THE LAST WORD/ TAKING CARE OF HEALTHCARE

By William G. Rodway

Whether in Europe, the U.S., or parts elsewhere, you are likely to be aware of local debates about healthcare costs and what might be done to curb them. The cost of healthcare, whatever system provides it, has been growing, not only in real terms but as a proportion of the gross national product in all developed countries. And as costs have continued to rise, dissatisfaction with the provision of health services seems to have risen in direct proportion. The situation is often exacerbated by politicians attracted by this dissatisfaction and in search of a "quick fix." This almost guarantees the taking of a short-term stance to the problem, which is reinforced by the protestations of those who resent any disturbance of the "status quo." At the same time, advances in technology, particularly those with their roots in biotechnology, are offering us the opportunity to change our whole approach to healthcare. Such a change requires taking a long-term view of where healthcare should be going and how it should be organized.

A brief look at some of the sums of money involved in healthcare provision reveals the extent of the problem. A report by the U.S. General Accounting Office to the Chairman of Ways and Means Committee of the House of Representatives (June, 1991) pointed out that the United States devoted 12.3 percent of its national income to healthcare spending in 1990 and calculated that, given the present trend, this figure would reach 15 percent by the year 2000. The amount added to the healthcare bill over this period would amount to 300 billion dollars, equivalent to the current U.S. defense budget. In the U.K., healthcare consumes some 6.5 percent of the gross domestic product. The U.K. National Health Service is the largest employer of labor in Europe, after what was the Soviet Army, and given trends in Eastern Europe, stands a good chance of finding itself in first place.

Part of the thinking that informed the establishment of the U.K. National Health Service was that the extension of free medical care to all would eventually eliminate many of the illnesses that were then dominating healthcare spending (e.g., tuberculosis and polio), and thus the costs of running the service would diminish over time, which has proven to be a major miscalculation.

Several factors have caused costs to rise rather than fall. One is the introduction of such high-technology medical interventions as kidney dialysis machines, heart transplant operations, bypass operations, or whole body scans. Another significant contribution has come from the pharmaceutical industry, the products of which have been accorded an increasing proportion of the increasing

healthcare bill. Medicines for chronic and previously untreatable conditions enable patients taking them on a regular basis (and at ever-increasing costs because of the complex regulatory regime necessary to ensure their safety) to keep disease at bay for years. Yet very little money has been spent on prevention, and this is where biotechnology will have a profound effect, beginning with the use of a growing family of immunodiagnostics and DNA probes.

These tests will be able to detect disease before a patient exhibits conventional symptoms, and our increasing understanding of the conditions leading to various debilitating diseases will allow us to determine who has a genetic predisposition to these diseases. We should be able to use this knowledge to treat patients well before they would otherwise come to the notice of their doctors, and well before their illness requires massive equipment and treatment, perhaps preventing long-term suffering and incapacitation in the bargain. It therefore becomes possible to think of preventive maintenance rather than what engineers call "blue smoke maintenance." Gene therapies, anti-sense RNA therapies, and other biotechnological approaches to diseases are becoming available. It does not take a great deal of imagination to see that all of this is likely to tilt the balance of healthcare toward prevention rather than correction.

Thanks to the rapid evolution of biotechnology and the inventiveness of those involved in it, we are being offered an opportunity to combine an improved "quality of life" for many people with a decrease in public spending. Of course, matters are rarely that simple. There are numerous issues to be resolved (many of which are discussed in a U.K. National Economic Development Office report entitled "New Life for Industry"). Some are organizational, such as where the locus of diagnostic testing should be and whether and how screening for particular genetic susceptibilities should be undertaken. Others are ethical, such as whether the results of diagnostic testing should, under any circumstances, be disclosed to third parties, or whether "germ line" gene therapy could ever be permissible. Still others might be called technocommercial, such as "where would development best be directed to fit into the observed trends in healthcare/biotechnology."

At present, few people involved in healthcare are examining the longer-term implications of technical developments (particularly those likely to arise from continued progress in biotechnology) on the future organization and management of healthcare, and I urge them to do so. These implications will, after all, be profound. It is possible, for instance, to paint a scenario in which a combination of simple and accurate diagnostic kits, medical expert systems available on your home TV, and intrinsically "safe" medicines would make healthcare largely a personal responsibility. For many people this would clearly be an attractive proposition, judging from the growth of private healthcare and "alternative medicine."

All of us, government, industry, and the public, as patients and as taxpayers, have a great deal to gain from taking a holistic view of the influence of technical developments in healthcare and from beginning studies on their impact as quickly as possible.

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