SPECIAL COMMUNICATION

Interdisciplinary University without Walls*
Current Status of the ACCP

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The American College of Chest Physicians is our only true multidisciplinary chest society. Its disciplines include pulmonologists, cardiologists, thoracic and cardiac surgeons, immunologists, allergists, anesthesiologists, radiologists, and pathologists. One of the emblems of the American College of Chest Physicians exhibits the likeness of René Laennec who invented the stethoscope which, ironically, ties the various disciplines of the chest together through an auditory link. Although a major purpose for the existence of the ACCP is to increase competence in each of the various specialties, the primary goal is to encourage the multidisciplinary units to become interdisciplinary.

The participation of the multispecialties on a committee or task force does not represent true interdisciplinary function. It requires excellence and security in one’s specialty, and then, and only then, by reducing barriers and competition, can better communication occur, and the various specialties proceed with problem-solving together “as one.” Whether perfection in this area is achieved is not important. What is critical is that we move in that direction.

I find the great thing in the world is not so much where you stand, as in what direction we are moving; to reach the port of heaven, we must sail sometimes with the wind, and sometimes against it—but we must sail, and not drift, nor lie at anchor.

Oliver Wendell Holmes

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There are problems which can only be solved by this approach. What we have now is primarily multidisciplinary; the direction in which we hope to move is toward the interdisciplinary.

The American College of Chest Physicians is known as the university without walls. This concept embodies two important facets critical to our goal to be an interdisciplinary body. The emphasis is on human and educational concepts rather than brick and mortar, and the breakdown or elimination of walls—the removal of the barriers that separate and isolate. This concept encourages communications and allows interaction, cardinal to efficient interdisciplinary function.

Many feel the great strides by our College and journal over the last 45 years has brought us to the peak of success. Success can be measured by our membership of over 10,000, our financial stability, and the fact that our journal, Chest, under the extraordinary direction of Dr. Soffer, has a circulation of 20,000 and can only publish 20 percent of submitted manuscripts. These are remarkable achievements in the overview of the past, and continued effort in these areas is important to future success. However, many of those who struggle with the functions of the College, who construct its educational programs, even the excellent one we have experienced this week, realize how difficult true interdisciplinary interaction is to achieve.

It is not what we don’t know that gets us into trouble, it’s what we know that ain’t so that is the big problem.

Will Rogers

Interdisciplinary function rests with the ability to
teach and interrelate—not to perform simply as subgroups of the various specialties that meet at the same time and operate only within their own limited frame of reference. A good example of interdisciplinary function is the camel which superficially looks like something put together by a multidisciplinary task force or committee, but is integrated into one of the most efficient animals on earth because of its ability to function and survive in a variety of environments with minimal requirements. Thus, looks don't mean everything. We are moving toward the interdisciplinary function. At present, we might be considered as operating at the committee level where multiple specialties are represented.

Historically, outstanding achievements have resulted from interdisciplinary function. For example, the “blue baby” operation evolved at the instigation of Dr. Helen Taussig, cardiologist, who, with the cooperation of Dr. Albert Blalock, surgeon, designed a procedure that provided palliation for tetralogy of Fallot. The mutual understanding of the problem from two different specialties combined to produce problem solving. Development and use of cardiopulmonary bypass with the heart-lung machine required the efforts of cardiologists, pulmonologists, surgeons, anesthesiologists, hematologists, physiologists, and biomedical engineers. The development and improvement of this therapeutic modality has been one of the foremost interdisciplinary contributions in modern times. Many other achievements have been possible because of the cooperative endeavor of our specialties with engineering such as cardiac valves, vascular grafts, and pacemakers. Transplantation is the symphony of true interdisciplinary function and probably represents one of our finest clinically orchestrated areas in operation today.

Recognition of the pathophysiology of gastroesophageal reflux remained obscure for decades because of the failure of communication of various specialties which were responsible for the care of the patient. The isolation of the internist who took the history, from the radiologist who examined the static esophagus, from the esophagologist who visualized the inner aspect of the gullet, to the surgeon who was primarily a technician enjoined to provide anatomic repair of a hiatal hernia. Often the psychiatrist was the clean-up man after the failure of the other multidisciplinary units. This demonstrated one of the disadvantages of the multidisciplinary committee approach where each specialist was operating separately without communication and often with a spirit of competition. It reminds us of the classic story about five blind men who were to evaluate an elephant. One felt the trunk and described it as a snake. Another touched the leg and called it a tree, the third felt the ear and thought it was a fern, the fourth grasped the tusk, and considered it a sword, and the fifth individual touched the skin and described it as leather. However, once the pathophysiologic effects of gastroesophageal reflux were recognized, attention was diverted from the anatomic hiatal hernia, and communication between multidisciplinary groups of internists, radiologists, gastroenterologists, esophagologists, and surgeons improved. Better methods of diagnosis and therapy were developed. The psychiatrist was less frequently needed and allowed to spend more time in self-analysis. This is an example of where failure to understand the pathophysiology separated the specialists on the one hand, and on the other hand, separation of the “committee members” retarded significantly the recognition of gastroesophageal reflux as the primary underlying pathophysiology.

This controversy in the beginning reminds me of the story of the university president addressing his graduating class.

“I regret to tell you that one-half of what we have taught you is wrong. Unfortunately, we don’t know which half.”

The major obstacles to the evolution of a successful interdisciplinary approach to diagnosis and therapy involve the development of an adequate faculty and curriculum. The faculty is the hardest to assemble because traditionally, each of us is trained in his particular specialty. Motivation is achieved primarily through the development of our talents in our specialty, often through competition. This tendency encourages isolation and may become pathological. An obvious example is two pioneer cardiac surgeons operating in the same hospital in adjacent rooms, neither having ever seen the other work.

Another obstacle to interdisciplinary success is the development of the curriculum and teaching techniques in our university without walls. It is easy to educate within traditional units such as cardiology, pulmonology, or surgery. Many in this College feel that is enough. By virtue of several different subspecialty programs occurring in the same place at the same time, the opportunity is provided for one specialist to visit another’s meeting not offered by other chest organizations. Without structured programs, I think few of us tend to visit other specialty meetings. On our program, a multidisciplinary committee or panel is our best effort toward interdisciplinary teaching. Although this program has been exceptional for the specialties, the best yet, there is only a minimal attempt at interaction between specialties. The preliminary program noted our convention theme to be “Heart and Lung Interaction.” In the
final program this theme was nowhere to be found and for good reason.

In addition to developing faculty and curriculum, assessment of educational techniques is important. We have enough difficulty assessing the value of any educational structure on subsequent performance let alone interdisciplinary functions. Dr. Tom Petty, Chairman of the Board of Regents of the American College of Chest Physicians, has applied for a grant to investigate whether or not a postgraduate course influences the practice of a physician regarding areas such as decreased morbidity and mortality. This is a pioneering effort with regard to postgraduate education assessment. However, assessment of interdisciplinary education is more difficult and standard testing and assessment techniques are usually not adequate.

As a member of the American Board of Thoracic Surgery in charge of a recertification syllabus, it is obvious to me the effect of postgraduate education on the performance and practice of the thoracic surgeon is extremely difficult to assess. The problems of assessment for certification as well as recertification are monumental.

Although there are no perfect models, it is important in our search to study the areas of moderate success in interdisciplinary function. Case-Western Reserve Medical School embarked on a program of interdisciplinary teaching covering the basic sciences and clinical care simultaneously. It was an integrated vertical educational structure rather than the standard two years of basic science followed by the clinical years. They had similar problems with developing an adequate faculty which spent more time in meetings and discussions than in teaching. They settled on the committee system of multidiscipline representation as the best they could do in lieu of a trained faculty that could teach both basic science and clinical medicine. The curriculum had similar problems and, of course, the students did not do as well on the standard tests as those from standard curriculum medical schools. Many pitfalls and solutions are currently being evaluated by Dr. Ham and that will be helpful to us.

Other successful examples include Comroe's Cardiopulmonary Institute, the mandatory interdisciplinary cooperation in development of space travel, the successful evaluation of organ transplantation, and the development of the intensive care unit.

After our recent visit to China, the question was asked me: how could a country like China be so expert in reimplantation of an extremity involving the fine technical details of nerve and vessel anastomoses and be so slow in the achievement of successful coronary artery surgery? Again, we must look at our own models where superb valve and congenital heart surgeons were not always able to make the transition to coronary artery vascular reconstruction. It is another example of superspecialization and failure even within a specialty to interrelate.

Let us spend a moment assessing the environment in which our search for the interdisciplinary university without walls is operating. For many years now, we have been under a threat of government control or takeover, (observing the catastrophe of the National Health Service in England), loss of the "Golden Era" of medicine, and wasting of the individual. The advent of Watergate, the fact that even the President of the United States could come under criticism, the failure of our largest city and banking center to take care of its own financial needs, and the economic instability of welfare and Social Security created concern about the responsibility of big government. No longer do people have faith that the government will solve their problems. No longer can one man sit in Congress or the White House and control legislation or the future course of our country. Checks and balances do operate. Our environment is much healthier. It is much more difficult to alter our health care system overnight by a zealous "do gooder" in Washington. The ACCP spends a great deal of time and money trying positively to influence this environment politically. Our Government Relations Committee is one of the most successful in the arena. The change in the Washington environment reminds me of the story about the visitor to Washington D.C. who was entertained by a lady who was 70 years young, considered by many to be the most charming hostess in the nation's capital. Also, this lady had a granddaughter who was very beautiful and attractive. When the visitor returned to his hotel, someone asked him if he had a good time. This was his answer:

"If the shrimp had been as cold as the gravy, if the gravy had been as warm as the wine, if the wine had been as cold as the chicken, if the chicken had been as tender and well dressed as the hostess's granddaughter, and if the hostess's granddaughter had been as willing to entertain and show me a good time as the hostess, I would have had a hell of a good time."

In our movement toward barrier breakdown and better communication, competition is necessary for the development of excellence in our own specialty. Ironically, true security comes from challenge, competition, and success. Only after this are we in a position to communicate without compunction, to discard competition for cooperation, and to move into significant interdisciplinary relationships with their less well-defined and less comfortable framework.

Walk into the light and the shadows will fall behind you.
We need to be challenged constantly and encouraged toward the interdisciplinary relationship.

Leadership is extremely important. The concept of “lead—follow—or get the hell out of the way” may be inappropriate at times but makes a point. Much of our effort should be directed toward exploring, not being afraid to fail, in our endeavors to develop the faculty, the curriculum, and the necessary assessment techniques. We have changed our by-laws to increase the interdisciplinary structure of our Board of Regents and are streamlining our committee structure into forums to take advantage of individual specialization and progressively encourage interdisciplinary interaction.

Discussion of leadership must include the Director of the university without walls, champion of the “interdisciplinary” theme, Editor of the finest multidisciplinary journal in the world—Chest—mediator of our 10,000 members, and balance wheel for their variety of interests. Constantly questioning, guiding, and changing, we will lean heavily on him in our quest.

Finally, the most essential ingredient to success in this spectrum of specialization, excellence, and interdisciplinary relationship is the preservation of integrity. This sounds like supporting motherhood. However, the ultimate objective of the research and education of our university without walls is patient care. Until each of us has been sick, we do not usually fully appreciate the value of physician integrity. Although it is not taught separately, each of us teaches by example at all times.

This was brought home to me several years ago when I broke my pelvis during a horseback riding accident in the Rocky Mountains. The Chairman of our Board of Regents cared for me when I developed a massive pulmonary embolus. His dedication and integrity sustained me through the depressing days of the ICU and thereafter. My sensitivity was dramatically increased as to what provides confidence in the patient and in this regard the importance of our integrity. Our relationship to the patient and the quality of medicine practiced depends upon this integrity. It cannot be legislated or regulated.

For example, each of us operates in at least two spectra with regard to patient care. The extremes in one area are represented by the individual doctor who feels he owns his patient and is solely responsible for him, and at the other end, the impersonal groups of physicians who may deliver care in a manner described in Texas as “herding cattle.” The patient who is viewed as the single doctor’s property, although emotionally supported, is restricted by the bias of that physician without often having the benefit of another point of view. An example is the physician who feels no patient should have coronary bypass surgery, or the physician who feels that all patients with coronary disease should have surgery. At the other end, mass production often short changes the patient emotionally and may render his care by a committee or statistical decision. Somewhere in between rests the best patient care. Physician integrity and education should provide the responsible advice. This cannot be regulated.

Another spectrum is related to financial remuneration for our service. At one extreme is the “fee for service” in which a physician is recompensed for each case. The more patients he sees, the more money he makes. At the other extreme is the prepaid health care system in which the physician is paid more if he treats fewer cases. Either way leads to inappropriate management of the patient if executed without integrity. Somewhere in between provides the ideal incentive for good care. Whatever system is adopted, the integrity, the caring, and the discipline of the individual physician is cardinal. This cannot be legislated or regulated.

Ethics and morality have been left out of fundamental education for many reasons, not the least of which is legal exposure. In our university without walls, ethics and morality should receive maximum emphasis. Having had the opportunity to evaluate life and medicine in Russia last year and in the People’s Republic of China this year—the world’s other two great powers—it is perfectly obvious that never in the history of the world at any given time has there been greater opportunity afforded to men, to physicians, than right now, here, in these United States of America. Along with this, never has there gone more responsibility not only to this country, but to the rest of the world.

I complained I had no shoes until I saw a man who had no feet.

Summarizing this current status or progress report of our multidisciplinary university and hopefully moving toward an interdisciplinary university without walls, we should establish the following goals:

1) Maintain excellence and competition in our particular specialty. Without this, we have little to offer in interdisciplinary problem-solving;
2) Search for ways to remove barriers and improve communication between disciplines;
3) Develop the faculty, curriculum and assessment techniques to provide the maximum advantage of our interdisciplinary resources; and
4) Dedicate ourselves to high moral and ethical principles with integrity as the cornerstone.

These goals will certainly establish the American
College of Chest Physicians as a unique model. Then, hopefully, the ideals held forth for us individually and as a profession by Robert Louis Stevenson will be in part fulfilled:

There are men and classes of men that stand above the common herd: the soldier, and the shepherd not infrequently; the artist rarely; rarer still, the clergyman; the physician almost as a rule. He is the flower (such as it is) of our civilization; and when that stage of man is done with, and only to be marveled at in history, he will be thought to have shared as little as any in the defects of the period, and most notably exhibited the virtues of the race. Generosity he has, such as is possible to those who practice an art, never to those who drive a trade; discretion, tested by a hundred secrets; tact, tried in a thousand embarrassments; and what are more important, herculean cheerfulness and courage. So that he brings air and cheer into the sick room, and often enough, though not so often as he wishes, brings healing.

Reference