Financing Chronic Care Seminar: Chronic vs. Acute Care, Introduction and Macro View

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The international issue of costs of caring for chronic disease is an important current topic, but, in fact, it is not a very new problem. If one reads the late Dr. Milton Roemer's book, *Health Care Systems: The World Perspective*, he noted that with the reduction of infant mortality rates, the conquest of most epidemic diseases and the increased longevity of the population, a much greater proportion of the people who were formerly afflicted with these conditions will live long enough to develop chronic diseases. Because of their large numbers and extent of their individual expenses, the public sector will need to intervene to help these patients and their families. He wrote this observation in *1976*.

The World Health Organization (WHO) has also identified and recognized the magnitude of this growing problem. Its current definition of chronic disease incorporates the principle that the world can no longer view these conditions using traditional models. Four new principles should shape the way we now define chronic disease. First, many more people will have multiple conditions, like heart disease, diabetes and cancer. These multiple conditions must be evaluated as they relate to one another in each patient and not in isolation. Second, chronic conditions include non-communicable diseases *and* persistent communicable conditions, such as HIV infection. Third, chronic mental illness is a growing area of concern and highlights the concept of mental as well as physical well-being as part of the definition of health. Finally, chronic conditions due to accidents and injuries are becoming more prevalent. The WHO estimates that by 2020, these injuries, along with mental health problems, will be responsible for 78 percent of the global disease burden in developing countries. Actuaries who work in the international arena will need to deal with these changes as they confront a largely new mix of diseases over a different time frame. Cost and life expectancy estimates will be radically changed.

In order to get a sense for the global costs of chronic disease, we can look at some examples from other countries. The chronic conditions that we typically consider in the United States—asthma, chronic obstructive pulmonary disease (COPD), congestive heart failure and others—are, in fact, the same diseases that create a huge burden of illness in different countries. For example, in Estonia, asthma accounts for 1.4 percent of direct health care cost, most of which is due to pharmaceutical expenses. Other examples of significant chronic diseases in other countries are diabetes, which is very common in Taiwan, and HIV and AIDS in India.

Unfortunately, we cannot gauge the magnitude of the treatment cost for these illnesses simply by assessing their current prevalence. This problem exists for two reasons. First, the burden is growing, i.e., the prevalence of such conditions as obesity, diabetes, etc., is increasing. Second, we are either not treating or inadequately treating

many people whom we have identified with chronic diseases. For example, two out of three Americans with type 2 diabetes have uncontrolled blood sugar. Another example is heart disease. Only 50 percent of high-risk patients who visit doctors receive appropriate cholesterol-lowering medication. If only three-quarters of appropriate patients were treated adequately, medication costs would increase by 50 percent! Add to these two conditions the correction of undertreatment of chronic mental illness and the costs are staggering.

While we always include older adults in discussions about chronic disease, we should not forget that we must also consider the children who survive genetic illnesses (such as inborn errors of metabolism) and congenital deformities, from which they formerly died. In recognizing this issue, MetLife and Merrill Lynch have calculators on their Web sites to allow parents to compute the long-term health care costs for their chronically ill children.

Why are chronic diseases becoming relatively more prevalent? The WHO answers that: "Throughout the world, birth rates are declining, life expectancies are increasing and populations are aging." For example, in the 1950s, the expected number of children a woman could bear over her lifetime was six. Today it has declined to three. As well, life expectancies have increased, even in developing countries.

We cannot, therefore, discuss chronic disease without considering some statistics concerning aging. Again, according to the WHO, aging is defined as "a progressive, generalized impairment of function, resulting in a loss of adaptive response to stress in a growing risk of age-associated disease." The next logical question that arises is: What age do we consider "old"? Perhaps not surprisingly, there is no consensus. In the United States, we have chosen 65 for purposes of retirement and social security. From a research perspective, the WHO, realizing that there is a problem with any particular number, classifies "older" as starting at age 60. The Organization for Economic Cooperation and Development (OECD) uses the U.S. limit of 65.

Where are these aging people located? Some country-specific examples will highlight the answer. For about the past 10–15 years, Japan has had the most rapidly aging population of any developed country. Other rapidly aging developed countries include Greece, Spain, Belgium, the United Kingdom and Canada. The United States, interestingly, is not among the "top 10" in this category. By 2025, 120 countries will have reached a fertility rate below replacement level (2.1 children per woman). Currently 70 countries are at this level. Over half of the world's older population lives in Asia. This situation is quite a change from 30–40 years ago when books like *The Population Bomb* by Paul Ehrlich warned that the single biggest problem humanity faces

is overpopulation due to high birth rates.

Of the elderly population, the fastest growing segment worldwide is over 80 years old. In the United States and Japan the fastest growing segment is over 85. Aging is basically a condition of women, because men die much sooner. When we consider nursing homes, for example, we talk about taking care of elderly women. Over age 80, there are fewer than six men for every 10 women. In developed countries, it can be less than one-half. In Brazil and South Africa, women are about two-thirds of the population over 75. Considering this fact, we have to realize that we have to gear our health care services to this population and calculate the costs based on the diseases that are going to affect older women.

In addition to demographics, world-wide economics plays an important role. Developed countries have had years to plan and save for an aging population. Developing countries, on the other hand, are aging faster than they can accumulate wealth. This problem has significant implications for these nations as they try to gain financial stability. Where is money going to come from to meet these needs?

Some key general social issues that also affect countries' abilities to cope with the increasing burdens of chronic disease and aging include: urbanization, migration of young to cities, smaller families, more women in the work force and the increasing trend for the elderly to live alone. These trends are causing such problems as dissolution of nuclear families (particularly in traditional collectivistic Eastern cultures) and the moving away of potential younger caregivers; the effect is removal of the long-standing support network the elderly and chronically ill have historically enjoyed.

When one considers chronic disease, long-term care must also be considered. The WHO definition for long-term care incorporates both formal and informal activity by both informal caregivers and professionals. This care occurs either in institutional settings (such as hospitals or long-term-care facilities) or at home. Internationally, the evaluation of the extent of disability and criteria for skilled care follow similar guidelines that we use in the United States: namely, activities of daily living (ADLs) and instrumental activities of daily living (IADLs).

Numerous difficulties exist in dealing with chronic care. The first problem is that we do not empower patients. This empowerment goes beyond mere consumerism, because it has a very important effect on the cost-effectiveness of care. If we empower patients and they are actually part of the decision-making process and treatment regarding their care, that care costs less and is more effective.

The second problem is that we don't ask patients what they want or expect from treatment. For example, is the patient willing to risk death or significant morbidity in order to relieve non-life-threatening symptoms? This involvement of patient expectations also applies to such situations as end-of-life care and cancer treatment.

The third problem is our failure to change our health care system from a strictly acute care model to one of integrated care across the service and time continuum. Surveys of any health care systems would reveal they are set up for treatment of acute illnesses and centered largely on hospitals. About 30 years ago, there was a WHO conference in Alma Alta which advocated primary health care systems. Unfortunately, we have not made progress in that direction.

The fourth problem also concerns a worldwide issue. Studies evaluating health systems in different countries reveal that the number-one consistent complaint among people is that they are dissatisfied with their continuity of care.

The fifth problem is a failure to address prevention.

The sixth problem is failure to implement adequate information systems. These systems often comprise computerized patient records, physician order entry systems, centralized digital radiology systems and other computer-based technologies. The problem with this definition is that developing countries cannot afford these systems, nor do they have the technical infrastructure to install and maintain them even if money were not an obstacle. In these cases, countries must be helped to develop manual information systems, like paper-based registries for persons with such conditions as tuberculosis and HIV infection as well to track immunizations.

The seventh problem is failure to align financial incentives across the continuum of care and reward *health* care, not just episodic treatment for acute illness. Chronic care is about rewarding whole episodes of care across the continuum.

The eighth problem is failure to assure sustainability of programs. For example, some very well-meaning foundations and groups may enter a country to implement an immunization or treatment program. After a one-time action, they withdraw. Such programs often lack the capability to repeat needed interventions, institute information systems for recall, train nurse practitioners and install population monitoring systems to gauge program effectiveness.

Research shows that correcting these problems will improve health care. Substantial evidence from over 400 studies demonstrates that counseling, education, information, feedback and supporting patients and asking them their opinions actually

works. For example, including patients in treatment and planning makes the delivery of care for chronic conditions more effective and more efficient.

In addition to the finance and operations aspects of chronic illness, quality is also an international concern, particularly with respect to institutional care. For example, countries are paying increasing attention to such problems as use of pharmacologic and physical restraints, pressure ulcers, dementia care, lack of privacy and basic patient rights, high staff turnover and shortage of qualified caregivers due to lack of education and underpayment. What have some countries done to remedy these problems? Australia looked to reaccredidation of long-term-care facilities. Austria implemented new and higher standards for these institutions. Germany adopted quality regulations. In several countries, including the United States, quality ratings are published for the public's use in choosing sites for care. Finally, Sweden instituted educational programs for caregivers in this sector and raised salaries in order to attract more and better qualified personnel.

Although many countries are working to improve care, widespread structural barriers arise in countries like Japan and Spain in the form of bed shortages. In some countries the problem is overall number of beds, while in others it is distribution of these beds. Even as some countries, like Germany, are adding capacity to attempt to address these shortages, the need is also growing rapidly.

In addition to institutional care, we must address how we care for the chronically ill at home - where most persons prefer to reside. With respect to this issue, there are problems that need to be overcome. First, there's often a lack of consumer information about what is available. Frequently, patients and their families believe hospital or institutional care is their only option. To remedy this deficit, countries such as Austria and the United Kingdom have made such information publicly available. Also, in order to address this issue, the United Kingdom requires consideration of home-based options first, if institutional care is also contemplated.

A second problem is inadequate programs to support informal primary caregivers with such services as respite care, training and counseling. In the United States, the Medicare Catastrophic Bill, which was passed in 1988 and repealed in 1989, would have funded respite care. Unfortunately, nothing similar has replaced it.

A third problem is identifying which groups of these patients are at risk for requiring ongoing services. Countries have differed in their strategies in this regard. For example, Sweden conducts individual programs, while other countries perform population-based assessments.

As mentioned previously with institutional care, another problem is funding. Countries are realizing that home care often provides a more cost-effective solution compared to hospitalization and institutionalization. As a result, nations such as the United Kingdom and the United States have been enabling growth in the private home care sector by increasing public funding. Germany has created an innovative program in this regard, whereby the government gives eligible persons discretionary funds they can spend on home care if they opt for that choice over institutionalization.

Given these choices for site of care and the previously mentioned problems countries need to address, nations have approached payment issues for chronic care in a variety of ways. Their first choice is the source of funds. Countries can choose between general taxation, individual payments (like payroll deductions or value-added taxes) or a combination of the two. Once funds are acquired, a second issue concerns their allocation based on need, means-testing or a mix of the two. A third concern a country must face is the bureaucratic oversight for these programs: Do they fall under the health care or social welfare systems? How each country answers this question will also determine how the benefits are funded and how the program's operations are integrated into the economy. A fourth choice arises over the extent of user fees. Rising incomes and net worth of the elderly, particularly in the developed countries, are causing their governments to shift more of the financial responsibility to the people actually receiving the services. A related topic is the role of private insurance. Long-term-care insurance is of minor importance world-wide, even in the United States, where it is more prevalent than elsewhere.

Despite attempts to create a workable financing mechanism, the fact is that countries are still confronting a rising number of the elderly, while facing periodic economic downturns and the inability to index benefits or benefit rates. This state of affairs is obviously a formula for unsustainable financial solvency, a situation that is occurring in countries like Germany and Japan, whose health care systems are running enlarging deficits. To illustrate these countries' looming crises and reliance on funding from younger workers, by 2050, to maintain a constant ratio between working and pension-aged populations, Germany's population would have to consist of 80 percent immigrants or their progeny or require the average Japanese to work until age 83.

In confronting these financial problems, countries have turned to other, non-financial methods for controlling the cost of chronic disease. Such programs (some of which have been mentioned above) included preadmission screening, enhanced flexibility of treatment plans and sites of care, individualized services and payment for home-care services as an alternative to institutionalization. Unfortunately, while these measures are necessary, they are not sufficient.

To some degree, Japan and other countries have recently adopted all of these programs without solving the fiscal crisis.

A recently emerging international method for enhancing quality and lowering cost of chronic disease treatments is called "disease management." In the United States, the Disease Management Association of America advocates for its members who, among other activities: identify high-risk populations, promote evidence-based practice guidelines, espouse collaborative practice models (which include physicians and non-physicians), educate patients for self-management of their conditions and develop process and outcomes measures to assess the success of their programs.

These programs also exist, to varying degrees, in other countries such as Australia, Germany, Singapore, United Kingdom, South Africa and India. In India, several pharmaceutical companies have diversified their services to include disease management programs like those conducted in the United States. One such company is Ranbaxy, which focuses on integrated disease management. Examples from the United Kingdom can be located at www.patient.co.uk. In another instance, in 2002 the German government instituted disease management programs and a severity-adjusted payment system to encourage health plans to accept sicker patients. This method successfully incentivized these plans which now cover this population.

Research that looks at the success of these programs is relatively new. One recent study looked at disease management programs in the United States, Brazil, Mexico and Poland regarding diabetes management. It showed that that in Poland, Mexico and Minnesota these programs were, indeed, effective.

I began my remarks with some thoughts by Milton Roemer. I want to close with a suggestion by a contemporary of his, Odin Anderson, who was, for many years at the University of Chicago. In 1972, he suggested that we evaluate our success in chronic illness in new ways: "As the survival rate from acute and short-term disease increases, there will be an increase in long-term and intractable chronic illness. Thus, other indices of payoff need to be brought into an evaluation of the effectiveness of health service. These indices involve relief of pain, relief of anxiety, measures of satisfaction and a graceful adjustment to inevitable disabilities, as a person ages. In other words, these are quality of life, rather than quantity of life measures, and will require a concept of payoff as yet undetermined."