plan. This consultation process should involve the patient as fully as possible. It is only after such steps have failed that an application to the high court should be considered. In England and Wales, the official solicitor is available to offer advice at any stage.

Decisions to withdraw treatment are not uncommon in some clinical settings. In palliative care, they are the norm. They are commonly reached by mutual agreement between the patient and clinicians, and treatment focuses on managing the process of dying, rather than sustaining life. The increasing use of technologies capable of sustaining life means that such decisions are likely to become more common, but also more complex.[9] When a patient chooses to withdraw from life sustaining treatment, helping that person achieve a "good" death is a legitimate goal for healthcare professionals.[9] From the patient's perspective, key considerations are adequate pain and symptom management, avoiding inappropriate prolongation of dying, achieving a sense of control, relieving burden, and strengthening relationships with loved ones.[10]

Tom Sensky *reader in psychological medicine*

Imperial College of Science, Technology and Medicine, West Middlesex University Hospital, Isleworth, Middlesex TW7 6AF
t.sensky@ic.ac.uk

TS was instructed as an independent expert in this case by the official solicitor, and made personal assessments of Ms B, as well as studying Ms B's medical records and other background information. He had her permission to write up the case.
For valuable discussions about the case, I thank the consultant psychiatrist who gave evidence at the hearing (a court injunction prevents the identification of the psychiatrist); Laurence Oates, official solicitor and public trustee; and Beverley Taylor of the official solicitor's office.

1 Ms B *v* An NHS Hospital Trust. 2002. EWHC 429 (Fam).
2 British Medical Association. *Withholding and withdrawing life-prolonging medical treatment: guidance for decision making.* London: BMJ Books, 1999.
3 General Medical Council. *Withholding and withdrawing life-prolonging treatments: good practice in decision-making.* London: GMC, 2002.
4 Charland LC. Appreciation and emotion: theoretical reflections on the MacArthur treatment competence study. *Kennedy Inst Ethics J* 1999;8: 359-76.
5 Atkins K. Autonomy and the subjective character of experience. *J Appl Philos* 2000;17:71-9.
6 Sprangers MAG, Schwartz CE. Integrating response shift into health-related quality of life research: a theoretical model. *Soc Sci Med* 1999;48:1507-15.
7 Patterson DR, Miller-Perrin C, McCormick TR, Hudson LD. When life support is questioned early in the care of patients with cervical-level quadriplegia. *N Engl J Med* 1993;328:506-9.
8 Edwards MJ, Tolle SW. Disconnecting a ventilator at the request of a patient who knows he will then die: the doctor's anguish. *Ann Intern.Med* 1992;117:254-6.
9 Cook DJ, Giacomini M, Johnson N, Willms D. Life support in the intensive care unit: a qualitative investigation of technological purposes. *Canad Med Ass J* 1999;161:1109-13.
10 Singer PA, Martin DK, Kelner M. Quality end-of-life care: patients' perspectives. *JAMA* 1999;281:163-8.

The world's most neglected diseases

Ignored by the pharmaceutical industry and by public-private partnerships

Infectious diseases can be considered "neglected" when there is a lack of effective, affordable, or easy to use drug treatments. As most patients with such diseases live in developing countries and are too poor to pay for drugs, the pharmaceutical industry has traditionally ignored these diseases. Over the past decade, however, the public sector, by creating favourable marketing conditions, has persuaded industry to enter into public-private partnerships to tackle neglected diseases such as malaria, HIV, and tuberculosis. Yet some infectious diseases—the world's "most neglected" diseases—are still being ignored not just by the pharmaceutical industry but also by public-private partnerships.

Why have these partnerships ignored the most neglected diseases, such as kala-azar, Chagas' disease, and sleeping sickness? This question was explored at a recent meeting in New York, organised by Médecins sans Frontières.[1] The answer lies in the social contract that exists between the public and private sectors.

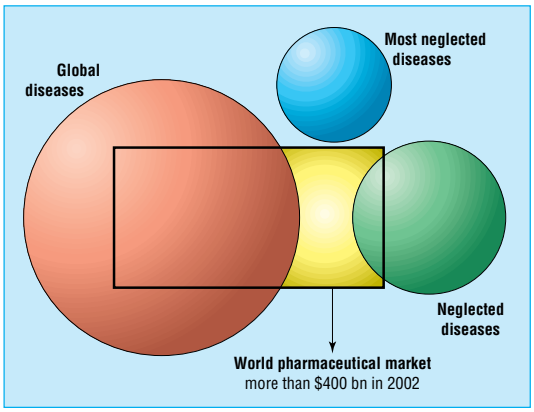
The public sector has decided to make it public policy to leave drug development in the hands of the pharmaceutical industry. This industry in turn invests almost exclusively in developing drugs that are likely to be marketable and profitable—drugs for conditions such as pain, cancer, heart disease, and baldness. Public policies, such as tax incentives and patent protection, are geared towards this market driven private investment. As a result, out of 1393 new drugs marketed between 1975 and 1999, only 16 were for neglected diseases,[2] yet these diseases accounted for over 10% of the global disease burden. In contrast, over two thirds of new drugs were "me too drugs" (modified versions of existing drugs), which do little or nothing to change the disease burden.

The pharmaceutical industry only enters into public-private partnerships when it sees at least some potential market for its drug. For example, although people with malaria in the world's poorest countries cannot afford to pay for new malaria drugs, Western travellers can. Similarly, patients with tuberculosis or HIV in Africa or India cannot afford to purchase new treatments. However, many patients in the United States or Europe, whose health expenditure is covered partly by government run health insurance programmes, can pay for these treatments.

When the pharmaceutical industry sees enough of a market, the public sector then has sufficient leverage, or bargaining power, to persuade the private sector into a partnership. The bargaining power involves creating favourable conditions that make it attractive for industry to invest in drug development. For example, the public sector might reduce the costs of research and development through grants, tax credits, or public support for clinical trials, or it might create a purchase fund, in which donors ensure that there is a pot of gold ready to buy the new drug once it is developed. Examples of this type of approach are the Medicines for Malaria Venture, the International AIDS Vaccine Initiative, and the Global Alliance for TB Drugs Development.

When it comes to the world's most neglected diseases, however, these present absolutely no market opportunities. Without such opportunites, there is no incentive for the pharmaceutical industry to invest in

BMJ 2002;325:176–7



Three types of diseases

drug research and development. The patients have no purchasing power, no vocal advocacy group is pleading for their needs, and no strategic interests—military or security—are driving concern about these conditions. This is why no public-private partnerships exist specifically for the most neglected diseases. The figure shows how these diseases fall totally outside the global pharmaceutical market.

For example, sleeping sickness, which claims thousands of lives annually in Africa, can be considered as a most neglected disease. Current drug treatments are in scarce supply, difficult to administer, and often toxic. Melarsoprol, which was developed over 50 years ago, kills up to 10% of people who are given the drug, and in some regions drug resistance means it is ineffective in a third of patients.[3] An effective, less toxic drug, has been developed—eflornithine—but the company that developed it stopped its production in 1995, citing commercial failure. African patients could not afford to buy the drug. Eflornithine became available again five years later in the United States, when it was found to reduce unwanted facial hair in women.[4] The injustice of American women depilating their faces while thousands in Africa were dying of a treatable illness finally led the original makers to restart production of the drug.[5] It is currently available through a donation programme until 2006, though a long term producer is yet to be found.

Médecins sans Frontières believes that the best hope of treating the world's most neglected diseases is for the public to accept responsibility for drug development, taking it out of the marketplace and into the public sector. The organisation has launched an initiative on drugs for neglected diseases, founded only by public sector and non profit partners, such as the Pasteur Institute, the Special Programme for Research and Training in Tropical Diseases (a project undertaken jointly by the United Nations Development Plan, the World Bank, and the World Health Organization), the Indian Council for Medical Research, and the Brazilian government pharmaceutical organisation Fiocruz. The initiative is testing the idea that a drug research and development network can be established in the developing world, with a centralised management structure, and its feasibility study will be published later this year. Philippe Kourilsky, the director general of the Pasteur Institute, believes that the initiative will do "nothing short of creating a global, not-for-profit pharmaceutical industry." If the initiative proves viable, it is likely to engage with the pharmaceutical industry on specific projects, since industry has great expertise in the development of drugs. The initiative, however, will not rely on market forces; it will define its needs, and then rely on public investment to meet them.

Will the strategy of taking medicines out of the marketplace work? Few precedents for truly international public initiatives exist (the Human Genome Project is an example), and the public investment will need to be massive. There will need to be concerted political attention to make available the necessary financial and technical resources. Right now there is little other hope for those dying of the world's most neglected, yet curable, infectious diseases.

Gavin Yamey *assistant editor, BMJ*

(gyamey@bmj.com)

1 Yamey G. Public sector must develop drugs for neglected diseases. *BMJ* 2002;324:698.
2 Trouiller P, Olliaro P, Torreele E, Orbinski J, Laing R, Ford N. Drug development for neglected diseases: a deficient market and a public-health policy failure. *Lancet* 2002 359:2188-194.
3 Legros D, Ollivier G, Gastellu-Etcegorry M, Paquet C, Burri C, Jannin J, et al. Treatment of human African trypanosomiasis—present situation and needs for research & development. *Lancet Infect Dis* 2002;2:437-40.
4 MacDonald R, Yamey G. The cost to global health of drug company profits. *West J Med* 2001;174:302-3.
5 Boseley S. Drug firm wakes up to sleeping sickness. *Guardian*, May 7 2001.

Performance league tables

Use of indirect standardisation is inappropriate

Valid performance league tables cannot be formed from indirectly standardised indices.[1–5] However, this methodology has been adopted for most of the performance indicators for NHS trusts that relate to outcomes, effectiveness, and access. This includes all the clinical indicators.[6] Indirect standardisation is also used to compare general practitioners' prescribing.[7]

As an illustration, the example in the box includes two study populations with identical category specific rates (these may be for age, ethnicity, or case mix, for example). Despite performing identically, they have two very different indirectly standardised ratios because of their different structures.

The inappropriate comparison of performance using indirect standardisation arises because of a common misconception about the standard that is being used. For indirect standardisation the study population itself is the standard, as this is the population to which the category specific reference rates are applied. Consequently, a different standard is used for each population's indirectly standardised ratio.

In contrast, for direct standardisation each study population's category specific rates are applied to the

BMJ 2002;325:177–8