

# Thoughts for the future

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The three most significant health-related issues raised in the past year were, presumably, the introduction of drugs for 'lifestyle improvement', certain new medical interventions and a renewed interest in utilizing alternative medicine in medical care. These issues are expected to significantly influence medical practice in the future and contribute to modify its present pattern.

### 'LIFE-STYLE IMPROVEMENT' DRUGS

This category of drugs is well represented by Viagra™ (sildenafil citrate), about which little needs to be said. After little more than a year of its approval by the US Food and Drug Administration (FDA) in March 1998, it is difficult to find someone who does not know the name.

In September 1998, less than six months of Viagra's approval, the FDA cleared another drug called Preven™, indicated for emergency contraception in case of contraceptive failure or unprotected intercourse. Nicknamed 'morning-after kit', Preven consists of a patient information booklet, a urine pregnancy test and four emergency contraceptive pills, each containing a standard oral contraceptive combination (250 µg levonorgestrel and 50 µg ethinyl-estradiol). The drug reduces the risk of pregnancy by about 75%.<sup>1</sup> The public response generated by Preven was similar to that of Viagra, though this time confined to the West.

Preven and similar emergency contraception methods, were available for years.<sup>2</sup> However, the FDA approval and probably the opportune marketing of Viagra, brought it in the spotlight.

The implications of drugs such as Viagra and Preven may be two-fold. First, they represent a recent tendency to introduce more and more drugs to improve 'lifestyle' or quality of life. In the past (up to 1997), new drugs were introduced to make people live healthier. In the future, new drugs could be introduced

also to make people live or look better and feel happier. Second, the introduction of these drugs could be a response to public demand rather than to medical need. With either or both explanations, it is becoming likely that the patient would have a stronger say in deciding the pattern of future medical practice.

### NEW MEDICAL INTERVENTIONS

The new medical interventions may be symbolised by more than one achievement. One is the approval of the first gene-based drug Herceptin™ (trastuzumab; a humanised anti-HER-2 monoclonal antibody).<sup>3</sup> The second is the successful application of a chromosome-based technique of sperm separation that enables parents to choose the gender of their future child.<sup>4</sup> These two achievements are harbingers of genetic applications in medical practice. Expectedly, more genetics-based applications would be introduced in the near future.

Another advance is the successful culturing of embryonic stem cells from human blastocytes.<sup>5</sup> Embryonic stem cells can give rise to essentially all cell types in the body. This makes 'cell and tissue replacement therapy' a likely tool of the future with great potential applications in organ transplant, gene therapy and treating diseases such as diabetes mellitus, AIDS and neurodegenerative conditions such as Parkinson's disease. If the envisioned potential of this technique is materialised, then it would break new ground in medical practice.<sup>6</sup>

### ALTERNATIVE MEDICINE

At the other extreme, 'alternative medicine', a collection of non-allopathic methods such as herbal medicine, acupuncture, homoeopathy and chiropractic, appears to pose as a healthcare frontier of the future. The popularity of alternative medicine in the developing countries is well known. It does not seem to be much different in the developed countries. In

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the UK about 10% of the population visit alternative medicine practitioners and about 30% of the country's general practices offer their patients access to alternative medicine services through the national health service.<sup>7</sup>

The Journal of American Medical Association (JAMA) devoted almost all of its November 1998 issue to alternative medicine. One study in that issue estimated that 629 million visits worth US\$ 27 billion were made in 1997 to alternative medicine practitioners in the US, a number that exceeded the total visits made to all primary care physicians.<sup>8</sup> It also represented a 47.3% increase over the 1990 figure of 427 million. The study attributed this increase to a rise in the proportion of the population seeking alternative therapies, rather than to increased visits per patient.

With these results, it is difficult to ignore that people want to use—and are using—alternative medical interventions alone or concurrently with allopathic medicine. The mainstream medical profession might eventually accept this shift and incorporate some 'useful' procedures from alternative medicine in their practice.

#### CONCLUSION

If the above three issues progress as predicted, the present pattern of clinical practice might gradually be replaced with a future pattern, so far not fully envisioned. Perhaps, with more technological applications and greater role for patients in health matters, the role of medical practitioner would also be redefined. In one scenario it was postulated that general practitioners of the future would be "highly skilled medical generalists and information specialists".<sup>9</sup> The author of

this view expects that "general practitioners will have a key role in helping patients make complex decisions about diagnosis and treatment" and that everything else "will be done by nurses, technicians and robots".

Those who are at present medical students (or just graduated) and in their early twenties are expected to practice more than 40 years in the new millennium. The above issues would probably be daily aspects of their practice.

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