order to focus more precisely on the academic challenges implicit in the allied health concept. This will mean directing attention away from the more comfortable tasks of budget projection or planning for individ-
ualized departmental goals (such as developing a new competency-based graduate program in dietetics) to the more nebulous and demanding tasks of setting schoolwide goals which encompass interdisciplinary approaches to delivering cost-effective health care. Another implication is the need for allied health administrators to seek a more active role in influencing external decisions at the state and national level which will provide a legislative and policy basis for practice in the sundry allied health professions. These professions if they are to prosper must seek more of a coequal basis for operation with other sectors of the health care delivery enterprise. What seems to emerge from these conclusions is a mosaic of new skills which will make them effective in working with a variety of constituencies.

Currently an effort to identify the competencies needed by allied health deans is underway at the State University of New York at Buffalo. The results of this study have provided important input to the goals of our postdoctoral administration internship program, and it is hoped that a doctoral level program to prepare experienced allied health faculty to assume administration positions will be implemented at a later date.

Beginning with a survey of the general literature on the role of the dean (Dibiden, 1968; Gould, 1964; and Schuh, 1974), the more recently evolving literature on the deanship in schools of nursing (Armiger, 1976; Conway, 1978; and NLN, 1979) and studies of the role of the allied health dean (Morgan, 1972; Dagenais, F.; and Wilson, 1977), the findings of these studies were contrasted with several studies of academic leadership (Baldrige et al., 1978; Balderston, 1974; and Richman et al., 1974) to yield a series of baseline competencies for the projected role of the allied health administrator.

With the support of a planning grant from the Division of Associated Health Professions the preliminary listing of competencies was reviewed by an advisory committee of allied health administrators. The following list of competencies describes a model for the preparation of allied health administrators. The inventory of competencies set forth here is a description at a very generic level that may be useful to other agencies contemplating the development of a program to prepare allied health administrators.
ALLIED HEALTH ADMINISTRATIVE COMPETENCIES

A. General Competencies

Provides academic leadership for the continued development of academic programs under the jurisdiction of the academic unit.
Coordinates and administers common support services necessary for the continuance of programs.
Represents the school to external constituencies in order to acquire and maintain fiscal support and accountability.

B. Subcompetencies

1.0 Develops and maintains basic fiscal support for academic programs.
   1.1 Understands the role of financial resources in program development.
   1.2 Knows the primary sources for extramural funding.
   1.3 Analyzes the budget, review, and decision-making process in the institution.
   1.4 Estimates minimum levels of support necessary for developing and maintaining a program.
   1.5 Develops a comprehensive budget planning statement.
   1.6 Prepares grant proposals in accord with the guidelines of external agencies.
   1.7 Applies the principles of budget control to the process of managing a program budget.
   1.8 Understands and employs various methods for projecting cost effectiveness.
   1.9 Reviews budget proposals for individual programs.
   1.10 Provides leadership in differential allocation of resources to achieve multiple goals.

2.0 Plans for effective utilization of physical resources.
   2.1 Represents facilities, equipment, and supply needs of individual programs to college planning bodies.
   2.2 Acts as liaison to assist departments with establishing clinical agreements.
   2.3 Analyzes use of physical resources to project changing needs.

3.0 Develops an academic plan for the school.
   3.1 Works with various constituencies to seek planning input to the academic plan of the school.
   3.2 Integrates data from planning bodies into a comprehensive plan for development.
3.3 Writes a planning document which encompasses short-term and long-range goals.

3.4 Provides leadership in periodically reviewing and updating the academic plan.

4.0 Provides leadership in establishing academic standards and health care philosophy by promulgating qualities needed for appointment of new faculty and administrators.

4.1 Defines roles and responsibilities for program directors.

4.2 Establishes criteria for appointment and renewal.

4.3 Recruits and selects program directors and key staff members.

4.4 Achieves the goals of the school by maintaining and motivating a competent faculty and staff.

5.0 Effectively manages faculty and staff activities in the achievement of school goals.

5.1 Provides a mechanism for the orderly flow of communication in the organization.

5.2 Accepts the worth and potential contribution each participant can make to the organization.

5.3 Maintains accessibility and receptivity to others.

5.4 Employs a knowledge of group process skills to facilitate group interaction.

5.5 Utilizes systematic process of management to coordinate and evaluate progress toward achievement of school goals.

5.6 Takes a leadership role in conflict resolution where appropriate to the administrator's level of responsibility.

6.0 Makes and carries out decisions.

6.1 Employs a systematic approach to analysis of problems.

6.2 Actively seeks informed input from internal and external constituencies in formulating the relevant aspects of the problem and possible avenues of solution.

6.3 Makes an informed decision which is consistent with the plans and resources of the organization.

6.4 Identifies appropriate resource personnel and initiates action to resolve the problem.

7.0 Implements accountability principles in administration of programs.

7.1 Develops a systematic approach to evaluation.

7.2 Insures that individual programs maintain a systematic evaluation process.

7.3 Critically evaluates program requests in terms of accountability to stated objectives.

7.4 Assesses the contributions of individual program units toward achieving school goals.
7.5 Provides leadership in implementing indicated revisions in stated goals and the academic plan.
7.6 Reports results of the accountability process to interested external constituencies.

8.0 Understands the external constituencies of allied health educational programs.

8.10 Understands the common organizational and administrative structures in which allied health educational programs are located.
8.12 Understands the influence of differing educational philosophies on the process of curriculum development.
8.20 Understands the common organizational and administrative structures of clinical facilities.
8.21 Understands the nature and need for clinical affiliation agreements.
8.3 Understands the essentials set forth by national, regional, and state groups which are responsible for registry or accreditation of programs.
8.4 Understands the role of the legislative process in providing support for allied health education.

9.0 Acts as spokesman for allied health interests.

9.1 Assists external groups in understanding the contribution of the allied health professions.
9.2 Articulates school goals and objectives to the remainder of the academic community.
9.3 Works with state, regional, and national coordinating groups to represent allied health interests.
9.4 Assists lay and governmental groups in understanding the allied health professions' role in health care delivery.
9.5 Seeks and supports legislation to improve the health care system.
9.6 Assists lay and governmental groups in understanding the goals and practices of allied health education.
9.7 Maintains active and positive communications with other allied health administrators.
9.8 Participates in national and regional conferences and workshops.

10.0 Understands legal guidelines which will influence the management of programs.

10.1 Understands federal and state guidelines which influence program development (e.g., Title XII).
10.2 Negotiates contract agreements with clinical sites to meet legal administrative and educational needs.
10.3 Understands the legal aspects of faculty appointment and rights.
10.4 Understands student rights to due process and access to records.

11.0 Maintains visibility as a scholar through active participation in professional activities.

11.1 Takes an active role in allied health and professional discipline related organizations.

11.2 Maintains current knowledge of professional discipline by actively following appropriate journals.

11.3 Writes and presents papers.

REFERENCES


The National Health Planning and Resources Development Act of 1974, Public Law 93-641, was signed by the President on January 4, 1975. This action evolved from the experience of Hill-Burton, Regional Medical Programs (RMPs) and Comprehensive Health Planning (CHPs). The act attempted to combine the more desirable features of these programs for state and local planning and development. The law authorized transitional funds through fiscal year 1976 for state CHPs, RMPs, and Experimental Health Service Delivery Systems (EHSDs). Where there were strong CHPs, there are, in most instances, the better Health Service Agencies today.

The preamble of PL 93-641 stated, “to facilitate the development of recommendations for a national health planning policy, to augment areawide and state planning for health services, manpower and facilities, and to authorize financial assistance for the development of resources to further that policy.” Note that “manpower” was in the bill. This indicates education for health manpower will be the business of all HSAs.

The long awaited health planning amendments to PL 93-641 (PL 96-971) were signed by the President on October 4, 1979, and are “designed to strengthen local decision-making, improve the planning process and inject more cost-consciousness into the health care system.” The three-year extension “also changes the make-up and selection of HSA governing bodies, calls for new governing body staff support and assistance, and integrates mental health considerations more directly into the planning process.”

It appears that HSAs are getting their programs in order for more
action with respect to cost effectiveness, as well as demand and quality control for health manpower requirements. It is essential that allied health educators and governing bodies of post-high school education institutions be aware of these developments by cooperating with and participating in the activities of the HSAs, as well as other state, regional, and national activities that impact on their mission. This article will attempt to acquaint the reader with HSAs developments which will be likely to affect allied health education programs in the future. The reader should review the literature from May 1980.

Some further historical observations are essential. Public Law 93-641 added the following two new titles to the Public Health Service Act: The first, a new Title XV, created a national network of local health systems agencies (HSAs). State health planning and development agencies (SHPDAs) and statewide health coordinating councils (SHCCs) are responsible for health planning and resources development throughout the country. It also established a new National Council for Health Policy within the Department of Health, Education and Welfare. A new Title XVI "provides for Federal financial assistance for construction of health care facilities, particularly for modernization of existing facilities and for the development of new outpatient facilities." The law stressed local planning and further controls than in past health service developments. Local HSAs were required to approve or disapprove applications for federal health programs, educational and research funds, and for periodic review of existing institutional health services in their respective areas. This was the first time that a planning agency had been given authority for implementation in addition to planning. The act included federal funding for planning and implementation of health education, but although many HSAs have reached this development in their organization, Congress has not appropriated development funds.

Merlin K. DuVal, a former Assistant Secretary for Health in HEW, aptly pointed out that during the past sixteen years, there have been at least eight full-scale reports by major organizations on the manpower problem. "That none of these reports... should have sufficed is, itself, testimony to the difficulties that are associated with accurately assessing the health manpower needs of the United
States. Furthermore, that so many such efforts were undertaken at all is rather clear evidence that neither the medical profession nor the political leadership in the United States is entitled to any feeling of confidence that it knows what it is talking about in addressing this same problem today."

Zurich in 1978 updated PL 93-641 in a most comprehensive report of what happened in the first three years. Much of the time during this period was spent in refining the original act, setting priorities, determining guidelines, and attempting to establish a national health policy. Several changes were made in the national health priorities, emphasizing the importance of organized health care systems and prevention activities.

The three years of meetings and deliberations by an estimated 50,000 volunteers included a conglomerate of viewpoints by individuals and organizations, many with vested interests and personal biases. Today, approximately 9,000 volunteers serve on HSA governing boards and another 16,000 are on subarea councils. Many volunteers and staff became disenchanted because of so much time in planning and so little in implementation during this period. Much time was consumed in getting guidelines to local and state agencies. It was a difficult task to get a workable plan with over 50 percent of boards to be made up of consumers. The area where this author lives includes sixteen counties with the following populations: six less than 10,000, three of 10,000 to 80,000, and seven over 80,000 for a population of 582,098, encompassing 11,043 square miles. There is a sixty-seven-member Board of Directors with 52 percent consumers and a twenty-five-member Executive Committee which must reflect racial, ethnic, urban/rural characteristics from the sixteen counties. In many areas there is very little opportunity for input of health professionals regarding health manpower planning and implementation.

The National Health Council on Health Planning (NHCHP) in April 1978 reported a general exception provision that indicated local health systems might make adjustments in the national standards in order to meet special local conditions and circumstances. The 1976 draft of legislation had included four goals and seventeen subgoals. The first statement of goals included health status, health promotion, disease prevention, and access of services at a reasonable
cost. The seventeen subgoals were later changed to seven and also changed to relate to strategies.

The purpose of the goals and guidelines were to provide benchmarks for local planning. However, many HSAs felt that this would interfere with planning and that the balance of local and national planning would be offset. Zurich reported that "there was much concern that 'top-down' dictation might replace 'bottoms-up' planning." It was feared local agencies would largely be agents of the federal government which was in direct conflict with the intent of PL 93-641.

In the first five years there developed a nationwide network of HSAs. The latest figures indicate there are 198 fully designated health systems agencies, 4 with conditional designation, and 2 health service areas temporarily without an agency. Local health planning is under way in 8 other geographic areas for an anticipated total of 211 agencies to be fully designated in the near future.

A recent article by Rorrie and Dearman states that state health planning and development agencies (SHPDAs) have been established in 57 States and Territories. Thirty-seven of these State agencies are fully designated and 21 hold conditional designation. Statewide health coordinating councils (SHCCs) have been established in 52 States and Territories. All of the fully designated HSAs have drafted long-range health systems plans (HSPs) describing goals for improving the health status of area residents and for bringing about improvements in the health system, including cost containment. They have also prepared annual implementation plans (AlPs). To do this it was necessary for the HSAs to develop a clear understanding of the issues that would influence the accomplishment of their goals, define the changes necessary to produce the needed improvement, produce a community understanding and commitment to the designated change, undertake a defined set of implementation activities and regulatory recommendations to accomplish the required changes, and promote linkages between physical and mental health care systems.

The primary emphasis for the first five years has been a procedure on which to base the review process. However, we are now ready to see how effective PL 93-641 will prove to be. The next three years will see a national movement from process to product. It would seem that trends might well be indicated by looking at goals and objectives of established HSAs: 96-98 percent list cost containment, health promotion and prevention, maternal and child health,
and mental health, 88 percent list care for the elderly, 75 percent list access to primary care, and 33 percent list HMO development. While manpower demands are not included as a category, they are an integral part of each of the five categories. As extended services and new categories of manpower are indicated, this takes us to educational costs in the demands for health personnel. Much of the literature now includes educational costs for health personnel in the rising health costs of our economy.

If HSAs are to prove the viable procedure anticipated, they must move beyond health planning stages. Health planning is a new idea to many of the participants, and many agencies have lacked technical supportive knowledge in their personnel to develop sound plans which would be supported by the community for the necessary action steps. It would seem that too much may have been assigned and undertaken by the HSAs and too much expected from them. More realistic goals and expectations would seem to be desirable. HSAs, SHPDAs, and SHCCs must be both designed and staffed for action. The next three years will determine the success and future of this legislation. We can expect to see much more attention given to educational costs for health personnel, as well as more concern by the consumers for the educational preparation for all health personnel. Allied health educators should participate in the decision-making in order to live with the consequences.

A recent national study on allied health manpower indicates there were nearly 11,000 allied health programs for preparation of personnel in 1975-76. More have been added in the past five years but at a much slower rate. Half the academic programs were in collegiate settings: 39 percent in four-year colleges and 21 percent in two-year colleges. In noncollegiate settings there were 28 percent in hospitals, 11 percent in other nonmilitary, and 1 percent in military. Before 1960, fewer than one in ten allied health programs in collegiate settings were in community colleges; fifteen years later, in 1975, this had changed to four in ten. By 1976 three-fifths of all two-year colleges and about half of all four-year colleges in the United States had allied health programs. Approximately three-fifths of all allied health education programs in four-year colleges had been established before 1970, while over three-fifths of all allied health education programs in two-year colleges had been established after
There are too many academic programs in allied health, and many are not cost or quality effective. Will HSAs play a vital and realistic role in determining where the academic programs are to be and assist in phasing programs down and out as may be indicated? Will allied health educators assist staffs and boards in this decision-making?

In the late 1960s and early 1970s there was a great deal of expansion of educational facilities to prepare more physicians, dentists, and allied health personnel. Yet in none of the legislation and developments was there consideration given to careful long-range planning for the production and utilization of this flow of health manpower. While there have been many efforts to compile sound data of demands for such personnel, these projections have had little influence on determining categories, quality, or numbers of graduates. This is probably due to the tradition of reliance on the free marketplace. We also tend to separate planning of facilities and services from preparation of medical and allied health personnel. Educational institutions and professional groups along with accrediting and certifying bodies have very largely determined the preparation and numbers of the products to be released to serve society.

There has been a great deal of data put into the files of HSAs and State Health Planning and Development Agencies (SHPDAs) in the last five or six years relative to health manpower planning and requirements. Much of this material becomes outdated quickly and very little of it relates to allied health. That which does relate to allied health should be reviewed carefully and questioned thoroughly for its current and future relevance and accuracy. Allied health educators can and should help with this process.

As HSAs develop plans for health manpower decisions they will discover that some of the Health System Plans (HSPs) do not represent a satisfactory state or regional plan for manpower decisions. If there are three or more HSPs there may be that number of guidelines for collection of data, and the data will also relate to the variable staff skills and technology used in the collection and presentation of the data.

The guidelines established by HSAs will continue to be altered and updated with the accompanying episodes of bureaucratic delay and controversy. However, health manpower was in the original bill,
and as the HSAs become better established, this matter will receive more attention. Allied health educators must keep up with both what has happened and what is likely to happen. The citizen's role in decision-making will continue to be strengthened. It behooves allied health educators to keep the citizenry informed of who and what allied health encompasses and the role we play in health care delivery and well-being. Citizens and their representatives on HSA boards with the mix of a few professionals, lay public, and ethnic groups will be making important decisions which will affect allied health educational programs.

The 211 HSAs in the states and territories vary greatly in respect to staff, funding, successes, failures, and acceptability. There are still unanswered questions regarding the roles and responsibilities of governing bodies at the national, regional, state, and local levels. There are not supportable cost studies regarding cost of providing necessary staff at each of the four levels to carry out the intent of PL 93-641. There is an element of "patching up" what we have had rather than a totally new thrust which would have been more likely to succeed.

As previously stated, the legislative mandate of HSAs was to correct the errors of past federal legislation. The act was for the development of a delivery system that assures for every citizen equal access to health care at a reasonable cost. Abraham Lincoln once stated, "If we could first know where we are, and whither we are tending, we could then better judge what to do, and how to do it." It is difficult to plan for the future intelligently when we are not sure where we are today. PL 93-641 and amendments stress equal delivery of health care to all. This is a noble and desirable goal which, after two hundred years, has not been reached in educational opportunities, work opportunities, standards of living, or in any walk of life. A desirable goal, but is it realistic at any time and more especially when we are trying to determine what proportion of the gross national product can be devoted to what aspects of health? We are in a period of more limited resources and less discretionary income along with rampant inflation and a recession. These factors may, however, set the stage for more realistic and desirable health programming and health behaviors on the part of our citizenry, though they may be very threatening to the ambitions and goals of those participating in allied health education programs.

PL 93-641 defines "health" as more than the delivery of medical
care at acute care institutions. It is intended that health planning have an effect on the health status of people as well as health services, health facilities, and health manpower. It addresses the need for prevention and well-being, health promotion, and the needs of the citizen’s responsibility to play a role in remaining well. It has recently been suggested that we should have an incentive for wellness behavior. So-called your fault insurance is being proposed where the patient pays a sizable deductible if the illness or the problem is a direct result of the person’s poor practices and activities of “your fault.” An example would be the heavy smoker who develops lung cancer and requires extensive and expensive surgery and long-term care and treatment. Former Secretary of Health, Education and Welfare Joseph Califano referred to the “Four Horsemen of Death” as being tobacco, alcohol, obesity, and accidents—all preventable. Should the person who assumes a responsibility for his own health and well-being be expected to pay the bill for those who do not do so? Since we now have limited resources for health care and well-being we must control or reduce our dependency on care and seek to prevent the occurrence of illnesses or at least delay it. This possible development would demand an array of new types of allied health manpower.

HSAs seek to make health services and needs reasonably available to the residents of each of the 211 health service areas in the fifty states and territories. The act permits each of the 211 areas to determine its needs and priorities. This is commendable but is fraught with unnecessary duplication and replication of extensive and expensive planning. It also develops “ministates” within a state, with each HSA deciding what services it should perform and how these shall be provided in the respective area. Each area will not only determine its respective needs for facilities and health services; it may also attempt to provide its own allied health manpower, which may affect quality and also lead to a further oversupply. When we should be moving from state to regional planning for allied health manpower, HSAs seem to be taking us in the opposite direction, from state to local planning. The State Health Plan (SHP) is supposed to deal with this.

Health manpower planning exercises in this or other countries have suffered from isolation and have had little effect on numbers or quality. Professional groups talk only to themselves about manpower
needs and demands and seldom seek the views of political or economic professionals. Such planning is further aggravated by allied health education when each of the many health occupations and professions seek a place on the governing body of the HSA. How objective can a representative of a specific professional group be regarding demands of society when he feels his specialty should determine the educational needs of his profession? Can he speak objectively about the many other health occupations?

Objectivity and reality in respect to the state of the nation is needed in allied health manpower decision-making. With the anticipated concerns of the economy today and for the foreseeable future we can no longer leave to the professional group alone the educational requirements and numbers of graduates required. Should we continue the proliferation of academic programs in allied health education where cost effectiveness, quality control, and demand for graduates are not the determining factors for their continuance and extension?

To avoid unnecessary duplication of academic programs in allied health and to assure quality and cost effectiveness, an approach to education that is different from the present pattern in most of the 211 local HSAs is required. First, the local agencies cannot be burdened by educational decision-making which relates to the state and perhaps crosses state lines. Dr. K.M. Endicott, Administrator of the Health Resources Administration of Public Health Services, stated, "To do its job effectively, the State agency must build a plan that deals with—and works with—all State health activities, including, by regulation, 'programs in ... health manpower education and training,' even though the latter may actually be carried out by a State board of higher education or a State commissioner of education." Cost effective and quality controlled allied health education programs should be a state and, in many of the health occupations, a regional approach. Each of the 211 HSAs cannot and should not determine or encourage attempts to meet allied health educational manpower demands for their respective areas.

Dr. Endicott questions the ability of a local HSA to do what the bill requires in respect to a full assessment of the health status (and its determinants) of the health of the residents of health service areas. He sees the need for contractual relationships between HSAs and universities and between HSAs and private planning coopera-
tives. He feels that success in health manpower planning will not come from the federal agency down to the community, but will move upward from a strong base of competent HSAs through a sensitive state health operation to the regional and national level. He indicates that some feel PL 93-641 establishes a new and questionable relationship between the local HSA and the state and federal governments.

While the National Bureau of Health Manpower is working toward refining its statistical inventory of health manpower and is improving its ability to put forth good projections of national supply and demand, its sophistication is still inadequate for medicine and dentistry and even more so for the conglomerate of 150 to 200 allied health occupations and professions. However, for local HSAs to attempt assessments without established guidelines will provide misinformation and encourage unnecessary duplication and replication as well as develop and extend academic programs which perhaps should be phased out.

A document intended for HSAs and SHPDAs provides an overview of the major decisions that face an agency as it tries to estimate or project its area's health manpower requirements. The summary at the end of Part I relates to constraints and opportunities as follows:

On the constraint side, agencies must face the fact that: (1) manpower planning, although required, is a lower priority activity than plan development, project reviews, and the like; (2) given the limited resources of agencies, the low priority of manpower estimation constrains most agencies to adopt non-sophisticated approaches; and (3) this tendency is reinforced by (a) the limited ability of agencies (especially HSAs) to change private, state, or federal manpower policies, (b) the comprehensive nature of manpower issues that transcend both state boundaries and the "health system," and (c) the unintended consequences of the 1976 HSP guidelines focus on services and settings.

On the opportunities side, the 1976 guidelines are being revised and agency resources initially devoted to start-up activities are gradually being freed for other purposes. Most important, the process of developing a health plan at the local or State level should contribute significantly to an agency's understanding of the unique needs and resources of its area. This kind of understanding of the community it serves should help an agency make the decisions involved in determining its manpower requirements.

It would seem to be in the best interests of allied health educators to avail themselves of a copy of this and later publications. The
publication is to help HSAs select and apply methods appropriate to their own particular situations. However, the publication does not face the issue that data gathering should follow a common pattern for all HSAs of a state or region, and in fact the nation, if the data are to have any reliability for meeting health manpower requirements.

If allied health education matters are to be left to health planners, then the planners must seek the assistance of those who determine the numbers, qualifications, and educational essentials of the respective health manpower categories. While health planners should be able to be objective in interpreting society’s wishes and desires, they must realize that professional groups and specialty boards, certifying and accreditation agencies, as well as licensing boards must be considered. Professional groups in health, as well as other categories, have to a large degree determined their own destinies in curricula content, length of preparation, and where and how they practice their skills and knowledge. It is most essential that allied health educators not wait to be invited to serve on HSA boards and committees but should seek appointments. A balance is needed. To be sure, society cannot justify nor continue to permit professionals to determine their own destinies. It has been too easy to let the public foot the education bill through tuition, taxes, and fees for services.

Each of the 211 HSAs cannot provide the technical assistance needed in respect to manpower. The ten regional centers for health planning should provide technical knowledge through carefully selected staff and consultants. Health manpower demands a very different approach to planning and much more realistic goals than has been evidenced to date in other categories. Health planners and even health economists supply very sketchy material on manpower demands by society. We have not to this date had legislation promoting long-range planning for cost effective production and utilization of health manpower.

A National Commission on Allied Health Education has recently concluded an extensive two-year study funded by the W.K. Kellogg Foundation. The recommendations include fifteen primary recommendations with sixty-three corollaries to implement the objectives. Staff and boards of HSAs as well as state, regional, and national
offices should have available this publication for guidance regarding
decision-making in relation to allied health education. All of the
recommendations relate to the issue of health manpower. Allied
health administrators and educators should see that each of the 211
HSA offices has one or more copies of this publication. Allied health
administrators and educators should check with such offices to see
that the publication is available and being utilized to help staff and
board members understand what allied health education encompasses
and that the impact of their recommendations will have much to do
with the state of health in the United States. It will also help staff
and boards realize that allied health personnel constitute the large
majority of the health work force. They must understand the need
for alliances between educational institutions, professional groups,
clinical settings, and employers. If and where HSAs meet their charge
for necessary health manpower, they will become a very powerful
structure for state and federal support for allied health education. It
is the responsibility of allied health educators and administrators to
keep congress and state legislators advised as to what allied health is
and what is necessary in education and service in order to provide
necessary health services for our citizenry.13

Notes

1. E.J. Rubel, "Implementing the National Health Planning Resources Act of 1974,"
5. David I. Zurich, "Initial Development of National Guidelines for Health Planning,"
6. Ibid., p. 418.
7. C.C. Rorrie, Jr., and F.B. Dearman, "Health Planning: A New Phase," Public
9. A.R. Somers, "Consumer Health Education: Where Are We? Where Are We
10. K.M. Endicott, "Towards a Policy for Health Manpower Planning: Health Re-
11. "Determining Health Manpower Requirements: An Overview of Planning Agen-
12. The Future of Allied Health Education: New Alliances for the 1980s (San
13. At the time of publication the fate of HSAs is being debated in Congress.
The primary care of patients and their families seems at long last to have achieved its proper place in the hierarchy of health care in our nation. Few among the health professionals and practically no one among the laity would presently deny the importance of primary care. What seems at issue in the reemergence is exactly what the dimensions of such care are and who are its practitioners.

It is our contention and the purpose of this essay to posit that these issues will gradually fade as we continue to experiment with a variety of models of delivery and through experience ascertain the appropriate modes for the specific circumstances or settings. Further, we believe the allied health professionals can play an important role in primary care delivery as they do in both secondary and tertiary care.

Historically, primary care is not new; in fact, it antedates all other forms of modern care. It was the care rendered by the old time general practitioner, the family doctor: the fabled hero—the selfless and devoted healer who in decades past cared and cared well for the entire family. He practiced in an age before the scientific explosion made it increasingly difficult for any one person to encompass completely the totality of health care knowledge and skill. He exuded confidence and understanding, made house calls, and seemingly was always available.

That the memories of those of us who look longingly at this folk hero are colored and softened is most likely true. But it is also true that he did exist and did play an important role in the health care of our nation, albeit perhaps not the exaggerated one some of us may
have fancied. If the general practitioner’s role was so important and credible why did his numbers diminish and his influence in health care wane? The answers to that question are neither singular nor simple and may best be traced to the scientific explosion mentioned earlier.

Our nation along with the other Western nations experienced a scientific revolution beginning in the 1930s not unlike the industrial revolution of a century ago. The years following World War II were filled with scientific discoveries the enormity of which have no precedence. We entered a period in health care which not only gave us instrumentation capable of providing finite and accurate information about our bodies and the illnesses which invade them but medications and surgical interventions which could correct or limit a great many of these diseases. It is not our purpose to describe this scientific revolution in any greater detail but only to note that as the body of knowledge and skills involving health care increased exponentially it became humanly impossible for any single individual to contain them. Thus the age of specialization was upon us.

Medical education of necessity became more intensive and specialized to the point that increasing periods of time had to be spent in postgraduate education if a physician was to master but a single aspect of the enlarging field of medicine.

Allied health, nursing, dentistry, and pharmacy experienced similar explosive growths in their domains. Increasing lengths of time were required for the preparation of these professionals, and separate specialties began to emerge within the ranks of each of them. All of these professionals were much better equipped to minister to their patients in their limited area of expertise.

For a time the patients appeared satisfied with this new era of health care. Morbidity and mortality tables reflected remarkable trends of decrease for diseases which previously had taken great toll. This was especially true for the infectious diseases. Who would have believed in 1940 that smallpox would have disappeared from our entire planet, that poliomyelitis, a disease which each summer crippled our children and panicked their parents, would be under almost complete control in modern industrial nations?

One recalls that cardiac surgery, which presently enjoys great prominence, was in the early forties considered by some to be human
experimentation at its worst, or that the first renal transplant was successfully performed only twenty-five years ago. Truly remarkable strides.

With all of this achievement, one would have anticipated a continuing romance between health care professionals and their public, but such was not the case. Some voices of concern began to be heard. Specialization had certainly provided an assault upon disease never before witnessed. Yet something was missing. Specialization seemed to fragment care, and in that fragmentation, somehow, the close personal relationships which patients at one time associated with the general practitioner seemed diminished or gone. Patients wanted the "curing" that the age of specialization brought them, but they wanted also the "caring," the humaneness, a quality they felt the emerging specialties did not provide. Obviously the physicians providing such care took umbrage, and the debate was joined.

Meanwhile, the numbers of family physicians in the United States diminished. Patients in rural areas found great difficulty in obtaining health care of any kind, while their counterparts within the inner city turned to the emergency rooms of hospitals as their only source of care. These facts, plus the soaring costs for care and increasing evidence that any further substantial reduction in morbidity and mortality would need to address disease prevention and lifestyle modification, gave impetus to the development of a new specialty: family medicine. Family medicine emerges phoenix-like from the ashes of general practice.

A great deal of credit must be given to stalwarts within the American Academy of General Practice (rechristened Family Practice in 1970) and the American Board of Family Practice (ABFP), which fought long and hard to keep alive the concept of primary care and the family physician as its purveyor. The establishment of family medicine as a distinct specialty and the successful appeals for government funds to support residency training in family medicine represent a turning point in society's efforts to do something to balance the previous trends in specialization.

The joint interests in AAFP and ABFP in attempting to describe the parameters of primary care and its contents led to the following definitions. The AAFP defines primary care as "a form of medical
care delivery which emphasizes first contact care and assumes on­
going responsibility for the patient in both health maintenance and therapy of illness. It is personal care involving a unique interaction and communication between the patient and physician. It is compre­hensive in scope and includes the overall coordination of the care of the patients’ health problems, be they biological, behavioral or social. The appropriate use of consultants and community resources is an important part of effective primary care.”

The ABFP defines primary care as a form of delivery of medical care which encompasses the following: (1) It is first contact serving as point-of-entry for the patient into the health care system; (2) It includes continuity by virtue of caring for patients over a period of time, both in sickness and in health. (3) It is comprehensive care drawing from all of the traditional major disciplines for its functional content. (4) It serves a coordinative function for all of the health care needs of the patients. (5) It assumes continuing responsibility for individual patient follow-up and community health problems and; (6) It is a highly personalized type of care.

These definitions, as well as others, contain four essential points: first contact care, continuity of care, coordination of care, and comprehensiveness of care. It follows that primary care is essentially the entry point for a patient into what we term our health care system. That whoever undertakes the responsibility for this initial response additionally assumes the responsibility for continuing the care of the patient, for whatever length of time is necessary to resolve the patient’s problem.

Obviously, some of these problems are of an acute and minor nature and can be handled swiftly by the initial contact practitioners. Others require not only long term care but the addition of other elements from the health care community as well as the community at large to help in their resolution. In this latter case, the primary care person is the coordinator of the patient’s care, orchestrating the various elements necessary to insure the appropriate disposition of the problem. Comprehensiveness implies not only the handling of the specific problems but attention to and an involvement in the preventive aspects of health and disease. A concern for the sociocultural influences in the patient’s life which, if modified, improves as well as lengthens his life.
As previously noted, we might all agree that these activities comprise primary care. What is not agreed upon universally is who or what is to be the purveyor. The family physician makes a strong and valid case that not only are all of these within the purview of family medicine by dint of history, tradition, and logic, but they are the basic ingredients of their new specialty and their residency programs are deliberately structured to prepare physicians for this role.

A congeries of other groups, however, intrude upon the scene. The generalists in internal medicine and pediatrics believe they too must be included under the rubric of primary care, as do an assortment of others including many of the specialties in medicine and some from a variety of disciplines outside medicine, such as nursing and pharmacy.

Recent literature in support of these separate groups carefully identify one or more of the four C’s (initial contact, continuity, coordination, and comprehensiveness) as consistent with their present role and function. Whether this sudden interest by other specialties or groups to be included as primary care entities represents an awakening to responsibilities previously neglected or a more primitive instinct is interesting to contemplate.

It should be obvious, however, without being pejorative, that if primary care, as defined, represents a continuous stream of care, then persons who participate in the delivery of such care intermittently or spasmodically could not properly be classified as primary care specialists in the strict sense of the phrase. This issue is one that brings into clear focus this question: When we speak of primary care, are we concerned about the process or the purveyors, or are they one and the same?

The medical specialties have made their case for primary care status and have identified those designated specialties which are recognized as primary care. There are still questions about when a specialist provides primary care services. To illustrate that concern, the internist does not practice primary care when performing a gastroscopy. On the other hand, a dermatologist generally practices primary care when he treats a simple rash on the hand. The concept of the continuous stream of care referred to above is the great determiner that allows one to identify primary care practice. The delivery of continuous, comprehensive, coordinated, first contact
care is broad and diverse and is practiced most times by physicians, sometimes by other health care professionals, and very often by lay people.

The concept that all primary care service could or should be delivered by physicians is as specious as the argument that any health care must be delivered by the physician. In the secondary and tertiary care facilities, it has been long recognized that the physician is not alone in the health care enterprise. Most health care practitioners in our system, in fact, are not physicians. The explosion of knowledge and the ensuing technology available demands the proliferation of teams of professionals to deliver care. Departmentalization has made the team more impersonal and care of patients more variegated in hospitals and other institutions by the very nature of the specialization. All too often, the only connection or communication between and among the health professionals is through the notes on the chart. Primary care is, however, the most broadly delivered and most common type of health care delivered in this country. The overwhelming number of patient contacts take place in the primary care setting.

Kerr White et al. pointed out in the classic description of health care that in a given year, in an adult population of 1,000 people, 720 make at least one visit to a physician, 100 are admitted to a hospital, and only 10 are referred to a university medical center. These patients are only 1 percent of the universe!

Yet our approach over the last thirty years has been to invest in capital construction and the proliferation of manpower for institutional settings—primarily hospitals and medical centers. That investment serves 10 percent of those who are ill. The call to reassess our priorities to be congruent with the reality of our needs has come in recent years from enlightened practitioners, the public at large, ultimately the Congress, and several presidential administrations. The Secretary of Health, Education, and Welfare’s Forward Plan for Health over the last several years has called for a national policy to emphasize planning for a system of health care. This systematic approach to the delivery of health care to the nation reemphasizes primary care and the equitable and accessible distribution of services to all.

As we develop a systematic delivery of health care, we as a nation
will pursue a uniquely American approach. Other developed nations have attempted to solve similar problems of access to health care through centralization. We have and will continue to approach our access problems through decentralization, a grass-roots approach. Instead of establishing a monolithic structure of health care, our society continues its pluralistic approach. As an example, PL 92-641, the legislation which established the Health Systems Agencies (HSA), has opted for the uniquely American approach to planning. The legislation established local Health Systems Agencies, whose responsibility includes determining regional and local health care needs and establishing local priorities and policies to effect change to meet those needs.

As the federal presence increases in health care owing to its increased share of the system's financial responsibility, more power will be infused into these planning and delivery decision-making bodies. There will undoubtedly be a more systematic delivery of health care in the future, and it includes primary care. The present settings in which primary care is provided continue to evolve. Some will disappear; others will emerge.

Assuming that the primary care system of health care delivery will grow and that, additionally, health care planning will play a large role in how and where it will grow, then several patterns for delivery will pertain.

The first type of setting is and will continue to be the traditional delivery mode. In this pattern, a medical or dental practitioner practices his or her craft solo. This type is greatly diminished in number.

A second type of setting which has experienced rapid development is the prepaid group practice unit. In some cases, these are decentralized and private and are called Independent Practice Associations (IPA); others are organizations with facilities and staff. The latter is the Health Maintenance Organization (HMO). The IPA type is a prepaid care program in which an individual receives care from his or her personal physician. In this setting, cooperating IPA physicians maintain the traditional physician mode except for the funding mechanism. HMOs can be free-standing units or can be attached to a hospital. They are usually "private" in nature, although their largest benefactor is the federal government. It is very likely, however, that
private industry in partnership with organized labor will bankroll these organizations in the future. Top management in the large corporations are ever aware of the increasing cost of medical and dental insurance of which they pay the lion's share. Industry may very well take that expense and invest it in the HMO-primary care type of organization for employees and their families. Kaiser Permanente has succeeded in this arena and is a model. Others are examining this concept as an alternative.

HMOs, however, have had many problems, and these must be overcome if they are to endure. Health Maintenance Organizations, on the whole, have been funded by the government and capital investments have come from the public sector. Many have not been able to provide total and comprehensive service and have resorted to charging additional fees for services. Many HMOs have developed in areas where health care is traditionally inaccessible. Some have, in fact, developed from the defunct Neighborhood Health Centers. All too often, the HMO is in an area where blacks or the poor or both reside. HMO must bring in the middle and upper classes and compete with the other practitioners.

A third setting is **publicly funded clinics** which will provide comprehensive service much like an HMO for those who are unemployed. Rural Health Initiative Funding is one example of the federal presence in this area. The fiscal solvency of these kinds of primary care facilities is related to federal, state, and local infusion of funds.

A fourth example is the **private group practice** (fee for service) consisting of primary care and specialty physicians. These groups will increasingly employ other health care practitioners much like the private and public HMOs cited in types one and two above in order to become more comprehensive.

How will allied health professionals serve in primary care settings? What makes an allied health professional a primary care practitioner? Many of the disciplines within allied health have made a case for themselves as primary care practitioners. The Institute of Medicine (IOM) heard each of thirty-four health professional groups make the case for its inclusion as a primary care practitioner. The IOM, in the final analysis, blessed four medical specialties, the physician assistant, and the nurse practitioner as primary care practitioners. This essay goes beyond the IOM approach. Instead of arbi-
trarily listing the specialties of primary care, it defines the environment and the tasks accomplished in the delivery as the determinants of when a professional, regardless of title, fulfills the role of a primary care practitioner.  

The concept of allied health professionals in primary care involves questions of what they practice, how they operate, with what kind of patient, and their relationship to other professionals.

The key concepts of continuity, comprehensiveness, first contact care, and coordinated care are the general standards by which we judge activities to be those of a primary care nature. For allied health practitioners, those functions lie in the primary care health team (Figure 1).

Kindig addresses the rationale for the team approach in primary care delivery: “Because the general practitioner of 1950 was not qualified for the complexity of modern practice, and because the internist was too highly specialized in scientific medicine to carry out the ‘caring’ function that the general practitioner performed so well, other professionals had to be included in such a health care practice.”

It is in the process of team care that we designate allied health practitioners as primary care practitioners. The team addresses the tasks of primary care delivery comprehensiveness, continuous, and coordinated care to patients and family. “A team is a group of individuals, who must work together collaboratively and interdependently to accomplish their work tasks at all, or well, or efficiently.” Allied health professions do not or will not practice independently in any of the aforementioned settings, will not control access or coordinate care, but they do and will have critical roles as part of the team of practitioners. “Allied Health Professionals, under these teams, provide services that complement and supplement those of the ‘primary health care provider’ but none is seen as a potential replacement for the physician in his role of controlling access to all health care services.”

The Allied Health Practitioner “has proven that non-physicians, particularly those specifically task oriented, can deliver personal health services to patients in need. The sole responsibility for the delivery of primary care should not be vested in such personnel, but rather the function of such disciplines should be with practicing
primary health care physicians or family practitioners who can, through a team effort, address the primary care needs of our population. To use allied health personnel as sole practitioners to expand our primary care system, would merely provide an additional parameter to our present dual system of health care—a system that pits private against public facilities, inpatient facilities against outpatient facilities, and the specialist against the generalist. Such a continued trend would be diverse."

How do primary care allied health practitioners' activities differ
from those of their counterparts in the rest of the health care system? The team responsibility in that continuous stream of service to a patient or family is the hub of the argument for including allied health practitioners in the practice in primary care settings. The responsibilities of a primary care health practitioner are different from those in a tertiary care setting, because of the continuous, as opposed to episodic, care involved.

There is generally more consultation among the practitioners and with the clients. Patient education takes on a more important role. Primary care practitioners should create an environment in which patients can take an active responsibility for their own health. We are already beginning to see the development of successful health promotion and disease prevention programs. Peer professional consultation is commonplace. Medical technologists, as an example, in such a setting provide more than basic laboratory services. They consult with nutritionists, pharmacists, and the patient to instruct the other practitioners and the patient on the effects of the ingested agent on laboratory results.

Given allied health professionals on the team, we need to examine the composition of team membership in primary care settings. Who is in and who is out? Local needs will determine what kinds and mix of settings—solo practice, private HMO, public comprehensive care center, or private group practice. In metropolitan areas, all patterns will coexist. The mix, then, of professionals, will vary widely. Primary care team membership will be as diverse and multifaceted as the needs of each geopolitical subdivision in the nation. Each primary care team will relate to the specific needs of the patient community in which it delivers care. What an allied health professional will be able to do in these settings will be directly related to the social and political pressures exerted by practitioners, consumers, and other publics such as politicians, business, and labor. Kindig supports this concept: "The breadth of primary care tasks is so great and organizational models for primary care so numerous that it is impossible and inappropriate to define the membership of a primary care team. . . . The principle of determining team membership and composition is that form must follow function. Depending on the needs of the patient population, the goals and tasks of a particular primary care delivery unit are determined and then the types and roles of members can be secondarily identified."

Educational institutions traditionally prepare allied health professionals for a role in secondary and tertiary care. We are not surprised, for it was in the hospital setting that these professionals were spawned and have most been utilized. Most of the allied health disciplines grew out of the hospital well before the educational institutions knew or cared about them.

Historically, the various professions developed as a result of a very specific need for physicians in hospitals to train technicians to aid them or take over some routine tasks. Typically, a bright, eager, female high school graduate was identified and given more responsibility in the clinic, laboratory, or therapy unit. On-the-job training was the rule of the day, but as these technicians grew in number and their tasks in complexity, one-year hospital based programs were soon established for training. In due time, these programs were accredited by newly formed professional associations. As the disciplines changed and developed, and as technology developed, different levels were designated with prescribed specific duties and training programs established. The educational institutions belatedly and very slowly took these programs under their wings at the associate and baccalaureate levels, still using hospital—secondary and tertiary settings—to provide the clinical or applied portion of the curriculum.

The model is representative of most of the allied health professions, particularly the clinical fields. It is in the institutional setting where their roots, sympathies, and educational programs lie. Primary care and training of practitioners for primary care has been foreign to many of the disciplines in their development over the last fifty years.

The socialization of the allied health professional has taken place in and for the benefit of the institutional setting. The professional takes his or her orders from the physician, performs the service, and moves on. There is little in an allied health professional’s didactic training to deal with skills prerequisite with primary care concerns. Moreover, there is little evidence of required learning experiences in primary care facilities which emphasize comprehensiveness, coordination, continuity of care, and first time care. In all fairness, there are few role models and few clinical sites which provide these educational experiences to students.

Our educational program must prepare students for primary care practice, as well as for the medical centers, community hospitals,
long-term and mental health care institutions. The curriculum must be made more flexible, new content must be identified, and new clinical sites must be located.

It falls to the educational institutions, particularly the health science centers, to set the pace, through reallocation of resources to establish primary care settings for educating students. Extramural sites must also be developed as they themselves grow and accept students from clinical experiences.

As we approach the twenty-first century, it is clear that the nonsystematic, isolation that once permeated, and in many ways still permeates, the health care system is anachronistic. Professional independence, once the hallmark for many fields, is no longer viable for delivery of good patient care. Interdependence—team delivery—is the byword of the future. Team is not a new concept, yet is is the essence of delivery of primary care services as they relate to allied health and primary care. Yet, team behaviors and skills are rarely taught to students.

In general, health professionals are trained independently from each other. The early experiments in primary care team delivery, such as the Dr. Martin Luther King, Jr., Health Clinic in the South Bronx, demonstrated that professionals required in that kind of setting must be trained as teams to operate as a team. A model must be developed for health professionals, in general, and the allied health professionals in particular, to prepare students for this approach to care. The traditional education approach to didactic and clinical education addresses the specialization and skills of secondary and tertiary care. We need an approach to didactic and clinical education that includes skills for primary care service.

The first issue that must be debated and resolved is that of primary care specialists in the allied health professions. Medicine has chosen to train primary care physicians as well as other specialties after the medical student finishes the academic program.

There is some movement in this area for allied health specialty practitioners. Medical technologists train for specialization in clinical biochemistry, microbiology, and hematology at the graduate level. Physical therapy trains for specialty work in pediatrics, cardiac rehabilitation, orthopedics, etc., at the graduate level. Physician assistants train in specialties at the basic level and differentiate
primary care and specialty physician assistants initially. Allied health must address this issue and decide whether primary care training is concurrent with basic entry level educational activities or should be a specialty for postdegree education.

The curricular approach presented herein should be adaptable to either, but our clear bias is that the allied health professional needs to be broadly based at entry to the profession. He or she should be able to choose to work at any level of health care within the health care system.

Carefully designed lectures, seminars and discussion groups can be effective in getting across information about the nature of each discipline (traditional professional role, nature of training, attitude and aspirations) and the general issues in interprofessional collaboration in a practice setting. Small group experiences around a learning task or simulated problem can illustrate and develop skills in the communication process components of teamwork. Clinical education experiences will be required to have the learning be relevant to team practice. Creative approaches to primary care clinical training with increased use of simulated clinical situations will have to be developed in order to maximize the educational experience and minimize the interference with efficient and sensitive patient care.10

A model for consideration is outlined below and is illustrated in Figure 2. Generally, allied health professional preparation is two years at the associate degree level or at the upper division in four-year institutions. This model discusses preparation at the first and second professional years, so it is applicable to both two- and four-year institutions.

Changes in our curricula require a thoughtful and deliberate curriculum design. The scope of this chapter is to discuss allied health’s role in primary care, not to expound on the process of instructional design. It is, however, worthwhile to summarize the basic steps that must proceed in the design of curriculum. The identification and definition of skills, competencies, and attitudes, hence learning objectives, is the most important step in the design of instruction. These serve as guidelines in the development of courses, topics, units, and lessons as follows: Step 1: life-long objectives; Step 2: end of course objectives; Step 3: unit objectives. The specific performing objectives for each unit or topic are the learning objectives for the student. Learning objectives are critical for later in the
Once objectives have been written, a decision must be made regrading the sequence in which the objectives are to meet from simple to more complex skills. Thus the sequencing of learning activities is based on the sequence of objectives which promote effective learning. Gagne and Briggs reflect the conventional wisdom on curriculum design and aptly state:

Once the goals of a course or curriculum have been determined, there follows a series of design steps directed toward the organization of courses into their major units or topics, and eventually into the form of statements of end-of-course performance objectives. These objectives are further analyzed in order to identify the essential pre-requisite skills which must be learned before the target objectives can be mastered. Learned hierarchies are constructed to display the
essential pre-requisites for each intellectual skill objective. Objectives representing other domains of outcome can then be integrated into the total plan for sequences of lessons or instructional models.\textsuperscript{11}

Each allied health college which attempts to design curriculum for primary care education, should proceed in the manner congruent with the model defined above.

Institutions have attempted to infuse content and experience in their curriculum which provides team interdisciplinary and extraspecialty content to their students. To date several content areas have been identified by these institutions and thus enjoy replicability.

The nature of the health care system, ethics, legal concerns, management, group process, communications, and health care terminology have been identified as important areas. Other topics are of particular interest in preparation for primary care: health promotion and disease prevention, community health and patient education concepts, and emergency care procedures. Research design and statistics, nutrition concepts, geriatrics, and emergency medical techniques are other important areas of study. People working in primary care need to understand people and how to work collaboratively and cooperatively with them. Practitioners need to understand basic considerations of community and how to assess the health of the community and resources available to deal with it. Primary care practitioners need to know how to communicate and how to teach for their on-going service functions as well as for in-service and patient education activities. Our curriculum must prepare them for it.

An understanding of community health concepts allows a professional an understanding of measures of the health of communities and their sources in the community to improve these measures. The ability to assess the community in both areas is vital to all health professionals. It is particularly important for those who practice in the broad area of primary care.

Patient education techniques are requisite for practitioners who deal on an on-going basis with individuals and family units, particularly when a major objective is health promotion and disease prevention. Improved communication skills enhance the ability to contribute toward better care.
Management concepts are critical to those in a clinical setting, regardless of the level of care, but will be important in primary care settings. Allied health faculty must examine these competencies and others which contribute to successful practice in a primary care setting and decide whether to educate for all, some, or none. If they opt for the path of the future—teaching students for primary care settings—then there must be an orderly process of identifying the curriculum to prepare students to possess the competencies agreed by the faculty as required of graduates.

The ability to work through problems through group process, the understanding of how people interact toward decision-making will be critical as the team concept grows in the health care sector. The team is not a team without the ability to tackle problems and coordinate toward care of patients.

A curriculum can be developed using accepted models, but the most difficult part of the process is to find the time in the curriculum for new topics. Time must be carved out of the existing curriculum to afford the opportunity to add the kinds of classroom experiences required to teach students those skills determined as appropriate for working in a primary care setting. Acceptance of this kind of coursework will be the preeminent challenge, for not only is it new and nonclinical, traditionally trained faculty generally do not feel comfortable teaching it.

The major obstacle to change in the clinical portion of the curriculum, as with the didactic coursework, is finding the time in the curriculum for a primary care experience. This problem is compounded by the coordination of clinical rotations across departments and across colleges so as to afford the construction of the reasonable and realistic teams. In addition, there is little in our experience to help us develop good sound educational experiences in a team clinical setting.

There are several models used throughout the country for an interdisciplinary team clinical experience. Success has been found in urban and rural areas. Both didactic education and clinical experiences have and are working. They can provide models for us to develop curriculum. Creativity and commitment are the key in establishing cross-disciplinary experiences.

In summary, it is apparent that primary care will continue to
have an increasingly more important role in the total health care delivery in the United States. If allied health professionals are to have a responsibility in this activity, and we believe they should, it is incumbent upon the educators to begin immediately to design or restructure their curricula to include the content of primary care. It is further necessary that teaching institutions in conjunction with practitioners, develop or modify practice settings which can serve as models of care for our students.

NOTES

5. Ibid., p. 101.
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