

special nature of the knowledge. I think disease-based management is exactly where you are going, and you could actually be captains of the disease-based management ship in a number of ways.

Kaliner. I think that primary care doctors will take over mild allergic rhinitis and treat it effectively. There is no reason why we can not train primary care physicians in a cost-effective manner to treat mild rhinitis and mild asthma.

Austen. Are you saying that within the framework of disease management, the allergist should identify as his or her specialty the more difficult diseases that cannot be managed easily by primary care physicians, in conflict with what the bulk of the allergists now do?

Kaliner. I think that is where things have to go. The bulk of the allergy community is taking care of patients with diseases that can be treated more cost-effectively by a family practitioner or primary care doctor. The market will determine who takes care of those patients, and the allergists will not take care of patients with mild or easily controlled disease. We need to work out an appropriate relationship with primary care givers who see the patient, identify those patients whose care needs expert advice, obtain a consultation and a management plan, and then manage the patient. The market will determine the cost-effectiveness of that approach. That will be the approach 5 years from now in the United States for hay fever and mild asthma.

Wasserman. I agree that primary care doctors will take care of a lot of mild allergic disease. The problem with a disease-based approach is that the physician must understand the disease to know who needs a referral. We have done a dismal job of training primary care physicians in certain disease areas. Furthermore, much of primary care is done by specialists in internal medicine who are providing primary care to chronically ill patients. The marketplace will define patient allocation. In a managed care network with withholds in

capitation, the specialist may be better for managing certain patients, but this will need to be proved.

Kaliner. We began talking about asthma versus allergy. I made the argument that the specialty cannot look to a future of taking care of patients with allergic rhinitis but can look to a future of taking care of patients with asthma. In the Washington area, one of the largest health care providers has given asthma care to a panel of allergists. They will be looking strictly at hospitalization rates. This managed care group had 210 hospitalizations per 100,000 members per year over the last 5 years. The national average is about 182. They are giving a 3-year contract to the allergists to see if hospitalizations and associated costs will decrease. All asthma care for any patient previously hospitalized for asthma was assumed by an allergist, starting on Feb. 1, 1995. This is an incredibly important project. If it is successful, we can define our future. If young physicians know they can make a living treating asthma, which is an exciting disease to take care of, they will want to become allergists.

Shearer. I sense there is a fundamental dichotomy in the whole field of allergy and immunology, and it is certainly reflected in the discussion so far at this table. We in the university or in hospital-based practices are careful to include immunology in all of our thoughts of how to prepare people for the future. Yet, the market, as amply documented around the table, clearly pays little attention to the entire field of immunology. Most of the problem, as I see it, is that the practice of our field in "real life" is far removed from what we are trying to do at the university; perhaps what we are trying to do at the university is far too broad. It may be that the entire field of immunology cannot be compressed into a specialty, particularly at a time when options are being restricted by managed health care.

Austen. Dr. Shearer has basically just introduced topic number two, justifying a mechanism-based specialty.

Justifying a mechanism-based specialty

N. Franklin Adkinson, Jr., MD, Robert R. Rich, MD, and
Lawrence M. Lichtenstein, MD

Allergy/immunology is unique among medical specialties in claiming and training for expertise in the pathophysiologic mechanisms that underlie diseases across the entire spectrum of medical pathology. The answer to the question, "can we justify a mechanism-based specialty?," depends on who asks the question.

For the American Board of Medical Specialties and the Accreditation Council for Graduate Medical Education, we have defended our claim well enough. Clinical immunologists are not likely to succeed in creating another board because: (1) proliferation of subspecialty medicine is not politically correct in the current climate, and (2) there

is no defined patient base for clinical immunology that is not already claimed by one or more existing specialties.

For ourselves (self-justification) we appear to be content with our diversity, which gives us comfortable elbow room to expand (or contract) in response to medical practice trends and new scientific insights. It also bolsters our strength by diversifying our academic base, which is very important for internal medicine's smallest subspecialty.

For managed care organizations (MCOs), the issue becomes moot because formal qualifications in cognitive disciplines are not valued *per se*. If we cannot demonstrate what services we provide best and to whom, other less expensive providers can and will be assigned to care for our traditional patient population. In this sense we are no different from other subspecialties of internal medicine and pediatrics. However, allergy/immunology may be more vulnerable than other subspecialties because many, and perhaps most of the diseases we care for are also claimed by other disciplines. Areas in which we have little or no competition include drug allergy, anaphylactic and anaphylactoid reactions, and a variety of "hypersensitivity" syndromes (multiple chemical sensitivity, etc.). However, in the past we have missed some opportunities, such as adult acquired immunodeficiency syndrome (AIDS) and perhaps solid organ transplantation.

Regarding future opportunities, we need to consider the following:

- Move allergy and immunology under the umbrella of the American Board of Internal Medicine and American Board of Pediatrics and staunch the peripheralization of the subspecialty in both the academic and practice setting.
- Broaden and "generalize" the subspecialty base in immunology.
- Embrace diagnostic/therapeutic/procedural modalities that gatekeepers do not want or understand. This might include modalities based on disease mechanisms such as systemic and/or organ-specific autoimmunity or immune deficiency, "cutting-edge" therapies in the areas of cytokines and immunomodulators, and new sophisticated diagnostic techniques, particularly molecular technologies.

Without question we are moving toward novel ways to modulate the immune system—toward a new type of immunotherapy that may contribute to the management of autoimmune diseases. As an

immunologically based subspecialty, we should play a role in the evolution of these therapies.

JUSTIFYING A MECHANISM-BASED SPECIALTY: DISCUSSION

Rich. How is it that subspecialties are generally defined? There are three ways to define a subspecialty as it is practiced: (1) the intellectual content of the information that is being practiced, (2) special types of therapeutic maneuvers that are sufficiently sophisticated to require special training, and (3) procedure-based subspecialties. None of these are clean. Most of the traditional organ-based specialties, such as cardiology and nephrology, are oriented around the consequences of organ failure. However, other subspecialties, allergy and immunology among them, have traditionally been directed toward understanding non-organ-based diseases. On the therapeutic side, the reason hematology/oncology and the infectious diseases have been successful in defining their subspecialties is that the therapeutics they deliver are sufficiently complicated to require a subspecialty delivery, although many of the diseases are now well understood by generalists. Finally, there are procedure-based subspecialties, now increasingly under scrutiny, which offer the opportunity to deliver care in a way that focuses on highly technical procedures: gastroenterology and pulmonology, are two such examples. In allergy/immunology, there have been elements of all three of these categories. We have a tradition in certain organ-based diseases, specifically the respiratory tract and the skin, although we are not the only physicians who lay claim to those diseases. We have had an area of therapeutics (immunotherapy) that is sufficiently complex and sufficiently difficult that it has not been challenged. The problem, of course, is that now there are therapeutic alternatives that are generally acceptable to the gatekeeper, the person who will be managing the referrals to the subspecialists. There has been one procedure that allergists have had to themselves: immediate hypersensitivity skin testing. Both of the activities unique to our subspecialty, immediate hypersensitivity skin testing and injection therapy, are threatened by managed care, by alternative modalities, and by changes in the quality of what we can deliver.

What is required to be a pathogenesis-based subspecialty? First, multiple diseases with a common pathogenic basis. Second, complicated diagnostic, therapeutic, or procedural maneuvers, which can be delivered only after specialized understanding and training in those pathogenetic mechanisms. Third, I believe that a pathogenesis-oriented subspecialty is one that should look to preventing the progression of disease as opposed to treating end-organ failure when pathogenesis is no longer as important. All one treats then are the consequences of a failed organ. The point of a pathogenesis-based subspecialty is to try to interrupt the pathogenetic process to preserve end-organ function.

Our traditional subspecialty, in which I include allergy/

immunology on the one hand and rheumatology on the other, is threatened by the health care revolution. This reflects control of access to subspecialists and the increasing availability of effective and safe new drugs. Primary care providers can now actually deliver high-quality, cost-effective care to most patients whom we see. Our future depends on capitalizing effectively on the body of complex knowledge that is unique to our subspecialty.

I have some specific suggestions that will come up for a lot of debate before the end of the day. Not all of them will be generally embraced. However, I feel fairly strongly at least about the first one, which is that it is time to move allergy/immunology back under the umbrella of its primary specialties. I think Dr. Austen was right that part of our problem is that, at least within internal medicine, we have lost our identity. We lost our identity in part for the structural reason of having moved ourselves out into a parallel board structure and having undefined ourselves as a subspecialty of internal medicine. It is not outside of medicine, but it is not within it either. It has placed the subspecialty in a very difficult position to attract the kind of interest and respect necessary to establish effective referral patterns. As a first step, we need to broaden and generalize the subspecialty base in immunology and strongly promote a liaison with rheumatology. In addition, we need to aggressively embrace those areas that we can identify as special: complex diagnostic analyses, therapeutics, and procedures that require the special training of the allergist/immunologist. We have some therapeutic modalities coming before us that will be difficult for the generalist to use, including cytokines, immunosuppressants, immunoconstitution, and both solid organ and bone marrow transplantation.

Finally, we have not discussed the role of the practitioner allergist/immunologist in the diagnostic arena, but the fact of the matter is that allergists and immunologists understand how to deal with flow cytometry, serologies, and autoantibodies. We need to promote the notion that first, we can use these complicated diagnostic modalities and second, they can influence the type of care we deliver. We need some redefinition and focusing on a mechanism-based subspecialty.

Lichtenstein. I agree with most of what you said. Our problem is really to make allergy/immunology respectable. To do so, we have to join with the clinical immunologists and the rheumatologists. We have to work at the medical schools to have immunology accepted as a discipline similar to biochemistry or pharmacology.

Wasserman. I disagree. It is not that immunology is not respected, but rather that it is considered clinically irrelevant. Because immunology is so poorly understood, practitioners simply do not see how it impacts on practice patterns.

Austen. Each of us has our own perception, but I think Dr. Lichtenstein is correct, because we don't have a preclinical base. We grew out of clinical medicine, and because immunology grew out of clinical medicine much

more than it grew out of serology, it does not have a preclinical base with a seat on the preclinical council and with all the appropriate chips.

Ruddy. These are very sorrowful discussions that you are having here. In many respects I think that they are partly responsible for why you find yourself where you are today. You really should have more practitioners around the table telling you how patients are referred and how respect is accorded in managed care systems rather than beating your breasts about mechanisms. People are not referred for mechanisms; they are referred because they have wheezing bronchial tubes, or stuffy noses, or sore joints. The number of patients sent to you because they have some type of inflammatory disease will not require very many people to provide their care. I think it is an intellectually interesting discussion, but it really does not have very much to do with the real world.

Schuller. I would like to really reiterate what Dr. Ruddy said. Most allergists are interested in promoting to the public and their colleagues the fact that they treat allergies and asthma. Clinical immunology is fine, but that is not the biggest part of their business. To survive with managed care we have to approach managed care with plans that will address the majority of patient problems. They do not see their problems as T-cell problems—they see wheezing patients who need to be kept out of the hospital.

Shearer. I would like to respond to the short-term fix, which I perceive as responding to managed health care concerns of the day and to keeping referral patterns stable. I would like to address the future of our subspecialty, and I think the only way to go is with what Dr. Rich has proposed. I believe that if we are going to provide any intellectual appeal to young people, we must make this a pathogenesis-based specialty, and wherever that takes us in the future, so be it.

Wasserman. However, how many allergists and immunologists are needed to take care of patients with severe rhinitis or patients with immunodeficiency disease who have chronic sinusitis? Probably few. We probably have far more allergists and immunologists than we need to take care of the severe end of the spectrum. If that is the kind of specialty we want, the specialty will be smaller than neurosurgery or colorectal surgery. There just are not that many physicians needed for that niche market. By contrast, protecting the status quo, that every patient with rhinitis needs to be seen by an allergist, is not rational right now. To determine the future of the specialty, we need to define what an allergist will be doing 25 years from now.

Rosenwasser. Part of the importance of what we are talking about in terms of the future is the way in which we approach our present trainees. We should be training only the most outstanding trainees that we possibly can attract. We should be even more selective than we have been.

Austen. We have two agendas, and I think we need to acknowledge that so nobody feels we are unsympathetic

to the issue of "today." The second agenda is to look ahead. Some of you have addressed both together.

Shatz. We seem to be making an assumption that we as allergists practicing appropriate care could not be cost-effective.

Platts-Mills. I think there is another assumption: that the state of managed care will stay the same as it is now. Many allergists working in managed care settings are primary care physicians for allergy, and they are very happy about it.

Sheffer. We have two discussions: a practical "what's going on now" discussion and the training aspect, the aspect of the future.

Platts-Mills. Assuming that we know what will happen to the management of allergy inside managed care at this time is wrong. What is central is that we have to take care of the whole patient.

Wasserman. We should be the care givers for the patients with the immunologic diseases and the masqueraders in synonymous diseases. The other caveat I would add is that when you have seen one managed care organization, you have seen only one managed care organization.

Anderson. I would like to talk again about critical mass and missed opportunities. There is a problem. If you become too big, then you are vulnerable to all the pressures. However, if you stay too small, then you cannot cover all of the markets; I am also talking about at the academic center and the community level. We cannot even compete in most academic centers for the resources that are there. In the community if you are not there, those patients that you call your own will be going to another specialist.

Bloch. I think we suffer partly from a lack of information. We do not know whether it is really true that under managed care and capitated care so many of the patients currently cared for by physicians we refer to as "practicing allergists" will not see these physicians anymore. Is it

correct that, in general, the patient with mild and moderate asthma and those with allergic rhinitis are being short-stopped before seeing allergists? My impression is that that is, in fact, the case. The organizations are distributing manuals and guidelines under which primary care providers are to care for patients with mild and moderately severe asthma. Therefore as practicing allergists we will see far fewer patients in the future. Our experience is that we have had a 50% reduction in the number of patients coming to our clinics because managed care "short-stops" them. So we have to look forward in the future to training a far different type of physician than that trained in the past. We need to radically restructure our specialty. So far I have heard one component of what that restructured specialty training may require, namely, providing our future trainees with the ability to deliver advanced clinical care to patients with complex medical problems.

Anderson. I want to make a point about the disease. The information and the tools to treat asthma effectively are and have been out there. In our own institution we have done surveys in a way that leads me to believe that we cannot take care of all the asthma out there. We estimate that about 14% of all the visits for asthma actually go to a specialist. I think that the public has a high respect for our services; so even if the busy primary care physician does not want to refer the patient, with enough pressure, either direct or indirect, the patient is referred. We are very busy, and one of the things we sell is time.

Wasserman. Another aspect of referral volume is how committed the primary care physician is to a disease infrequently seen. Because 10% to 12% of what a primary care giver sees is upper respiratory tract complaints, they may become pretty good at managing chronic rhinitis, but they will never be very good at managing disorders that they might see twice a year and that we might see every day.

Board requirements versus National Institutes of Health requirements

Stephen I. Wasserman, MD, K. Frank Austen, MD, and
Richard F. Lockey, MD

Increasingly there is a conflict between the subspecialty requirements for the clinical discipline of allergy and the requirements for success as a National Institutes of Health (NIH)-funded investigator. It is not the NIH requirements that are crucial, but rather what it takes to become an NIH-funded physician/scientist.

TRAINING REQUIREMENTS FOR THE AMERICAN BOARD OF ALLERGY VERSUS TRAINING REQUIREMENTS FOR NIH TRAINING GRANTS

The special requirements for residency or fellowship training in allergy and immunology adopted in July 1992 require a graduate program