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5. THE GLOBALIZATION OF MEDICAL CARE

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Medical care and medical education are rapidly becoming globalized, with objective criteria for care and scientific standards combining with technological change in communications and information processing to establish worldwide networks and databases. This globalization is being hastened by the development of worldwide credentialling, multinational educational institutions and increased portability of health insurance. Barriers to trade in health services still exist and their reduction or elimination will lead to even further change. Developing nations will need to find a role for themselves in this rapidly evolving and changing environment.

I GLOBALIZATION OF MEDICAL CARE AND MEDICAL EDUCATION

Medical care has become globalized as access to the medical literature and clinical findings has become much easier through databases maintained on the Internet. In addition, standards of care are beginning to be more objectified and widely disseminated through the development of practice standards[2] and the introduction of "evidence-based cost-effective medicine" as the standard for practice. Cochrane centers have been established across the world to cooperate in conducting meta-analyses of clinical trials to assess the effectiveness of a particular intervention for a particular condition in a person with certain

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[2]M.J. Field and K. Lohr (Eds.), *Guidelines for Clinical Practice: From Development to Use*. Washington, DC, National Academy Press, 1992.

characteristics.[3] These standards have become reinforced by insurance companies, national health programmes, and managed care organizations which increasingly need objective criteria for paying for or refusing to finance care. Promotion of "evidence-based disease management" as treatment for chronic disease is a new development promoted in many cases by pharmaceutical companies as the appropriate set of treatment regimens for persons with a particular condition.[4] As long-term chronic disease becomes the major health problem of many developing nations as well as for the developed world, these approaches will become even more prevalent.

Telemedicine also has the capacity to deliver care world wide while encouraging the development of collaborative relations between providers in many countries in real-time treatment and diagnosis of patients. Radiology, for instance, can be practised at distant sites by collaborative groups of radiologists and disease and organ specialists if the appropriate equipment is available and the receiving unit is appropriately staffed. In principle a nation could contract out much of its radiology to distant medical centres that would provide 24-hour fully staffed coverage.[5]

On a more comprehensive front, one vision of the future digitized health care system in the United States includes sharing patient, demographic, clinical and outcomes data among providers, plans and governments.[6] This is predicated upon the development of an electronic medical record and a changed level of cooperation in what is currently a very competitive system. Development of mechanisms for protecting the confidentiality of patient records will clearly be very important. Such developments world wide or even in part of the world would go a long way to restructuring delivery of health services.

Medical education has also become globalized, with continuing migration for undergraduate and graduate medical education, the development of distance education over the Internet and with the use of telemedicine. Perhaps most important is the development of Web-based instruction which has the capacity to improve interactivity between the student and the material being learned while

[3] See for instance W. J. Gillespie and W. J. Handoll, Evidenced Based Medicine -The Cochrane Collaboration, *British Journal of Sports Medicine*, Vol. 31, No. 172, 1997; or F. Gueyffier, J. P. Boissel and M. Haugh, The Hypertension Cochrane Review Group - Presentation Users Guide. *Archives des Maladies du Coeur et des Vaisseaux*, Vol. 90, No. 8, 1997. pp. 1159-1163; or R. Kale and C. Gilagy, Systematic Reviews and the Cochrane Collaboration. *National Medical Journal of India*, Vol. 9, No. 5, 1996. pp. 3-4.

[4] G. Ellrodt, et al, Evidence-Based Disease Management. *Journal of the American Medical Association*, Vol. 278, No. 20, 1997. pp. 1687-1692.

[5] For a discussion of how teleradiology can work, see the virtual hospital website maintained by the University of Iowa's Department of Radiology (http://vh.radiology.uiowa.edu). Also, a patient, even travelling internationally, could stay in touch with his or her physician.

[6] M. Youman, *Health Care and the Intranet: The Missing Link*. Professional Report, LBJ School of Public Affairs. Austin, University of Texas, 1997. He is citing Council on Competitiveness, *Highway to Health: Transforming US Healthcare in the Information Age*. March 1996, available from (http://nii.nist.gov/pubs/pubs.html).

potentially distributing lecture notes, clinical exercises and simulations world wide.

It is already possible for the World-Wide Web user to have a simulated encounter with an interactive patient on the Marshall University School of Medicine site, to study cardiovascular physiology through simulations developed at Johns Hopkins, to refine his or her technique in arthroscopic surgery on the knee using virtual reality technology developed at the University of Hull or to study pathology at the University of Utah. Similarly, medical students at Stanford University have developed a Web page for medical students world wide to communicate, share information and raise questions. These trends are surely only the beginning of the very profound changes in medical education and credentialling which are under way.

The movement towards a uniform medical licensing examination in the United States has been a step towards more consistent and objective criteria. Mexico is moving from certification on a university by university basis to a single examination.[7]

Concurrently, many nations still restrict the entry of physicians from abroad. In fact, the United States has recently developed a scheme whereby hospitals which trained resident foreign medical graduates are being paid hundreds of millions of dollars a year to close their programmes.[8] Ironically, free-trade agreements have created a chain of potential reciprocity. Canada and the United States recognize each other's credentials. Canada has long recognized graduates of medical schools in the United Kingdom. And the United Kingdom recognizes as eligible to practice professionals licensed in the other nations of the European Union.

The Director of the Center for Quality Assurance in International Education in the United States predicts that a time is coming in which national identity among the professions will be passé. In its place will be the truly world-class physician, engineer, nurse or architect. Propelled by the multiple regional and global trade agreements which encourage the movement of professional services as well as goods, our national borders for higher education, and particularly, for professional education, will be blurred. Admission standards, testing, accreditation, certification, and licensure - forms of quality determination and assurance which were heretofore nation-based - will become global in nature. The professional graduates of the globe's quality institutions of higher education will enjoy unprecedented marketability and mobility. And those countries which did not pay attention in the late twentieth century to this

[7] N. Cochrane, NAFTA and the Free Movement of Physicians. In D. Warner, *NAFTA and Trade in Medical Services between the U.S. and Mexico*. U.S.-Mexican Policy Studies Program, LBJ School of Public Affairs. Austin, University of Texas, 1997.

[8] P.V. Walker, Law makers attack US plan to pay NY hospitals to train fewer medical residents. *The Chronicle of Higher Education*, Vol. 43, No. 28, 1997.

inevitability will have forfeited their national professional labour forces to those prepared for the global professional marketplace of the twenty-first century.[9]

II THE GLOBAL CONSUMER OF MEDICAL CARE

Increased foreign travel, new forms of medical insurance in developing nations, worldwide sources of information to medical consumers and joint ventures in providing services have all led to the increased consumption of medical care abroad. One major constraint on trade is the non or limited portability of national or government health insurance, especially by retirees.

There has been a rapid growth in international marketing by medical facilities in Europe, the United States, and elsewhere. While there was always a tendency for the rich to migrate to world medical centres, a growing middle-class has insurance that will cover care abroad. In the United States, for instance, John Hopkins increased its foreign patients to 7,200 up from 600 two years before. The four Mayo Clinics expect 10,000 patients from abroad in 1997.[10] Hospitals in the United States have developed exclusive contracts to provide advanced care to members of an Argentinean union, to civil servants in the Cayman Islands, and to the employees of the Central American Development Bank, to mention a few arrangements. Similarly, a consortium of San Antonio hospitals signed contracts with the four largest Mexican health insurers, which comprise about 90 per cent of the Mexican private health insurance market. These contracts recognize these hospitals as preferred providers eligible to receive patients.[11] Many referral hospitals in the United States market their services through physicians in the developing world as well as by maintaining communication with former patients. Increasingly, patients abroad are able to use the Internet and other resources to research "world class" physicians and facilities for the treatment of a particular condition. Hospitals, medical schools and pharmaceutical companies all have developed and maintain Web pages. Also clinics and hospitals in the developing world have been acquired by or affiliated with hospitals or medical schools in the developed world. In some cases pharmaceutical companies have purchased the practices of nephrologists or oncologists in developing nations. In other cases, facilities in the developing nation have sought out affiliations with well-known medical schools or hospitals to enhance their reputation and to have super specialty care available, in some cases through telemedicine.

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[9] M. P. Lenn, The Trade Agreements and Higher Education: The Globalization of Accreditation, *US Medical Licensure Statistics and Current Licensure Requirements.* Chicago, AMA, 1996.

[10] M. Freudenheim, Hospitals Looking Abroad to Keep Their Beds Filled. *New York Times*, December 10, 1996.

[11] M. Turner, Hospitals here ink pacts with Mexican Insurers. *San Antonio Business Journal*, June 12, 1997.

One of the greatest constraints to trade which operates to the detriment of developing countries is the lack of long-term portability of health coverage for retirees from OECD countries. In the United States for instance, Medicare covers virtually no services delivered abroad. Other nations may extend coverage abroad, but only for limited periods such as two or three months. This constraint is significant because it tends to deter some elderly persons from travelling or retiring abroad. And those who do retire abroad are often forced to return home to obtain affordable medical care.[12] The potential size of this market is substantial. There are currently more than 100 million persons over 65 in OECD nations (not counting Mexico or Turkey). By 2030 there will be close to 200 million such persons. In 1993, when around 13.5% of the OECD population was older than 65, they accounted for almost 40 per cent of all health expenditures in those countries.[13] In 2030, when the over-65 population will comprise 22.5 per cent, then at least half of all health expenditures will be on their behalf.

Many retirees with limited incomes may find it more attractive to relocate to countries where costs of living are lower and where it is possible to afford to pay for someone to help with the housekeeping or other activities of daily living. Retiring abroad becomes even more attractive for those who emigrated to OECD countries and who wish to return to their country of birth. In 1995 there were more than one million residents of the United States older than 65 who had been born in Asia or the western hemisphere south of the United States. In 1995 there were more than three million such persons between the ages of 45 and 65.[14] Other OECD countries such as Canada, France, Germany and the United Kingdom also have substantial ageing populations who were born in developing countries.

The potential impact of permitting portability could be substantial. If only 3 percent of the 100 million elderly persons living in OECD countries retired to developing countries, they would bring with them possibly US$30 billion to $50 billion annually in personal consumption and US$10 billion to US$15 billion in medical expenditures. These medical services should be less expensive abroad than they would be at home. Of course, a number of people retire abroad already, but portability of health coverage should increase the numbers. Many elderly couples might be able to avoid medical indigence by relocating abroad and save the OECD nation even more in the longer run. From the medical side, an administrative structure would have to be developed to assure quality and to avoid fraud; but that should not be too difficult to accomplish. Government procurement discrimination is an important barrier to

[12] D. Warner and K. Reed, *Health Care Across the Border: the Experience of U.S. Citizens in Mexico.* U.S. Mexican Policy Studies Program, Policy Report No. 4, LBJ School of Public Affairs. Austin, University of Texas, 1993

[13] OECD, *Ageing in OECD Countries: A Critical Policy Challenge*. Social Policy Studies No. 20. Paris, 1996.

[14] Data from the *1995 March Current Population Survey (CPS).* US Bureau of the Census, Released April 8, 1997.

trade in other services as well.[15] But, it is hard to see why provision of medical services should be restricted to one's own nation when other services are increasingly subject to competitive provision.

III OPTIONS FOR DEVELOPING NATIONS

Developing nations can pursue a number of strategies in the emerging globalized medical system. They can affiliate with medical schools and hospitals in the developing world to help provide enhanced medical education and support research at levels that would have been impossible before. They can develop enhanced clinics and hospitals to retain more of their affluent citizens and also to attract retirees and medical tourists from abroad. These facilities might also help many countries slow or reverse the brain drain of trained medical personnel who currently emigrate and find it difficult to support themselves if they stay at home. Similarly, many scientists in developing countries may make the case that they should not have to emigrate to compete for research awards from national science institutes around the world. Already, private research is being conducted quite competitively in locations such as Bangalore, India.

Privatization can take rapid and unpredictable turns. Richard Scott, in an interview just before he was replaced by his board as Chief Executive Officer of Columbia-HCA, said that he envisioned as many hospitals outside the United States as they had within (approximately 350) in several years.[16] A common model is for the foreign entity to act as a general partner in a hospital project and to involve local physicians and other investors as limited partners. The facility in the developing nation would then be connected to the headquarters abroad for purchasing, specialty consults and other administrative and management services. In some ways, this approach might work well for many developing nations.

Inviting private insurance schemes into a country introduces another set of questions. A recent article in an insurance magazine reported:

In Latin American, the NAFTA agreement, the progressive liberalization of rules governing foreign participation in insurance markets in South American countries as well as the continuing privatization of formerly state run services such as pension funds has sparked a rush by various international firms to either link with Mexican and South American companies, or to establish wholly owned subsidiaries or branches.[17]

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[15] B. Hoekman and C. A. P. Braga, Protection and Trade Services: A Survey. *Open Economics Review*, Vol. 8, No. 3, 1997. pp. 285-308.

[16] A. Sharpe and G. Jaffe, Columbia-HCA plans for more big changes in the health care world. *Wall Street Journal*, May 28. pp. A1, A8.

[17] Going global's the right idea (Editorial). *National Underwriter Life and Health Financial Services Edition*, No. 27, July 3, 1996. p. 54.

But as William Hsiao points out, "The experience of Chile, the Philippines and the United States demonstrates that it is both perilous and inefficient to create commercial insurance markets to finance health services."[18] He believes that for-profit insurance companies and health maintenance organizations target their product to low-risk clients and to those with the ability to pay. This can also generate an unnecessarily two-tier system.

Regardless of how these issues are resolved, the globalized medical care system of the future will be an exciting and dynamic sector for years to come.

[18] W. C. Hsiao, Abnormal Economics in the Health Sector. In Peter Berman (Ed.), *Health Sector Reform in Developing Countries.* Boston, Mass., Harvard University Press, 1995.