

# Scenario analysis of the future of medicines

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BMJ VOLUME 309 29 OCTOBER 1994

*Features of four different scenarios on future of medicines*

Features	Sobriety in sufficiency	Risk avoidance	Technology on demand	Free market unfettered
Coordination	Strong, emphasis on sustained development	Strong, control of risks	Moderate, technology driven	Little, free market driven
Technology culture	Moral transition, culture of restraint	Mistrust, strong perception of risks	Technological optimism	Strong consumerist attitude
Health system	Essentials, managed care, solidarity	Chaos, irrational weighing	High tech cure, telemedicine	Competitive, pluralism, inequality
Professional care	Protocols, in balance with self care	Defensive medicine, risk avoidance	Centralised clinics, professional dominance	Medical tourism, focus on self care
Use of medicines	When necessary, focus on natural remedies as well	Drugs are poison	Great trust, medicines are cost effective	Consumption orientated, health products
Drug research	Improvement of existing drugs, generic drugs	Crisis, risk avoidance	Beyond frontiers, successful	Line extension, short term orientation

## **SOBRIETY IN SUFFICIENCY**

This scenario anticipates a dramatic shift in social values resulting in a culture of restraint. During this moral transition people reject the consumer society and concentrate on essential, intrinsic values. The driving forces in this scenario are a mixture of traditional

Protestant notions of restraint and moderation and sincere concern about the consequences of the consumer society for the environment, social relationships, and dialogue between the developed and developing worlds. The changes in society enjoy general acceptance by the public. Another driving force is a balanced awareness of the blessings and limitations of technology. A series of failures of the high tech approach has led to a more cautious view of medical technology rather than as a panacea for solving health problems.

Solidarity and collectivism are the pillars of equal access to health care. A minimum package of health care benefits is designed to ensure the rational use of services, care, and drugs. Compliance with this minimum package is reinforced by a high degree of coordination and regulation. Individual decision making by doctors, pharmacists, and other health care workers belongs to the past. They now work with protocols and with defined standards for the quality of care set out at the collective level (for example, by professional organizations). New medicines are viewed with reserve, and existing treatments are preferred.

Patients are increasingly professional. They expect restraint in medical care and assume individual responsibility for decisions about lifestyle, disease prevention, self care, and use of health care services. In this scenario society has chosen restraint and sustained development. This is not a climate in which innovation will flourish.

## **RISK AVOIDANCE**

This scenario is characterized by a general feeling of mistrust of technology. Some of the same trends emerge as in the previous scenario but to a different degree and for different reasons. Here strong public concern about health hazards cripples rational decision-making. Environmental issues (such as acid rain, smog, and the ozone layer) have sensitized society and contributed to widespread disquiet about technological developments. In the late '90s several new drug treatments prove unsuccessful and attract attention because of their possible health hazards. In this climate of aversion and fear rational weighing up of the risks and benefits of medicines is hardly possible. Emotions control the debate, and there is a generally accepted notion that medicines are poison.

In this climate the practice of medicine becomes highly defensive and conservative. If medical treatment is prescribed at all, the emphasis is on care rather than cure, and high tech approaches are avoided wherever possible. Hospitals provide several models of care with a focus on empathy and behavioral medicine.

"Natural" remedies (homoeopathy, herbal medicines, etc) become increasingly popular because of their supposed safety. The media play an important role in disseminating information about risk and safety issues. Consumer organizations are important and play a prominent role as guardians of the public interest.

Legal protection of consumers has been greatly expanded, bringing the issue of liability to the forefront

of society's interests. What started as a reaction to the technological dominance of the '90s and a reasonable concern about health hazards has become an uncontrolled process of uncertainty, fear, litigation, and avoidance behavior to the extent that the risks of avoidance itself become ever more visible.

## **TECHNOLOGY ON DEMAND**

This scenario is driven by technological optimism, and its dominant feature is a powerful belief in the promises of technology. Technological change is considered as the major force for economic progress and innovation. High tech developments enjoy widespread appreciation. Medical and environmental technology burgeon and contribute to renewed confidence in technology's contribution to solving medical and social problems. Trust in the efforts of drug research is reinforced by the emergence of a series of successful new drug treatments.

Doctors, pharmacists, and other professionals provide health services with a focus on high tech cures rather than care. Disease prevention is well developed, with widespread adoption of screening, use of self diagnostic kits, and other innovations in prevention; this becomes an important prerequisite for the use of long term corrective treatment (for example, with cholesterol lowering agents or antidiabetes drugs).

Prophylactic drugs are adopted as a major strategy in improving the health of the population, and early detection of disease is therefore needed.

In this process advanced computer and information systems are applied in quality assurance, monitoring of drug usage, patient compliance, and evaluation of medical outcomes. Such systems offer opportunities for patients at home to communicate with their doctors and pharmacists; the professionals engage in telediagnosis, and the patients interactively acquire individualized medical information. In this scenario the public gives great credit to technology, particularly in health care. Trust in medical technology is implicit, and technology gets the chance to prove its value.

## **FREE MARKET UNFETTERED**

This scenario represents a portrait of the future in which the world of health care is dominated by market forces. This is predominantly the result of a renaissance of the European free market system in the late '90s. The international character of the marketplace stimulates the development and marketing of new products and services. These developments are accompanied by high consumption, a focus on self-help, and demand for medical technology and health care services.

Society wants to enjoy all the opportunities that present themselves.

Notably, elderly people—a group with a particular need for medical services—take advantage of these possibilities. Many older people are now relatively affluent as a result of the attractive retirement schemes built up during the last quarter of the 20th century. European regulation of medicines stimulates a free exchange of products and services and encourages multilateral competition between countries and suppliers. Many products are available, and prices are competitive. Intensive promotion and advertising are prominent features of this scenario.

The negative aspect of this scenario is the acceptance of inequality in society. In this market driven system solidarity is no longer a prerequisite. Large parts of the population cannot benefit from all the advances made in this scenario and have no access to reasonably affordable modern drugs. The rich in society rate individual health highly and are willing to spend much of their income on medical checkups, health farms, and general care. Medical tourism has become popular and provides a constant stimulus for renewal of the available health care package. The world is an open system, with pluralism and free consumption as dominant values.