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"PHYSICIAN, MANAGE THYSELF": THE CHANGING NATURE OF HEALTH CARE DELIVERY

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Physicians, hospitals, and other health care providers are feeling the effects of health care reform, managed care plans, and general concerns over the cost of health care. Physician incomes are not rising as rapidly as they once did. Hospital occupancy rates are down, and many hospitals are reducing their staff. Education of physicians is beginning to move toward primary care and away from specialists. However, an overabundance of specialists and a shortage of primary care physicians will continue for a number of years. How are the medical professions coping with these changes? Representatives of various health care professions will address these issues and their short-term and long-term effects on the health care delivery systems in North America.

MR. WILLIAM J. THOMPSON: There have been a lot of changes going on in the way physicians practice: managed care, health care reform and how health care is delivered, hospital utilization review, need for different types of specialties and how physicians get educated. We'd like to describe some of those changes and how they are affecting health care delivery. To do that, we have two representatives from the American Medical Association.

Our first speaker is Edward Hirshfeld, who is vice president and associate general counsel of health law, litigation and policy for the AMA. He manages the health law division at the AMA's Office of General Counsel and serves as the team leader for the AMA's private sector advocacy and support team. Ed will talk about managed care and the effect that it's having on the way that physicians practice.

Our second speaker will be Barbara Barzansky, who is the assistant director of the division of undergraduate medical education at the AMA. She has a Ph.D. in developmental and cell biology at the University of California at Irvine. She also taught medical education research at the University of Chicago prior to joining the AMA.

MR. EDWARD HIRSHFELD: We were very pleased on behalf of the AMA to be invited to speak before this group. We're honored to be here and very pleased you're interested in hearing about physicians in managed care. Your profession is becoming increasingly important to physicians, so we're happy to have this opportunity to introduce you to the AMA and to learn about your organization.

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I plan to cover a couple of topics today. One is a status report about physician participation in managed care and how physicians are being affected by managed care in the U.S.. There are a lot of myths about managed care in the U.S.; one of the things that we've done at the AMA is to take the trouble to pull together as much information as we can about managed care in the market, so that we have some objective information on which to base our policy as opposed to a lot of the anecdotal overstatements you hear. We'll also cover the reaction of physicians to managed care: how they are coping, how they are reacting, what they are doing. Physicians may be some of your clients so you may be interested in that. I'll also raise some of the issues that physicians need to be addressing by legislation having to do with managed care.

First, let's discuss the status of physicians in managed care. I'll toss out a few statistics, but I'm sure you'll be able to handle that. I'll start off with the number of Americans in HMOs and PPOs. A health maintenance organization is like an insurance company. Basically it offers a prepaid medical plan, requires its beneficiaries to use a restricted panel of physicians, and offers low premiums. So the beneficiary, in return for getting a lower premium and usually expanded coverage, better coverage than you get under a traditional indemnity plan, must use a particular set of physicians and hospitals. So that basically describes HMOs.

A preferred provider organization is not really an insurance plan, it's really a vendor to an insurance plan, and what it consists of is a network of providers that have agreed to discount their fees. In return for the discounts of the fees, the operator of the PPO promises volume to those providers. In addition, it provides financial incentive to the beneficiaries covered by the health plan using the PPO so that those beneficiaries will use the PPO.

Also in the U.S. we have what's known as managed indemnity. Managed indemnity is a traditional indemnity insurance plan. You go to the doctor, you get a bill, you turn it into the insurance company and the insurance company pays it. That's traditional indemnity, but managed indemnity has a phenomenon known as utilization review attached to it. So if you're a patient in a managed indemnity plan and you see a physician who says you need to go to the hospital, you have to get clearance from the insurance company before your stay in the hospital will be paid for.

In the U.S., virtually all health coverage now is HMO or PPO, but we tend to think of managed indemnity as being traditional indemnity, and we look at the HMO and the PPO as being the more intense variety of managed care.

When we look at how managed care is progressing, we look to see how many people are in HMOs and PPOs, and the estimates vary. The data are really not as precise as they could be, but there are about 46–55 million Americans in HMOs, and about 60 million Americans in PPOs. The rest are in managed indemnity or the traditional Medicare/Medicaid programs, or they're uninsured. We have about 35–40 million Americans without insurance.

There's a wide variation in managed care penetration, and penetration is the term that's usually used in the managed care industry. The heaviest HMO enrollment, which is another indication of how far managed care is progressing, is in the Pacific Northwest with 33.4% of the population enrolled. The second area of heaviest enrollment is New England

with 28% of the population enrolled. The lowest enrollment in HMOs is in the south central area of the U.S. with about 9%, and in the south Atlantic area with about 14.5%. So you can see that there is wide variation in the types of managed care that Americans and physicians are experiencing in the U.S., and that's an important thing to remember.

Managed care tends to be concentrated in urban markets in the U.S.. The highest HMO penetration in the U.S. is in the city of Rochester, New York, where 63% of the population is enrolled in one of two HMOs. The other ten most penetrated standard metropolitan statistical areas (MSAs) which, in the U.S. is basically a city that is the center of a metropolitan area, have HMO market shares ranging from 33% to 50%. It is interesting to identify them because again it shows the regional variation in managed care penetration. After Rochester comes Worcester, Massachusetts, a city outside of Boston, then the San Francisco, Oakland and Sacramento area, then Minneapolis-St. Paul, then Albuquerque, New Mexico, then Tucson, Arizona, then Milwaukee-Racine, then the Los Angeles, Anaheim, Riverside, San Diego area, then Portland, Oregon, and Vancouver, Washington and then Albany, New York.

The least penetrated MSAs by HMOs in the U.S., which have HMO market shares ranging from 10% to 13%, are in decreasing order: the New York City area; New York; Northern New Jersey and Long Island; Indianapolis, Indiana; Dallas-Ft. Worth, Texas; Pittsburgh, Pennsylvania; Louisville, Kentucky; San Antonio, Texas; Las Vegas, Nevada; and Norfolk-Newport Beach, Virginia. One of the things to notice is in one state, New York, there are two cities that are in the top eleven of HMO markets in the U.S., and one city that's among the bottom, New York City, which shows the dramatic variations that exist in managed care in the U.S.

Managed care tends to be concentrated in urban areas, and it's not unusual for there to be areas just a few miles away from these urban areas where there's very little managed care. It's concentrated in urban areas because the ingredients necessary to make managed care work are there. Those ingredients are: (1) the presence of large employers that control large beneficiary populations that are looking to reduce their health care costs, (2) enough physicians and other providers necessary to sustain intense competition for beneficiaries, and also large enough to form competing networks so they can be pitted against each other, and (3) large enough numbers of beneficiaries so they can be directed to providers to generate bids for providers.

The next thing I want to bring to your attention is physician participation in managed care. I've given you a picture of how much managed care there is in the U.S. and where it is. Seventy-seven percent of physicians in the U.S. have a managed care contract, meaning either a contract with an HMO or a PPO. Fifty-five percent have at least one HMO contract. During the past year, there was substantial growth in the number of physicians with HMO contracts—that percentage increased by 7%.

Interestingly, the number of physicians with PPO contracts decreased even though PPO enrollment increased during the past year. The probable reason is that the operators of the PPOs are starting to cut back on the number of physicians in their plans. They do that for a couple of reasons. The primary reason is that they get the attention of the physicians that they keep in their panels because they're directing more beneficiaries to them; there's more beneficiaries per physician on the panel. Once you control a larger number of beneficiaries that go to a particular physician, then you can extract a larger discount from

that physician and get other physicians to compete harder for those beneficiaries. The other reason is simply to select those physicians that operate in the most cost-effective way. So you pare down your panel, eliminate the physicians that are using the most resources in treating their patients, retain the ones that are most efficient, and then do a little head knocking with the leverage you have because of the volume through the PPO.

Participation rates for physicians are obviously the highest in geographic markets where managed care has achieved the highest penetration. Eighty-two percent of the physicians have contracts in New England and the Pacific Northwest; however, participation rates are high even in areas where managed care has a low market share. Participation rates are higher for physicians in large groups. Eighty-four percent of physicians in groups with 10–24 physicians have managed care contracts as opposed to 74% of solo practitioners. Younger physicians tend to participate in managed care more than older ones. Over 80% of physicians under the age of 40 have a contract as opposed to 66% for physicians over age 55.

What about physician revenues derived from managed care contracts? Physicians participating in managed care derive 34% of their revenues on average from HMO and PPO contracts, so that's a significant amount to them. HMO contracts account for an average of 21% of the revenues of physicians participating in managed care, and PPOs account for an average of 19% of their revenues. A larger percentage of the revenues of physicians in large groups is attributable to managed care than physicians in solo practice. It's 43% of revenues for practices with more than 25 physicians, and 32% for solo practice.

If you know something about managed care, you're aware that it focuses on the primary care physician, and the primary care physician is the gatekeeper to the rest of the system, meaning the primary care physician controls referrals to specialist physicians and admissions to hospitals. However, the highest percentage of revenues attributable to managed care contracts include 44% for obstetricians-gynecologists (OB-GYNs), who tend to be classified as primary care physicians in the U.S..

Another thing that's interesting to look at is what percentage of revenues are attributable not just to managed care contracts, but to risk sharing. In the U.S., risk sharing includes capitation, which means physicians take a set amount per patient per month instead of being paid on a fee-for-service basis. Another form of risk sharing is what's known as a fee withhold. The physician continues to get paid on a fee-for-service basis, but a portion of that fee is withheld and is not returned to the physician unless certain utilization goals, or certain budgetary goals are met. If the budgetary goals are met, the withhold amount is returned. If budgetary goals are not met, that amount is not returned; the idea is to give the physician an incentive to practice more efficiently.

Capitation is widely regarded as the wave of the future in the U.S., with an in-creasing amount of physician services being paid via capitation. However, at this point, only 8% of primary care physician revenue is from capitation. That accounts for 22% of managed care revenues, but it's only 8% overall. Only about 5% of specialist physician revenue was from capitation. So you can see that there is a ways to go in terms of managed care advancing in the U.S.. Percentages of contracts that have withhold risk pools include 27% of general internal medicine physicians, 26% of pediatricians, 22% of family practitioners and 20% of OB-GYNs.

One of the things that physicians get quite concerned about is the impact on their autonomy of managed care because different kinds of managed care plans place different levels or degrees of controls on physicians in the way they conduct their medical practice. Managed indemnity imposes utilization review. Prospective utilization review requires an authorization from the plan before providing a course of treatment to the patient. Concurrent utilization review requires ongoing contact with the plan to approve the continuation of a course of treatment that's been authorized. Retrospective utilization review is when the plan looks at a course of treatment after it has been completed and decides whether it was necessary and appropriate; if it wasn't necessary and appropriate, they won't pay for it. The PPOs have the restrictive panels where not all physicians are on the panel plus they use utilization review and they have discounts.

Then there's the Individual Practice Association (IPA) model HMO; the network that serves the HMO is composed of physicians in independent practice who are practicing as they have traditionally and as they do in Canada, but they are members of an organization which is paid a certain amount for the patients allocated to that organization. Then the IPA pays the physicians on a fee-for-service basis. It functions much like a PPO even though it's an HMO.

Then there is the group model HMO, under which, in essence, is a multispecialty practice group that is dedicated to caring for the patients of the HMO. Under a staff model HMO, the physicians are actually employed by the HMO. Finally, there are hybrid HMOs that mix various attributes described above. As you go down that scale, starting with managed indemnity, to IPA model HMO, to group model HMO, to staff model, you get an increasing amount of control placed on the physician by the insurer, the PPO or the HMO.

Fifty-two percent of HMOs are the IPA model which are the least restrictive kind of HMO. Of the types of HMOs that tend to get the most press and that are talked about the most, the group model consists of only about 7% of HMOs; the staff model comprises only about 4% of HMOs.

The IPA model HMOs account for about 34% of all HMO beneficiaries, group and staff model HMOs together enroll almost 24% of all beneficiaries, and the hybrid HMOs enroll the rest. Managed care is still in an early stage of evolution in terms of the degree of control they place over the physician in the U.S.. There's a lot of talk about the group and staff model HMO, but there aren't that many of them yet. Those that do exist tend to get a lot of attention and often are dominant in their markets like the Kaiser Permanente HMOs in the U.S., Group Health of Puget Sound in Washington State, and the Harvard Community HealthPlan in New England.

Let's discuss ownership of HMOs and PPOs. Once the health plan imposes controls on physicians and imposes controls on their medical decision making, then the question that remains is who is running the health plan? Who's calling the shots? Physicians are concerned about that. Who is controlling medical decision making? The corporate prepaid health plans, the PPOs, HMOs, and managed indemnity plans are corporations. In the U.S., the corporations have a hierarchy and the control of the corporation is vested in the board of trustees or the board of directors. They, of course, allocate a certain amount of control to management and then there's a hierarchy set up in a triangular fashion. The

policies of these corporations are ultimately controlled by the few people that sit on the board of trustees and the senior managers of the corporation.

Theoretically, those are the people that have control over medical policy of the plan, and have control over what kind of medical care is provided to the beneficiaries of those plans. Who owns the plans? Insurance companies in the U.S. own about 25% of HMOs and 45% of PPOs. Blue Cross organizations, which are like insurance companies but they're not-for-profit, own 14% of HMOs and about 5% of PPOs. National managed care companies, corporations that operate HMOs on a national basis, own 21% of HMOs and about 11% of PPOs. Hospitals in the U.S. own 10% of HMOs and about 10% of PPOs. Physicians, physician groups, medical societies in the U.S., and physician hospital organizations own about 6% of HMOs and 7% of PPOs.

Interestingly, physician sponsorship of these plans has actually declined over the years. In 1985, 17% of PPOs were physician sponsored, by 1991 it dropped to only 8%. In 1985, 7% of PPOs were owned by insurance companies, and in 1991, 30% of PPOs were owned by insurance companies.

One of the reasons for that is also the growth of self insurance in the U.S.. Those of you who are familiar with medical insurance and marketing in the U.S. know that the majority of corporations now are self-insured, meaning that they retain the risk and their health benefits products look like insurance plans. The big insurance companies administer them, but they do not take on risk except perhaps for a stop-loss policy. Instead, the employer holds onto the risk and the insurer operates on an administrative-services-only basis.

What is the role of the insurance company in that kind of set up? The role is to organize the health care delivery network and to administer it, and the health care delivery system now works as the PPO. As self insurance has increased dramatically in the U.S. for regulatory reasons in recent years, the growth and control of PPOs by insurance companies has paralleled that growth. As of 1992, 67% of employee benefit plans were self-insured, 83% of all plans with more than 500 employees were self-insured, 50% of all employees of all employers with less than 500 employees were self-insured, and 51% of all Americans are covered by self-insured plans.

One of the things to look at is the sources of cost savings in managed care, and how successful they are in reducing costs. According to a Congressional Budget Office estimate, group and staff model HMOs reduce medical services by almost 20% as compared to managed and unmanaged indemnity plans. An IPA model HMO reduces the provision of medical services by about 1%.

Where do these savings come from? The largest source of savings is reduced hospital days, keeping people out of the hospitals. Reduced provider payment is also important, but it is not as important as reduced institutional cost. You may have heard a lot about preventive care, coordinated care, and integrated care as ways to save money, but they are not proven yet.

What about the quality of managed care? There have been a number of academic studies done about managed care in the U.S.. The majority of these studies conclude that managed care provides as good or better quality than traditional fee-for-service medicine.

However, physicians as a whole in the U.S. usually claim that managed care is adversely affecting quality, and there are many anecdotal reports of incidents where denials of care adversely affect patients.

One of the things that the AMA is trying to figure out is how to reconcile what the academic studies say with what physicians are telling us; we're trying to gather a lot of information about that. There are a number of potential explanations. One is that managed care is simply a new style of medical practice that physicians are not happy about. Therefore, they disagree with it and tend to see it as bad even though it isn't actually resulting in bad things.

Another is that physicians may detect differences that are too subtle to appear in the gross outcome information that the academic studies are relying on. Also, when the anecdotes are carefully reviewed, many turn out to be what I call close calls. This is a situation where a patient goes to a primary care physician who works for a managed care plan who says, "I will not refer you to a specialist or admit you to the hospital." Alternatively, the physician says, "Yes, I will," but then the managed care plan says "No, we're not going to admit that patient to the hospital, and we're not going to let the patient see a specialist." The symptoms persist and persist and the extra care keeps being denied until a dramatic event occurs which makes it clear that this patient is very sick. Then, the patient goes to the hospital, is taken care of and the patient turns out to be fine. They get the care they needed at the end, but they've been through a frustrating, harrowing experience.

There are a lot of anecdotal incidents of that nature including one at the AMA, where a woman on our staff had symptoms like headaches and dizzy spells. She wanted to see a specialist, but was denied until she collapsed at work and was taken to the hospital. She then saw a specialist, who diagnosed a brain tumor. She had immediate surgery, and today she's fine. No bad outcome resulted, but she went through a difficult experience.

Sometimes it's difficult to assign responsibility when there is a bad outcome. Was it physician error that would have occurred no matter what kind of incentives the physician was operating under, or was it attributable to managed care? An interesting example is a case that was brought to my attention in Cleveland. A baby was discharged from the hospital 24 hours after birth, the parents were saying the baby doesn't seem to be the right color. The nurses were saying, "No, you're Italian, the baby's a little dark, it's okay." The pediatrician examined the baby in the morning after the baby was delivered, but did not examine the baby just prior to discharge. The baby turned out to be jaundiced, and the parents had been told it was okay for the baby to be this color, so they didn't bring the baby back to the physician until it was too late to prevent serious brain damage. Who is at fault here? The managed care plan had a one-day-discharge policy and the physician is judged by that, or may be terminated from the PPO. Another interesting factor is that jaundice tends not to really take hold until after 24 hours. Was the fact that the baby suffered brain damage because of the managed care's one-day policy, or was it because the physician should have gotten there and taken another look at the baby before the baby was discharged? Sometimes it's hard to assign responsibility.

What we're going to find out in our research at the AMA is that managed care does provide as good or better quality of care than traditional medicine in the aggregate; however, because of the incentives involved, it's inevitable that some people will fall

through the cracks. The question then becomes whether we should change our regulatory system to prevent too many people from falling through the cracks.

How are physicians adapting to managed care? As I mentioned, we're still early in the evolutionary process, but awareness about managed care among physicians in the U.S. is very high. Virtually every physician knows about managed care, and they especially know how managed care can adversely affect them. They're concerned about loss of clinical autonomy because virtually all of them are experiencing utilization review. They're worried about loss of security. They're aware of the selective plans and many have a sense that the best way for them to respond is to organize groups, although the purpose of forming the group is not always well understood.

However, their understanding of the fundamentals of managed care is very poor. Most physicians do not understand very well how managed care really works. Most physicians do not understand the fundamentals of the business operations of their own practice. Most physicians want to practice medicine and leave the administration to others. I have a lot of sympathy with that point of view because medicine is so difficult and so complex that I think we are asking physicians a lot to not only know how to practice medicine in the best possible way but also how to become entrepreneurs; it's hard to do both.

Physicians are also not doing a whole lot to gain more knowledge about managed care. At the AMA, we've got a whole battery of educational products from publications to workshops, which simply are not being made use of. Most medical societies other than the AMA are having the same experience. We're all putting together educational materials while anticipating that the physicians need them, but physicians up to this point in time are simply not taking advantage of them.

Most physicians accept the fact that managed care is here to stay, and that it will likely continue to account for a larger share of patients. However, that does not mean that physicians are happy about it. One of the primary emotions that they have about the subject is fear, fear that they'll be foreclosed from practice, fear that they won't be able to access a network, fear that they'll have reduced income, fear of being forced to practice lower quality medicine, and unhappy about the tightrope that they increasingly find themselves on. Managed care plans have policies about how physicians are supposed to practice medicine, yet the physician is the one who's ultimately accountable in court for how the patient is treated. As you know, malpractice litigation in the U.S. is very intense, so physicians feel they're between a rock and a hard place.

Another emotion that they experience is anger. They don't feel it's right that they possibly could be foreclosed from practicing medicine if they don't have access to a network. Another notion is a sense of an inability to cope. As I mentioned earlier, it's hard enough to keep up with medicine let alone become an entrepreneur. Physicians are not trained for this, it's new to them, and so often you get a sense of apathy, of saying that this is all too much for us, we're just going to take the path of least resistance and hope for the best.

In any market, you can divide physicians into three sets. One are physicians who are embracing change and trying to develop the most efficient practice or network they can. They are very optimistic and feel they understand the situation better than anyone else, and they're really moving with it. They know what to do and they're very confident and pleased with the results. They tend to be the minority.

Another group of physicians would be those who are just trying to survive on a day-to-day basis. The way these physicians respond is by signing every managed care contract that comes across their desk, but without really making a serious effort to plan and adjust their practices to adapt for the future.

Then there's a third group who just refuses to change refuses to participate, and would rather fight this. These physicians tend to be older and they're very much in the minority.

There's also a tremendous amount of exploration of network formation by physicians, especially in the markets which are less mature. One of the problems we see is that while physicians are organizing a lot of networks, they are not setting them up in a way which has a good business product, or a good managed care product in mind. They have a vague sense that managed care is coming. They have a sense that they could be excluded if they don't participate in managed care plans. They have a sense that the best way to counter that is to organize and to form a network. However, they tend not to think beyond that and ask, "What is the network going to sell? How is it going to work? How am I going to fit within the network?" So there's a lot of work to be done there.

Where will physicians be ten years from now? We at the AMA hope that physicians will take the opportunities that are available to them to organize networks, to take on risk, and to direct contract with employers. If present trends continue, it's really much more likely that physicians will be highly controlled independent contractors or employees with insurance companies, and that the nature of the relationship between the managed care plans and the insurers will be much more like management and labor. As a result, we'll be moving more in a union direction unless physicians do more to take hold of the future and direct it themselves.

DR. BARBARA BARZANSKY: Managed care is growing. Physicians are encountering it at various levels, and many physicians are frustrated, curious, and afraid. The question that I would like to address is how well the educational program is preparing physicians for the new health care system. I would like to look at this at two levels. The first level is how well is the educational system preparing the right number and the right specialty distribution of physicians to fit into a managed care system. The second level is how well is the educational system teaching physicians the specific knowledge and skills and other kinds of background information that they need in order to practice in a managed care setting.

I am using the term *educational system* because essentially the education of physicians falls into two basic parts. One is the four-year program that leads to the MD degree or the DO degree. This is meant to provide the basic science information that underlies medical practice, for example, how to do a medical history, give a physical examination, and other basic clinical skills and knowledge. Then physicians will branch out into one of a number of different specialty areas and spend about three to seven years acquiring a specific set of knowledge and skills related to that specialty. We call this graduate medical education.

While we like to talk about medical education as a continuum, where the basic MD program leads into the specialty program, this is not really the case. These are two separate components that are planned separately and evaluated separately. What you hope is that both parts will somehow contribute to producing a physician who is prepared for

the health care system that exists. I would like to look at that and the kind of data that we have to try and answer the question of how well physicians are being prepared.

The first question I would like to spend a little bit of time on is whether the educational system is preparing the right number and specialty mix of physicians. To do this, I will compare the U.S. and Canada, because there are some very basic differences about how graduate medical education is organized and managed that affect how the physician work force is structured.

The first question is, What is the right mix of physicians for a managed care environment? This seems like a simple question but it isn't because there are many kinds of HMOs and PPOs. We really do not know except for some very basic studies how many physicians we need in a particular market or what particular mix of physicians are appropriate. We have some studies based on the group and staff model HMOs which are well defined, with a defined medical staff and a defined patient population. We really do not know how many physicians you need for a more pluralistic market which consists of a mix of fee-for-service, different kinds of HMOs and PPOs, and all sorts of combinations.

I think most people who do workforce projections looking at current and projected physician supply have come to a couple of conclusions. One is right now in the U.S., there is probably an oversupply of physicians, and there is at least in the future and maybe now, an oversupply of specialist physicians. Also there may be an undersupply or at least a balance of what we call primary care physicians. In the U.S., the federal government defines primary care as family medicine, general internal medicine, general pediatrics. Other groups include obstetrics-gynecology. There is a lot of conflict and a lot of controversy about which specialties are classified as primary care because health care reform legislation last year favored primary care training.

It is much simpler in Canada. In Canada there are family physicians and then there are physicians who are defined as specialists. The roles and relationships among these are much more clearly defined and clearly understood, so there is no conflict of who does what or who is allowed to perform what practice.

The number of physicians in the U.S. has been growing dramatically as shown in Table 1.

TABLE 1
NUMBER OF PHYSICIANS IN THE U.S. BY SPECIALTY

Specialty	1975	1985	1992
Family Practice	12,183	40,021	50,969
General Practice	42,374	27,030	20,719
Internal Medicine	52,615	88,862	109,017
Pediatrics	22,192	36,026	44,881
Total	393,742	522,716	653,062
Primary Care as Percent of Total	33%	35%	35%

Comparing 1975, 1985 and 1992, the absolute number of physicians has gone up from almost 400,000 to over 650,000. What is interesting in the U.S. is looking at the proportion of physicians who are primary care. The proportion has not changed very much. There have been somewhere around 35% claiming to be primary care physicians. This is in the context of claims for at least the last 20 years that we do not have enough primary care physicians. There have been a lot of commissions, reports, and recommendations saying we need more primary care physicians.

Why have we stayed at these relatively low levels? Essentially specialty choice is defined in a number of different levels, and here is where the differences between Canada and the U.S. really stand out. There is the level of the medical school itself, and that includes who is admitted into medical school and what they particularly want to do with their lives. For example, there are some medical schools that admit people who say they have an interest in practicing primary care. You may say this is very naive on their part because everyone, if they want to get into medical school, will say they are interested in primary care. In reality, there is a strong correlation between having a policy to admit people who are interested in primary care and eventually turning out primary care physicians at the end of training. So admissions can make a difference.

Curriculum also can make a difference. This is both in terms of what you actually teach people and who does the teaching. If students meet only subspecialists and only have their education in a tertiary care, specialty-oriented hospital, they are going to get a message that primary care does not matter very much. Students are told all the time that primary care is low status. So students need role models, people who are primary care physicians who can show them what it is like to be a primary care physician. Therefore, the organizational characteristics of a medical school, such as having a Department of Family Medicine, are important as well.

At the residency program level is where there is a major distinction between the U.S. and Canada. In the U.S., for every graduate of a U.S. medical school, there are about 1.4 residency positions. Students have a lot of choice in terms of what specialty they can go into. The number of residency positions is often set by the hospital that sponsors the residency training program. So if the hospital needs residents in anesthesia programs because of a need to take care of patients, the hospital and training program can establish those positions and medical students can enter them. There is not a lot of control on either the number of residency training positions or the specialty mix of residency training positions. Whereas in Canada, the number of actual medical student positions and the number of residency positions is determined by negotiation between provincial government and the educational institutions. The number of residency positions is defined and cannot keep proliferating the way it does in the U.S.

And the third issue is what message is sent by the health care system. This includes how physicians are reimbursed and what the employment opportunities are. In the U.S., it has been fairly easy for a physician, regardless of specialty to find a practice opportunity until very recently. It has only been in the last couple of years that, in certain parts of the country and in certain specialties, young physicians are having a hard time finding a job. That does not mean they do not find one; it means they may have to go far away, maybe to areas they do not want to go, and take a job they may not have really wanted. However, they can find jobs. The difficulty, however, is beginning to slowly affect the market.

In anesthesiology there have been cuts in staffing and problems with people in anesthesia finding positions. This has led to cuts in the number of residency positions in anesthesia and fewer medical students choosing that specialty. So the market, at least in the U.S., is beginning to work in terms of students seeing what their future will be and making choices based on that future.

In contrast, HMOs are very anxious for primary care physicians. They are paying them well and recruiting them actively, and more people are beginning to think about choosing primary care. So we are beginning to see more of a move toward primary care. The take home message is that it's been hard in the U.S. to control the number and specialty distribution of physicians. The marketplace now, however, is beginning to have some effects. The market is influencing student choices. The effect so far is very small and, considering the fact that you are dealing with such large numbers of physicians, it will take a while before we get to the balance in terms of the number of primary care physicians that we need.

The next question is how well is the educational system preparing students and residents for practice in the managed care setting. Physicians are very concerned and frustrated, and many do not know very much about managed care. Ideally, their education should prepare them for this kind of practice. There have been various recommendations about what people should learn in order to get ready for a world with managed care, things over and above what a standard medical curriculum will provide.

These include things like health promotion and disease prevention; population based medicine (which is looking at the statistics for populations); use of cost effective diagnostic and treatment services (not ordering every test in the book but specifically ordering tests you think will make a difference); being able to provide a broad range of services beyond what a traditional residency program might have prepared the physician for; and being able to function as part of a health care team.

All these things are not routinely part of a traditional medical education and are now being advocated by managed care organizations and others as being important. The question is how common are they in the curriculum, and how well are they taught?

There was a survey done of physicians under the age of 45, who were out in a variety of practice settings and in a variety of specialties. The survey was sponsored by the Robert Wood Johnson Foundation. It asked these physicians how well they were prepared in certain knowledge and skills? Results are: manage business aspects of practice 3%; provide cost-effective medical care 41%; provide preventive care 60%; keep updated on new developments 87%.

In asking how good preparation was for managing the business aspects of their practice, only 3% of responding physicians said that anywhere in their training in medical school or in residency were they well prepared to do this. In terms of providing cost effective care, about 40% felt well prepared and 60% felt prepared to provide preventive care. In contrast, about all physicians, 87%, felt they were well prepared to keep up with new developments, such as keeping up with the medical literature and new methods of diagnosis and treatment.

Some of the basics, which are really key to managed care, appear not to be well taught. Another question that was asked in this survey was how physicians felt about the sites used for training? A lot of training for physicians is done in the hospital. Medical students and residents take care of hospitalized patients and there has been much talk about the need to move medical education out of the hospital and into settings which more accurately represent the real life practice of medicine.

The Robert Wood Johnson survey asked how much time was spent in various settings, too much or too little, based on what the physicians know now about being in practice? For example, about a quarter of the respondents thought they spent too much time dealing with patients who had been hospitalized, whereas anywhere from one-third to two-thirds felt they spent too little time in other settings, such as outpatient clinics of hospitals, physician offices, and organized managed care settings.

The group of people who graduated from medical school somewhere in the late 1970s or 1980s said a number of things in the young physicians survey. They said they were not trained in the right places for practice today, and they were not taught all the things that they really needed to know. Now, most of these people were satisfied with their education in general; 80% said it was good or excellent overall. They did, however, recognize gaps.

The question is what is being done today to fill in these gaps? Are medical schools, or residency programs responding to try and fix some of the discrepancies between what physicians need to know and what was traditionally taught?

The first question is, what are medical schools required to do? Accreditation of the program leading to the MD degree in the U.S. and Canada is done by the Liaison Committee on Medical Education. In Canada, accreditation is in conjunction with the Committee on Accreditation of Canadian Medical Schools. The standards of accreditation these groups use are found in *Functions and Structure of a Medical School* by the Liaison Committee on Medical Education and the Committee on Accreditation of Canadian Medical Schools. It states "The (medical) curriculum cannot be all-encompassing. However, it must include the sciences basic to medicine, a variety of clinical disciplines, and ethics, behavioral and socioeconomic subjects pertinent to medical progress."

The standards require teaching about basic sciences, clinical sciences, and also mention behavioral, ethical and socioeconomic subjects pertinent to medicine. According to the accrediting body, these things have to be taught somewhere in the curriculum. Because the standards are very general, they do not say how much should be taught or where the subjects should be in the curriculum, but they require some attention to these subjects somewhere in the curriculum.

What really is going on in medical schools, especially related to the socioeconomic subjects pertinent to medicine? Every year the Liaison Committee on Medical Education surveys U.S. medical schools. Table 2 is a summary of the results of the 1995 survey.

TABLE 2
SUBJECTS IN MEDICAL SCHOOL CURRICULUM/1994–95
NUMBER OF SCHOOLS WHERE SUBJECT IS:

	Included in required course	Separate elective course
Practice Management	67	17
Risk Management	76	14
Utilization Review/Quality Assurance	81	12
Managing Health care Costs	114	25
Health Care Systems Practice Management	117	42

The 1995 survey asked medical schools if, somewhere in the curriculum, they have these subjects as part of a required course that all students have to take. If you look at just the numbers, it looks encouraging. Based on 125 medical schools, at least half deal with issues of managing the business aspects of physician practice and almost all cover health care systems. The survey does not tell us how much time is spent or whether the time is best spent in terms of educational formats. It also does not say who is doing the teaching.

The survey shows that medical schools are beginning to get the message that the subjects that were so lacking in the Robert Wood Johnson sample of young physicians are important. The subjects are beginning to turn up in the curriculum now. I think we probably still have a long way to go, but at least there has been some attention raised.

The physicians in the Robert Wood Johnson survey (Table 3) said they did not spend enough time in settings outside of the hospital.

TABLE 3
MEDICAL STUDENT EDUCATION
IN MANAGED CARE SETTINGS 1994–95
NUMBER OF MEDICAL SCHOOLS WHERE:

All students spend time in a managed care organization	18 (14%)
Some students spend time in a managed care organization	60 (48%)
No students spend time in a managed care organization	47 (38%)

If you look at the number of medical schools that train students in managed care organizations now, it is still relatively low. About 18 schools or 14% of the total had all students spend some time in a managed care organization. About half of the schools had at least some students spend time in a managed care organization. While in the managed care setting, the students may have been learning about prevention, they may have been learning about utilization review, they may have been in there to learn how to do a history or a physical examination. At least they were in the setting and being exposed to the kinds of people who practice in those settings and learning some of the unwritten rules about what it means to practice in that kind of environment. Again, there is not a lot of participation, but there is some.

Does this continue in residency? There was a study done in 1990 that looked at how many HMOs have resident physicians rotate through the organization. This could include residencies in internal medicine, pediatrics, and family medicine. In 1990, only 15% of HMOs in the sample had some kind of educational affiliation to have residents rotate through. These were HMOs with particular characteristics. They were HMOs that were staff or group model, they were older, bigger, not-for-profit, or they were HMOs that were owned or managed by an academic medical center or medical school and its teaching hospital.

The low participation is because having students or residents in an HMO costs the HMO money, especially in terms of lost productivity. When HMOs are competing and trying to be more efficient, they need to move patients through in an efficient and timely manner. A physician can see a third fewer patients having a student around than when the student is not there.

Residents are more experienced and prepared. Some senior residents can enhance productivity. It could be a sacrifice for the HMO to have a student or a resident there. HMOs participate in education because these students and residents can be future staff. They do it because teaching keeps staff up-to-date. Staff say they feel so much more on their toes when a student is there. While there are many benefits for an HMO in being involved in an educational program, there are also a lot of negatives as well. That probably accounts for the fact that only 15% were involved in resident education.

The last point is what is the time line for change? When is this system going to be perfect and work well, and when will physicians be totally prepared to practice in managed care? I can't answer that and the reason is because it is a very complicated process of change. Somebody said changing the medical school curriculum is like moving a graveyard. There are a lot of issues around what makes change happen.

Essentially there are certain things that are needed. One is we need to know what content and skills should be added to the curriculum, where residents should be taught and who should do the teaching. We need to identify the kind of people who can do the teaching. Right now medical students and residents are being taught by people who came through the old system, who may think that managed care is a fad, something that's going to go away. Physicians are realizing that managed care is here to stay, but a lot of faculty in medical schools in the U.S. really haven't gotten that message yet.

We need to find new ways and places to train students so they can be exposed to these new environments. We are making some progress, but probably not fast enough. The Robert Wood Johnson Foundation survey respondents said they were not trained appropriately. HMOs are saying that they are not happy with the people they are getting and they cannot hire the kind of people they want. It is necessary for HMOs to reorient new hires, and this is costing them money. They are telling medical schools and residency programs that it is their responsibility to do something about it. One for-profit HMO in the U.S. was seriously considering starting its own medical school because it wanted to train physicians right from the beginning. This is an indication that it is a serious consideration on a lot of people's parts that change needs to take place.

MR. THOMPSON: We have some time left for questions.

MR. ROBERT E. CIRKIEL: I have a couple of questions relating to medical school issues. One is, many of us perceive physicians to be small business owners rather than salaried workers. Is the sense now in medical school that people will be salaried employees rather than business owners?

DR. BARZANSKY: There's a survey of physician groups that's done periodically by the AMA. In the U.S. a few years ago, at least 50% of physicians started out as salaried employees. As I said, I'm not sure medical schools have gotten that message in teaching students about what it's like to be a salaried employee or a business owner. It may not be the right time, so students get a little bit of it, but they don't necessarily understand what it all means. They're a little bit more ready for it in residency when they're just about to enter practice. This is because they are beginning to rotate through an HMO or they may be rotating with community physicians who have their own groups. They're kind of learning it by example rather than having somebody sit them down and tell them about it. There probably should be more of the latter, but really there isn't that much going on right now.

MR. CIRKIEL: There is an argument that managed care is a fad. The argument is an economic argument which is that managed care was designed to create a lower price cost. As costs come down, there will be more consolidation; as there's more consolidation, there will be less competition. With less competition prices will come back up again, which, if you follow department stores, airlines, and supermarkets, seems to be pretty basic economics. I'd like a reaction to that.

MR. HIRSHFELD: Well, I think as in any other market, there will be a period where prices fall for two reasons. One, it appears to be pretty evident that it is possible to reduce the amount of services that American physicians are providing without harming outcomes, so it is possible to eliminate a substantial amount of care. Two, it appears that there is an oversupply of providers, hospitals and physicians, so we'll go through a period where that oversupply situation gets worked out. When it's worked out, prices will probably stabilize.

One of the interesting things about medicine is whether potential entrants into medicine behave the way potential entrants in other industries do. In other countries, there never seems to be any shortage of people who are interested in medicine, and they turn out more physicians than their countries can use. There doesn't seem to be any lack of applicants to medical schools in the U.S. in spite of all that's occurring, so it will be interesting to see whether the oversupply situation really does work out.

DR. BARZANSKY: One more follow-up comment is that although people have identified certain knowledge and competencies, like providing preventive care and doing population based medicine; these are not bad things in and of themselves. Providing cost effective diagnostic and treatment services is a good idea regardless of what health care system you're under, and there have been increases in health care costs and people feel a need to limit that regardless. So these are things that probably need to be in the curriculum regardless of how it eventually shakes out.

MR. W. PAUL MCCROSSAN: Your comment about the increasing use of population-based statistics raises another question in my mind which is: Should the health care system be driven by physicians? If you look at these advanced learning tools, it seems to me that

there's a pretty substantive case to be made that people without the full qualifications of physicians should become the primary health care providers in the future, and I think it's demonstrated in other countries that lower levels of training might provide an adequate level of medical services and with greater efficacy than necessarily throwing more physicians at the problem. I wonder what your view is. Will the medical profession continue to be physician dominated in terms of its future direction, or will there be a shift towards paramedicals and so on in the future just because of the expenses involved?

DR. BARZANSKY: One of the things that people have tried to get a handle on is how is a mix of medical professionals used in HMOs? Part of the study of how many physicians you need is how you use other health personnel. There's wide variation across medical specialties and there's wide variation in the use of nurse practitioners or physician assistants. There has not been a really good evaluation of these models in terms of things even beyond outcome, in terms of client acceptability and things like that. It's an important issue, and we tend to think of physician workforce and think about it in isolation from other health care providers, but it's really something that needs to be considered in the context of how the system will evolve and what the different roles and relationships among the health care providers will be.

MR. HIRSHFELD: Those who don't actually practice medicine sometimes forget how little physicians have to go on. You know when you have some symptoms and you go to the physician's office and say, "I have a pain in my stomach area that's about here. It started about when I was doing X, Y and Z, and that's about all I can tell you, but it's painful and it's disturbing me."

That's about all the information you can give the physician, and then the physician can listen to you, ask you other questions that might elicit other information, and perhaps run some tests. What we're looking for is a quality of judgment there, and I think that we are used to having a high level of judgment.

When we do have symptoms, we want to go to someone who we know has got the range of education that can help us. Yes, nurses and lower level practitioners can take care of a lot of common ailments that people come in with, but when we come in with something that we're not sure about and don't know it could be serious, we want to have someone who has the training and judgment to know that. So it's really a quality issue, and it's ultimately what do we want to have when we, you and I, go see the medical professional.

FROM THE FLOOR: Could you please comment on managed care in a rural setting versus in an urban setting, both now and in the future?

DR. BARZANSKY: There have been some studies on what kind of a population base you need for managed care, and I think people who are projecting in the future tend to segment and see managed care growing in the urban areas but not so much in the rural areas. It would depend on what kind of a system you have and where you would put your various providers, but essentially managed care will have a hard time in rural areas. This is because you will have limited competition because there will not be that many providers and there will not be that many patients to divide up among them. Also, there are problems with things like transportation to centralized facilities.

MR. HIRSHFELD: It doesn't mean that managed care will not come to rural areas though. New Hampshire, which is primarily a rural state, has a substantial amount of its population enrolled in HMOs; there are some difficult issues that arise though.

Some famous multispecialty group practices have grown and thrived in fairly rural areas. The state of Wisconsin has a few, and interestingly some litigation just arose there between one of the largest physician clinics in the U.S., the Marshfield Clinic, with over 400 physicians, and the Blue Cross and Blue Shield plan that served the state. The Blue Cross and Blue Shield plan alleged that the clinic dominated and monopolized the rural area and was charging super competitive rates. It also alleged that the Marshfield Clinic had its own HMO and would not contract with the Blue Cross HMO. Thus, the Blue Cross HMO couldn't operate in the same territories as the clinic. The matter went to trial and Blue Cross won. It was a very substantial verdict, so that now the Marshfield Clinic has to give Blue Cross access to its network for its HMO. There's also an issue about what's a super competitive price and what is not. So it doesn't mean that rural areas will not experience managed care, but there are a lot of problems that remain to be worked out.

MR. THOMPSON: I'd like to ask one question on malpractice issues. With respect to managed care plans, physicians are asked to practice differently at times under a managed care setting with various utilization controls that puts different risks on them and their liabilities through the managed care plans. How do you see that affecting the way that doctors practice medicine and the way they prepare to practice medicine?

MR. HIRSHFELD: Well, the cold truth is that the physicians respond to what the plans want, but it's also true the physicians are the parties that are ultimately responsible in the courts for how the patient is treated. There's been an effort by plaintiff attorneys to bring managed care plans into the liability arena as well, and that, where there's an allegation that a patient is harmed because coverage was denied, that the managed care plan should be liable as well. There have been a few cases where there has been some degree of success, but if you look at the cases as a whole, you'll find that the courts are giving managed care plans a lot of discretion. They are allowing them to develop policies and in essence make managed medical care evolve the way they want to.

One of the frustrations physicians are feeling within the managed care plan is having to meet the plan's standards in order to remain part of it, yet then likely also being subject to the standards of the courts, which probably favor a different style of practice. It's a situation that probably can't go on forever without being reconciled in one way or another.

One of the solutions that's been suggested is enterprise liability whereby the managed care plan replaces the physician as the party that's primarily responsible for the patient outcomes, and then the physician ceases to become personally liable. That's something the AMA is resisting because we like to see the physician be responsible and have responsibility for care. We think that some kind of liability should be shared.

MR. THOMPSON: I'm hearing that there are certain moves afoot to develop certain sets of protocols, safe harbors if you will, for certain types of testing and procedures that could be followed with certain diagnoses to create standards of practice for physicians to help with the malpractice risks both under managed and unmanaged care.

MR. HIRSHFELD: There are a couple of demonstration projects in the states, one in Maine and one is being developed in Florida, whereby physicians who participate and follow practice guidelines that are adopted by the state can be immune from liability under the malpractice laws for a bad outcome if they appropriately treated the patient in conformity with the guideline adopted by the state. That raises a whole host of interesting logistical and ethical issues.

Do we want to have a government basically setting the standard of care or not? Interestingly, there's a provision in federal law in the U.S. that allows managed care organizations that contract with Medicare to basically do the quality assurance and utilization review for Medicare. A managed care organization may develop and adopt norms of treatment and care which is, in essence, a practice guideline. If a physician follows that norm and care of treatment that is adopted by the plan, he or she can't be held accountable for malpractice. That is a provision however which has not been widely used in the U.S. for reasons that aren't well understood.