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Editorial

Medical Professionalism

The problems facing the medical profession appear to be ever increasing. Some of the articles in the current issue of the World Medical Journal reflect this trend. The overview of bioethical and other aspects of medical technological advances presented in Tokyo during the scientific session of the WMA Assembly in Tokyo, analyse both the benefits and the problems related to technological advance (*see also Haddad's article in WMJ50(4)*).

It even possible to detect the relegation of clinical skills in some clinical protocols to a lower priority in the management of presenting disease, which place the carrying out of technological tests before clinical examination in the list of priorities.

The concerns of the European Forum of Medical Associations and WHO about the Bologna Process, which proposes radical changes affecting the nature of basic medical training, at a time when there has already been general agreement about the reform of the basic medical curriculum, also express some feelings of serious disquiet. While welcoming some aspects of the proposals, there is grave concern at the suggestion that the fundamental proposals for Bachelor / Master degrees for recognising academic studies should be applied to medical basic studies. The apprehensions relate to the additional problems of recognition which these will raise in an increasingly globalised world, where the problems of recognition and increasing medical migration are significant problems already. It found no evidence that the proposed two cycle Bachelor / Master process will improve anything in the medical training process justifying the application of the Bologna proposals to medical studies which are a specific training for a profession. Finally it expressed deep concern, that such a move might undermine the positive integration of the theoretical and clinical parts of medical education and then be harmful for the quality of patient care.”

Behind all of these problems is the increasing questioning of what constitutes professionalism in medicine. Dr. Mary Schramm, President of the Fiji Medical Association, extracts Associationwebsite www.wma.net

Genetics, development and disease

According to Professor Peter Scambler, treating children with birth defects and inherited conditions constitutes a major part of medical practice in the West, America and Japan. 2mrdevry 025people),n the4,000 jorso knownl fjoraf

issues raised by medicine, life and social sciences as applied to human beings and their relationship with the biosphere, including issues related to the availability and accessibility of scientific and technological developments and their application” (article 1). By including ethical issues in medicine in the scope of the document, UNESCO is clearly overstepping its mandate and encroaching on that of WHO. More seriously, many of the document’s principles are inappropriately applied to clinical medical practice, as will be shown below.

Aims – Article 3 of the draft Declaration lists no less than seven aims. The first is the most problematic because it includes two incompatible proposals: (1) “to provide a universal framework of fundamental principles and procedures to guide States in the formulation of their legislation and policies in the field of bioethics,” and (2) “to form the basis for guidelines concerning bioethical issues for the individuals, groups and institutions concerned.” These statements demonstrate clearly the confusion of law and ethics that permeates the document. Given the definition of bioethics as “the study and resolution of ethical issues...,” how can bioethics be incorporated into laws? There can be laws regulating the practice of medicine, medical research and the organization and delivery of medical care, but these should not be confused with bioethics. The second part of this article is appropriate for bioethics, insofar as it speaks of guidelines for individuals, groups and institutions. But these have a different status to that of laws. They speak to how people should act rather than how they must act.

Principles – The heart of the Declaration is a set of 12 principles that, according to article 2, “apply as appropriate and relevant: (i) to decisions or practices made or carried out in the application of medicine, life and social sciences to individuals, families, groups and communities; and (ii) to those who make such decisions or carry out such practices, whether they are individuals, professional groups, public or private institutions, corporations or States.” Whether a principle is appropriate and relevant to a particular decision or practice will often be a matter of disagreement, particularly between the two main audiences to which the Declaration is

addressed, namely, States and individuals/groups/institutions. Here again, the Document confuses law and ethics.

The following principles are particularly questionable for their application to medical practice:

Article 5 – Equality, Justice and Equity: “Any decision or practice shall respect the fundamental equality of all human beings in dignity and rights and ensure that they are treated justly and equitably.” This principle fails to take into account the multiple, and incompatible, concepts of justice and equity in health care⁶. According to their codes of ethics, physicians are not being unjust when they give priority to their own patients over others, but a State could interpret this article in such a way as to require physicians to practise in public facilities open to all patients.

Article 7 – Respect for Cultural Diversity and Pluralism: “Any decision or practice shall take into account the cultural backgrounds, schools of thought, value systems, traditions, religious and spiritual beliefs and other relevant features of society.” This is clearly impractical, if not impossible, in most clinical encounters between physicians and patients.

Article 10 – Informed Consent. This article is divided into three parts, the first dealing with research, the second with medical diagnosis and treatment, and the third with persons lacking the capacity to consent. Apart from the fact that it is clearly impossible to summarize the ethical principles relating to informed consent in five sentences, the article makes no provision for emergency treatment in situations where consent cannot be obtained. Moreover, although the Declaration is supposed to provide a universal framework of fundamental principles and basic procedures designed to guide States in the formulation of their legislation and their policies in the field of bioethics, the principle for consent to medical diagnosis and treatment for incompetent patients in this article is simply that existing domestic law should be followed.

Article 11 – Privacy and Confidentiality: “Any decision or practice shall be made or carried out with respect for the privacy of the persons concerned and the confidentiality of their personal information. Unless

irretrievably unlinked to an identifiable person, such information shall not be used or disclosed for purposes other than those for which it was collected.” The second sentence of this article is considerably more restrictive than the WMA *Declaration on Ethical Considerations Regarding Health Databases*⁷, as well as existing legislation in many countries. If adopted, it could seriously inhibit epidemiological research.

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Medical Ethics and Human Rights

addressed to every individual, the requirements of professionalism and of a declaration of conflicts of interest are inappropriate. The “due regard” of the last sentence is open to multiple interpretations.

Conclusion

Despite its best efforts, the IBC was unable to produce an adequate Declaration on Bioethics and Human Rights in the nine months allotted to it by the UNESCO Executive Board. It is highly unlikely that the committee of government experts in two meetings will be able to succeed where the IBC failed. This is not at all surprising, given the nature of bioethics, its relatively recent rapprochement with human rights, and UNESCO’s desire to respect cultural diversity and national sovereignty. The World Medical Association, which deals with similar challenges, took three years (1997-2000) to revise the *Declaration of*

Helsinki. One reason for this delay that could be a lesson for the UNESCO project was the willingness of the WMA Council to recognize that the process followed during the first 18 months of the revision was not the right one and that a different approach was needed⁸. The new approach proved successful, despite many difficult challenges. We can only hope that the UNESCO Executive Board or General Assembly will likewise realise that the process followed to date to develop a Declaration on Bioethics and Human Rights has not been successful and will authorize a new approach, one that will include sufficient time for further consultation and consensus-building.

John R. Williams, Ph.D.

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¹ The views expressed in this article are those of the author, not necessarily of the World Medical Association.

² http://portal.unesco.org/shs/en/file_download.php/10d16a8d802caebf882673e4443950fdPreliminary_Draft_EN.pdf

³ Proposed Universal Declaration on Bioethics and Human Rights, paragraph 24

⁴ http://www.wma.net/e/ethicsunit/unesco_project_bioethics.htm

⁵ http://portal.unesco.org/shs/en/file_download.php/e9d8dfce8497c221c4e620d11952dde1Consultation_en.pdf

⁶ WMA Medical Ethics Manual (<http://www.wma.net/e/ethicsunit/resources.htm>), 72

⁷ <http://www.wma.net/e/policy/d1.htm>

⁸ Williams JR: The Promise and Limits of International Bioethics: Lessons from the Recent Revision of the Declaration of Helsinki. *Journal international de bioéthique/International Journal of Bioethics* 2004; 15: 36-37

cians any more, “in sum”, we could not depend on medical professionals. In Japan, during the last ten years, we have seen many medical accidents in major hospitals. Media report a lot and we see almost daily some reports of medical mishaps. Patient safety has become a major policy issue for the government, the Ministry of Health, Welfare and Labor, who are planning to accumulate and analyze the reports of medical accidents and incidents nationwide. Patient safety in this context means, as we should be aware, that patients should be safe from physicians!

2) Two metaphors to protect medical privacy in Japan: the metaphor of ownership

That is why we are now worrying about medical information issues. To deal with our concern, two metaphors are quite popular in Japan. I will show you what they are and, although they are popular and easy to understand or believe, they are wrong or useless. I wonder if the same type of metaphors is used in other countries. If it is, my discussion will apply as well.

The first metaphor is that of ownership of property or a thing. We see a number of publications, books and articles, which are titled “Who owns medical charts or medical records?” This metaphor of ownership of property is totally wrong.

In the first place, information is not a thing at all. For instance let us compare information with your paper material in your hand. The paper is certainly a thing, but information is not. Even though the paper includes information, information is distinguishable from the paper, which contains it. Information cannot be seen, or cannot be touched. It is intangible.

In the second place, the claim of ownership emphasizes monopolizing something. It means that this particular something is exclusively mine or yours or his or hers. Certainly, if you say this paper document is yours, then, when you read it, others cannot read it. Others can be completely excluded. Information is, however, difficult to monopolize. Rather, information can be shared at the same time. You can enjoy information without disturbing others’ enjoying it. That is the peculiar characteristic of information.

In the third place and most importantly, it is hard to earmark so that this particular information is yours. With regard to the paper document in your hand, you can write your name on it to show your ownership. In the case of information, it is really hard to do so. Also, once information is disseminated out of your control, it is extremely difficult to recover and get back to the past. We should recognize that information is so special. It cannot be contained. It is not a thing.

You might say, however, that there is a legal device for the ownership of information. It is the scheme of intellectual property. Patents and copyrights are famous examples by which inventors or authors enjoy ownership over information they created, and the law recognizes it.

Professor Nobuhiro Nakayama, an authority of intellectual property law in Japan, says that if information can be successfully contained, then we could think of private property in it. There are two means for it. One is literally to contain information, or to keep it secret from any others. If you know something valuable, and also if you would like to take advantage of it in financial terms, then you can make it secret rigidly and share with only few of those who would pay for it. If you find someone who pays for it, the information is your property, which would bring money to you. However, this strategy has its own limitations. The more valuable the information is, then the more probable the information will be leaked. You cannot trace how it escapes and also it is hard to get back to the past.

That is how most society develops the intellectual property scheme. Through this device of legal imagination, the law grants a sort of ownership for a certain period to the inventors, authors of other creators of information. However, the important point is the fact that those inventors or authors could not keep it secret. Rather than the secrecy, the disclosure is encouraged under the intellectual property law. Well then, is there anything common between the intellectual property idea and our concern with medical information? Very little, if any, is my answer.

When we talk about medical privacy, we usually do not care about medical invention. What we do discuss is patients’ concern

about their privacy. After all, the legal system of intellectual property is a matter of money. It is an artificial legal device to encourage creative activities by giving financial incentives. Most patients, however, do not wish to keep their information protected for financial reasons. In other words, the metaphor of ownership and property fits very well with monetary interest, which has nothing to do with patients’ concern.

3) The second metaphor: balance of interest

The second popular metaphor with regard to medical privacy is balancing of interests. Suppose there is a balance to judge what is just. On the one side, we put medical privacy and on the other, we put its uses for other values than privacy. Let me quote one example from what happened recently in Japan.

Our Parliament enacted the Individual Protection Act of 2003 which covers medical information, and will take effect from April 2005. The first section of this important act prescribes the main purpose of law, which is to protect the privacy rights of individuals while taking into consideration appropriate uses of information. In sum, this Act orders to make a good balance between protection and use of information about citizens.

But the problem is how to make good balance. To tell the truth, the act itself is of little help. Two points should be noted in particular.

First, in the process of enactment, a sort of interim report was published in 1999 by an advisory committee, which clearly emphasized the basic idea the coming Act should be the right to control one’s own information. But, it is gone from the face of the Act. The idea of the right to control one’s own information is close to the ownership metaphor. It is now gone and has moved to the balancing metaphor.

Second, Professor Yoshiharu Matsuura, a legal philosopher at Nagoya University, explains that the metaphor of balance works well only if there is already an established rule in a comparable situation. This is totally different from our situation, where we only say that both protection and use are important to medical information. We can see no related or established rule, and this

cannot make a good argument from the comparison and analysis from it.

4) The failure of two metaphors

To sum up so far, we love metaphors that are easy to understand and also to apply in appearance. The metaphor of ownership and balance are exactly those types. Yet, they give us only dreams or illusions. They do not help us much.

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physician hears that another physician has medical information about you, which is relevant and necessary for your treatment.

standardizing in the form of electronic data increase the risk of privacy, they introduce a comprehensive nation-wide rule to protect medical information. Put another way, they found the accumulation of medical information in a standard form beneficial to society as a whole, and, in order to realize its benefit, found it necessary and indispensable to set up a legal system to protect medical privacy.





Medical Science, Professional Practice and Education

Background In Freedonia report "Implantable Medical Devices" of October 2003, US demand for implantable medical devices is projected to increase nearly 11% annually to \$24.4 billion by 2007.

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Advanced medical technologies include organ transplants, reproductive medicine, genetic diagnosis, gene therapy and regenerative medicine. Among others, this presentation will primarily focus on genetic diagnosis and regenerative medicine and outline related bioethical issues.

First, in regard to genetic diagnosis, global collaborative research on human genome analysis (Human Genome Project) that started in 1990 advanced faster than was initially expected. The draft sequence of the human DNA base pairs was elucidated ten years later in June 2000, and further relate details were uncovered in February 2003. Many will remember that a variety of events celebrating this accomplishment together with the commemorative events celebrating the fiftieth anniversary of the discovery of the DNA helical structure by Dr. Watson and Dr. Crick, were held worldwide. It can be said that the elucidation of draft sequences of the human genome has finally led us to the age of new medical science and medical care that is identified as the "post-genome era"

It goes without saying that elucidating the draft sequence of human DNA itself has extremely great scientific significance. Furthermore, the global consensus is that the biggest goal of medical studies in the post-genome era is to elucidate the functions of

each respective human genome for which the draft sequences were made clear as mentioned earlier, as well as to apply the results of such studies to medical science and medical care.

With regard to genetic disorders caused by a single abnormal gene, almost 1,000 kinds of abnormal genes, including notably less common genetic diseases, have already become clear, and the results of the studies concerning some of the genetic diseases have been widely used clinically for genetic diagnosis. In addition, with regard to acquired diseases, genetic diagnosis along with prognostic expectation etc., based on the results of such diagnosis, have been widely used clinically for many infectious diseases and some tumors. Moreover, in accordance with the recent elucidation of the complete base sequence of human DNA, further studies on the relationship between the results of DNA analyses and certain diseases have rapidly developed. Thus, it is expected that the studies will not only contribute to genetic diagnosis of congenital diseases, infectious diseases and specific tumors caused by a single abnormal gene, but also successively clarify the correlation between symptoms of a range of diseases that are classified as lifestyle-related diseases such as hypertension, diabetes, cancer, arteriosclerosis and Alzheimer's disease, which are considered to be caused by multi-

such as familial amyloidosis, Huntington's disease, etc. For example, according to the research by the University of British Columbia in Canada announced in 1999, of 4,527 patients that were diagnosed with Huntington's disease, 44 people (0.97%) either committed suicide, attempted suicide or were hospitalized in a mental institution. Of these, half of those who had attempted suicide or were hospitalized in mental institutions were reported to have not at the time developed any symptoms. This suicide rate is more than times that of the average.

Another example of such problem as this is genetic diagnosis of breast cancer that clusters within a family. As it is confirmed that abnormal genes related to the development of breast cancer are identified as abnormalities of BRCA-1 and BRCA-2 genes, when a mother or sister was affected with breast cancer and abnormalities are found in BRCA-1 and BRCA-2 genes of the patient concerned, it is naturally understood that a healthy female in the family often desires to have the examination to check for the presence of abnormal BRCA-1 and BRCA-2 genes. Although the expensive cost of this examination of 2,000

eases will be manifested, and checking mutation in genes will enable the diagnosis of whether or not each individual is likely to be affected by these diseases. If such a situation is realized, it can easily be presumed that, in addition to the aforementioned issue of taking out insurance, a broad range of social issues including the possibility of genetic diagnoses in connection with finding employment, marriage and other daily issues; the issue of protecting confidentiality of personal data on genes etc. will be raised due to a great many more patients with lifestyle-related diseases being different from traditional cases of genetic diagnosis of

Medical Science, Professional Practice and Education

cons of promoting the studies on therapeutic cloning among committee members of the said Expert Committee prevented a consensus from being reached.

I myself participated in the government-affiliated committee as a committee member with regard to bioethics to deal with the issues including reproductive medicine, gene therapy, human ES cells and studies on therapeutic cloning. The impression I got from the meeting was that the Japanese committee had only a few opportunities to hear patients' opinions. Actually, an open symposium concerning therapeutic cloning was the limited opportunity for me to directly listen to patients' opinions. In addition, I received the impression that media coverage was prone to bring up more negative opinions on the subject of the advanced medical technology mentioned above even if they were minority opinions. Furthermore, probably due to few opportunities to hear opinions from patients and their related parties at the hearings of the committee, I thought there were only a few situations when news reports raised patients' voices. On the other hand, partly because regulations on genetic diagnosis and regenerative medicine are executed as guidelines instead of laws, except for the Law Concerning Regulation Relating to Human Cloning Techniques and Other Similar Techniques in Japan, it appears to be one of the characteristics in Japan that a big political impact has not been made to date. Medical care is certainly embarking on an age of globalization. The latest information on advanced medical technologies can easily be obtained via the Internet and it leads to the era when the most advanced medical care is available everywhere around the world as long as the expenses are not brought into question. Although the "Brain-Dead Transplant Bill" proposed in Japan does not permit the transplantation of organs from brain-dead children, families constantly go overseas to have their children undergo transplantation despite the substantial expenses. I also hear that many couples obtain fertilized ovum diagnosis overseas, which as I described can only rarely be conducted in Japan.. I suppose other countries probably have similar situations.

To overcome such conditions, I am looking forward to seeing the World Medical

lution and the destruction of the natural order of things. Moreover, it will require additional years and enormous effort to recover from these damages.

In Japan, the onset of the Minamata disease caused by seawater pollution is a tragic case example, as well as the large number of patients with respiratory disorders stemming from air pollution. The yin and yang results of scientific development often become apparent only after a fairly long period of time. Thus, the effort to acquire the wisdom to anticipate numerous phenomena that may occur over a wide spectrum of situations must not be neglected.

Since medical science and medical care are directly linked to life and death issues, its impact on the future must be constantly taken into consideration. In our review about medical care and its ideal form, an important point to consider is the relationship between medical science and medical care and recognition of their differences. The late Dr. Taro Takemi, former JMA president and the president of the WMA, defined medical care as “the social application of medical science”. As to whether this is the best definition of medical care can be debated from a myriad of differing perspectives, but I believe that it is the most appropriate in explanations about medical care.

There is a relatively common perception about medical science that is shared among all countries. But, its social application is tempered by a panorama of factors that range from the natural environment, history, culture, politics, to the economy of each country. These exceedingly diverse conditions that surround medical science contribute to the complexity of medical care. Cold climate and tropical regions, mountainous and sea level regions, wet and dry regions the climactic and geographical differences lead to disparate diseases and the medical care that is needed to treat them also differs. A prime example is endemic diseases. Due to developments in transportation, infectious diseases that were once confined to a specific region have begun to spread rapidly and globally over a wide geographical area forcing each nation to be prepared to cope with these diseases.

The most recent example of this phenomenon is SARS.

Diseases that are linked to the dietary habits in each country or region are effectively treated through lifestyle guidance measures rather than by medical care. In the northern, cold climate regions of Japan, studies have shown that there was a high incidence of hypertension due to a high dietary salt intake by the population, and lifestyle guidance measures have effectively helped to control salt intake levels.

However, medical care issues in countries that face political and economic hardships are the most difficult to resolve. Due to extremely poor public and environmental health conditions, many people are unable to receive needed medical care despite the high incidence of diseases. The WMA has a role to fulfill in such countries where the population is unable to receive proper medical care due to existing economic conditions.

Currently, organ transplants, genetic testing, gene therapy, reproductive medicine, regenerative medicine and other forms of advanced medical technology are being successively and practically applied. The advent of medical care that was once considered impossible or the development of minimally invasive treatment methods has raised the fervent expectations of many and has pushed advanced medical technology into the public limelight. Meanwhile, bioethical issues, professional ethical issues that confront physicians, and issues that question the very essence of medical care have come to the fore, as attested to by the ethical issues seen in reproductive medicine.

As a science, medicine has pursued

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eases. But this education does not adequately address issues such as patient QOL, does not consider what is truly beneficial for the well-being of the patient, and what measures should be taken to achieve this well-being from a broader perspective of medical care. In an increasingly aging society, these are issues that call for a reaffirmation of the importance of holistic medicine by all medical care providers. It is important to note that the perspectives about life and death that prevail in each country are also important contributing factors.

The greatest demand that is being made on medical care today, is to provide safe and high quality medical care that is accessible equally to all people. In Japan, as in other countries, Japanese society and its citizens have recently begun to stress the need for safe medical care due to the frequent occurrence of medical errors. Consequently, specific measures and results are being demanded of medical care providers.

The three causes of medical errors are people, equipment, and organization. Of these three causes, the foremost cause is people. In other words, measures must be taken to improve the professional qualifications of medical care personnel and to raise physician ethics. Although this is the responsibility of each individual physician, medical associations also have a major responsibility to fulfill as professional academic organizations for physicians. Likewise, society also has great expectations of medical associations in helping to address this issue. To meet these expectations, medical associations must actively pursue measures to raise the professional ethics of physicians and to promote CME programs for its members.

In the past, the physician was the focal target of responsibility for medical errors, but it is more important to clarify the cause of the error, to take measures to prevent its reoccurrence, to reeducate the responsible physician in lieu of punitive actions, and

To compensate for this flaw, to eliminate wasted medical resources, and to provide effective health care, a system of medical provision has been created. In order to provide medical care, including advanced medical technology, appropriately to those in need, the functions of medical institutions have been divided and coordinated. In addition, information about the functions of each medical institution are openly disclosed and measures to provide information that allow patients easy access have been pursued as an important means of improving the system.

In Japan, a community health and medical care plan has been created for communities with a population of about 300,000 that have been designated as medical zones with all required medical facilities. One of the focal aims of this plan is to allow community residents to live in security with regard to their medical care needs, which are mainly taken care of by a system of primary care physicians who are supported by a network of hospitals. The objective is to create a comprehensive community health and medical care system within a designated medical zone. This is not a system that simply provides medical care. The aim is to build communities where residents are able to live out their lives in relative security within a system that provides wide-ranging health insurance and medical care services. Medical association activities also include maternal and child health, school health, community health, industrial health insurance, health insurance for the elderly, as well as activities for health insurance for all ages, vaccinations, emergency medical care, and nursing care for the elderly. The perspective has shifted from medical care providers, who have traditionally been responsible for creating health services

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medicine can be practiced by following clinical guidelines. As long as medicine is practical science, the constant presence of a gap between medical knowledge and medical practice is unavoidable.

Therefore, we should not criticize it as unscientific if medicine cannot be practiced by following clinical guidelines. Physicians

exist because such data have not been standardized. I am concerned that there may be a lack of data that could serve as a basis for the revision of medical fees.

Compilation of accurate medical data on the entire nation is quite useful for the efficient provision of health care. However, there are some issues to be considered. Two of the major issues are protection of privacy in the process of handling medical information and authorization to access the database. I will skip the privacy issue because Dr. Higuchi will talk about it in detail later. Here I would like to refer to authorization to access the database.

Analyzing medical data of individual persons in the database will reveal many facts; therefore, who will be authorized to access the database is a big issue. If the government has sole authority to analyze the data, the government gains tremendous power and may force a variety of policies on its people. Since this is surely undesirable, the medical database for analysis should be widely available to those who are interested in such analysis, while medical data containing personal information should be handled with caution. All nations should share their experiences in considering how to resolve these conflicting issues. The most important thing, I believe, is to establish rules for using the database, to make it public, and to authorize anybody who is willing to obey the rules. The present guideline for the medical database established by the World Medical Association puts emphasis on the privacy issue; however, I wish more consideration had been given to the access issue.

Patient empowerment

The most important impact of IT is that patients can now play a proactive role in health care. We can call it patient empowerment. Now that patients can easily obtain health care information on the Internet, they will be able to choose medical institutions according to the obtained information and discuss treatment options with physicians on equal terms. For example, patients can review their medical records kept at the hospital at home with their families via the Internet. Although the number is still small, some hospitals and clinics offer such services for their patients in Japan.



Human Evolution

Out Of Africa

According to Professor Fred Spoor of University College, London, man has evolved primarily through his capacity to run rather than climbing ability. Fossil evidence shows that man developed the art of walking around 4.5 million years ago, following ape evolution at 13 million years, and thence the ability to stride and run in order to escape his enemies and hunt in groups. In response to the changing environment of plate tectonics, man's legs have gradually become longer, relative to those of his nearest neighbour the chimpanzee, and his forearms have become shorter. The skeleton evolved directly as a reaction to the way *Homo sapiens* moved around, a classical form of evolution, over a 6 million year period. Efficacy in running emerged about 2 million years ago, being successfully better represented through surviving generations and men capable of raising large families. Thus man was enabled to migrate out of Africa and spread around the rest of the world. The question remains as to whether survival of the fittest is a product of random chance and deleterious mutations or are there specific feedback mechanisms operating on the DNA template in evolution to fill environmental niches?

Evolution occurs when natural selection operates in a population containing many variations in their inheritable characteristics. The genetic heritage of a community tends to remain constant unless changed by external environmental influences. For example, a population living on an island will evolve much quicker than one allowing free mixing, as in the Galapagos Islands originally observed by Darwin, where each island has different varieties of finches and tortoises. Also, Madagascar represents an isolated island where there are no monkeys – lemurs have developed to fill this environmental niche. In tropical Australia there are many new species that have been free to develop in the absence of competition.

In terms of survival of the fittest, of malaria provides survival value in some native African populations when immunity to the parasite *Plasmodium* develops. Some mutations, perhaps as a result of adaptation to metabolic requirements, can be advantageous rather than damaging – and it is these genes which in the long run may come to be the norm within a population.

Ivan M. Gillibrand

WHO

WHO Supports Global Effort To Relieve Chronic Pain

Geneva – The World Health Organisation has co-sponsored the first Global Day Against Pain, which seeks to draw global attention to the urgent need for better pain relief for sufferers from diseases such as cancer and AIDS. The campaign, organised by the International Association on the Study of Pain (IASP) and the European Federation of the IASP Chapters (EFIC), asks for recognition that pain relief is inte-

gral to the right to the highest attainable level of physical and mental health.

WHO representatives joined global specialists in chronic pain management and relief at a conference in Geneva convened to highlight the Global Day Against Pain and to press for urgent action from governments across the world. The conference coincides with the release of the Council of Europe's newly formulated recommendations on pal-

liative care including management of pain. The recommendations provide detailed guidance for setting up a national policy framework, and are available in 17 European languages.

“The majority of those suffering unrelieved pain are in low- and middle-income countries where there is an increasing burden of chronic conditions such as cancer and AIDS,” said Dr Catherine Le Galès-Camus, WHO Assistant Director-General for Noncommunicable Diseases and Mental Health. “Limited health resources should not be allowed to deny sick people and their families the dignity of access to pain relief and palliative care, which are integral to the right to enjoy good health. We strongly support the Global Day Against Pain and the efforts of IASP and EFIC.”

New statistics released by IASP and EFIC indicate that one in five people suffer from moderate to severe chronic pain, and that one in three are unable or less able to maintain an independent lifestyle due to their pain. Between one-half and two-thirds of people with chronic pain are less able or unable to exercise, enjoy normal sleep, perform household chores, attend social activities, drive a car, walk or have sexual relations. The effect of pain means that one in four reports that relationships with family and friends are strained or broken, according to the IASP/EFIC data.

The statistics also reveal that pain is second only to fever as the most common symptom in ambulatory persons with HIV/AIDS. Pain in HIV/AIDS usually involves several sources at once. The causes include tissue injury from inflammation (including autoimmune responses), infection (e.g. bacterial, syphilitic or tubercular) or neoplasia (lymphoma or sarcoma); so-called nociceptive pain. Nearly half of pain in HIV/AIDS is neuropathic, reflecting injury to the nervous system.

Oral morphine has proven to be a cost-effective pain medication for the treatment of moderate to severe pain when the underlying cause is cancer or HIV/AIDS. However, opioid analgesics are not adequately available, particularly in developing countries with limited resource set-



physical activity in school, making changes to school lunches, limiting hours spent watching TV and providing health education.

Professor Pierre LeVèbvre, President of IDF, underlined the need for urgent action. "Children and adolescents who are overweight tend to grow into overweight adults. Poor habits of nutrition and lack of physical activity are likely to endure, putting today's young people at risk of type 2 diabetes in the future. Even in childhood, overweight and obesity lead to higher levels of blood glucose (sugar), lipid (fat) and blood pressure. In many populations, doctors are seeing increasing numbers of adolescents with type 2 diabetes, a disease that in the past was not normally seen until middle or older age."

Diabetes is a chronic condition that occurs when the pancreas does not produce enough insulin or when the body cannot effectively use the insulin it produces. People who have type 1 diabetes produce very little or no insulin and require daily injections of insulin to survive. People with type 2 diabetes cannot use insulin effectively. They can sometimes manage their condition with lifestyle measures alone, but oral drugs are often required and, less frequently insulin, in order to achieve good metabolic control. Type 2 diabetes used to be known as non-insulin dependent diabetes or mature onset diabetes.

WHO and IDF are working together to raise awareness about diabetes worldwide. Their joint project, Diabetes Action Now, is supported by a World Diabetes Foundation grant to IDF and by WHO funds.

Jakarta/Geneva – The Director-General of the World Health Organization, Dr LEE Jong-wook, visited Jakarta for a five-day visit to Indonesia and Sri Lanka. During the visit, Dr Lee took part in the Special ASEAN Leaders' meeting on the Aftermath of the Tsunami.

Dr Lee, together with the Executive Director of UNICEF, Carol Bellamy, travelled to some of the worst hit areas around Banda Aceh in northern Sumatra to meet some of the victims of the tsunami and to assess the most urgent health needs. He also met and travelled with the European Commissioner for Development and Humanitarian Aid, Louis Michel.

After leaving Indonesia, Dr Lee travelled to Sri Lanka to review progress in the relief

effort and to offer further support to the country and to the communities which have been most seriously affected by the tsunami.

Since the tsunami struck, WHO has been working together with a core group of

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