they are told that a person has an illness about which they have prejudices. Health systems that require that medical decisions be based on diagnoses without having resources that would ensure appropriate protection of diagnostic information about the patient are also to be blamed. Being conscious of the power of diagnosis and of the labelling process might contribute to a wiser use of diagnoses, but removing the diagnosis by itself would not eliminate stigma.

Iatrogenic stigmatisation unfortunately does not stop at labelling. Treatment of symptoms of mental illness may produce side effects (for example, extrapyramidal signs), which will mark the person as having a mental illness more than the original symptoms of illness did. Governments sometimes support the use of cheaper treatments even when the side effects are profoundly disturbing or painful. Medical practitioners accept such policies, although it is clearly their duty to fight such regulations and ensure that their patients receive the best treatment, which is often not the

Psychiatrists and other mental health staff also stigmatise patients in other ways. Until recently psychiatrists in some European countries and elsewhere were requesting longer holidays and a higher salary than other doctors because they had to work with mentally ill patients who are dangerous, while arguing, at the same time, that mental illness is no different from other illnesses. Psychiatrists are among those who recommend separate legislation for people with mental illness to protect some people with mental illness, often unaware of the effect that such legislation might have on all other patients. They should certainly continue to do whatever is necessary to protect their patients; but it would help if they also advocated the notion that the rights and duties of people with mental illness should be decided by their behaviour and capacities in the same manner as for other people rather than by the diagnostic label alone.

Directors of institutions and hospitals in which people with mental illness are treated or find shelter rarely insist that their clients should be given an opportunity to participate in elections or other voting. The installation of ballot boxes in mental hospitals is

still a rarity even in countries where there is much awareness of the need to protect human rights and social rights of those with mental illness. How should we convince others that most people with mental illness retain many of their capacities and that their rights are often not respected if we do not show the way by our own behaviour? General healthcare staff only rarely joins psychiatrists in requesting equal provisions for the care of people with mental illness. Alison Gray in a recent review article urges medical professionals to consider their own attitudes and become aware of them, to involve service users in the development of services, and to stand up against discrimination because of mental health problems wherever it might occur. Hopefully health professionals will be influenced by her views.5

The above examples are listed to remind us that we psychiatrists and other medical professionals are not sufficiently engaged in fighting stigma and discrimination related to mental illness; what is worse, we may be contributing to it in various ways. It would be useful if all of us were to examine our own behaviour and actions and change them where necessary to reduce stigma. Stigma remains the main obstacle to a better life for the many hundreds of millions of people suffering from mental disorders and their consequences. We must make our contribution to eliminate stigma and fight it in every way possible.

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Diagnosing brain death without a neurologist

Simple criteria and training are needed for the non-neurologist in many countries

"death hath ten thousand several doors For men to take their exits."

John Webster, The Duchess of Malfi, 16121

hen nature takes its course the heart stops beating or the lungs stop breathing as a sequence of events unfolds, ending with death eventually overcoming the last cells of our bodies. The vast majority of the world's people leave life through doors marked "death from natural causes." During the last decades some new doors for death have been opened by medical progress and by the law. Palliative medicine strives to ease the final step over the threshold, extending the physician's traditional role by using modern medicine.2 In some places, two other doors have recently been unlocked: medically assisted

suicide has been legalised in the Netherlands, the American state of Oregon, and Belgium, and euthanasia has been legalised in the Netherlands and Belgium. Knocking at the doors of (medically) assisted suicide has not met with success in the US Supreme Court³ nor in the European Court of Human Rights.

Modern medicine has also given us tools as never before to oppose death. If this battle is lost, defeat reveals yet another aspect of death. Let us consider that brain functions fail to the point where the clinical criteria of brain death are fulfilled5 6; without artificial support, respiratory failure ensues, followed by natural death. When artificial support interferes with this process the result can be an unintended biological artefact: a body with an irreversibly damaged brain is diagnosed as brain dead.56

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¹ Pickenhagen A, Sartorius N. Annotated bibliography of selected publications and other materials related to stigma and discrimination because of mental illness and intervention programmes fighting it. Geneva: World Psychiatric Association, 2002.

World Psychiatric Association. The WPA global programme to reduce the stigma and discrimination because of schizophrenia—an interim report 2001. stigma and discrimination because of schizophrenia—an interim report 2001.
World Psychiatric Association, Geneva, 2001

Sartorius N. One of the last obstacles to better mental health care: the

stigma of mental illness. In: Guimón J, Fischer W, Sartorius N, eds. *The image of madness*. Basle: Karger, Basel, 1999:96-105.

Summerfield D. Does psychiatry stigmatise? *J Royat Soc Med* 2001;

⁵ Gray JA. Stigma in psychiatry. J Royal Soc Med 2002;95:72-6.

Under these circumstances death can now be legally declared in many countries.7 8 Apparently there is nearly universal agreement that in this situation there is no obligation-ethically, morally, or legally-to fight a futile battle.5-8 If, as a consequence, artificial support including mechanical ventilation is withdrawn, the medically interrupted process of dying will resume and follow the path of natural death to its full completion. What if support is not withdrawn? Some bodies whose brains presented with all the diagnostic criteria of brain death have been kept alive for years.9

The challenges resulting from medical progress need to be addressed by all of society. What physicians need is a clear legal framework to be able to deal with difficult and often extremely conflicting clinical decisions consistently. For example, medically assisted suicide and euthanasia are understood by their proponents as the ultimate expression of personal autonomy, but not every right of the patient becomes the duty of the physician. However, some rights of patients are firmly established. One is the right of mentally competent patients to refuse treatment-even if this means death. Another is the right to have life supporting treatment discontinued-and die.10 On the other hand the physician who pronounced death in the past when it was obvious may now have to declare dead an artificially ventilated body that looks alive.6 Modern doctors need all the help they can get. The Harvard ad hoc committee's report," precipitated by the first heart transplantation,12 has been most helpful. Although the report has been criticised on some accounts,6 its essence holds true10: artificial support can arrest the dying process of a fatal syndrome that is characterised by irreversible brain damage, as confirmed by appropriate neurological testing. The advice from the committee's legal experts points to the resulting dilemma: "we recommend the patient be declared dead before any effort is made to take him off the respirator ... otherwise the physician would be turning off the respirator on a person who is, under the present strict technical application of the law, still alive." Many countries have adjusted their laws to take account of this.7

The neurological diagnosis of brain death is now widely accepted,5-8 but only its proper application will ensure that this remains so. Diagnostic criteria vary and some, like apnoea testing, are contested.6 Therefore neurological experts have to be involved in making the diagnosis whenever they are available.548 In many regions of the world, however, there are none.13 In high income countries there is one neurologist per 30 000but in low income countries there is one neurologist per 3 000 000 population. Thus physicians have to make clinical decisions about brain death wherever neurologists or neurosurgeons are not available. A physician trained in the use of a ventilator should also be trained to diagnose brain death. Perhaps neurological experts could provide support by offering simple guidelines and professional training for the diagnosis of brain death. It should be applicable under difficult circumstances to help these non-neurologists with a most serious medical decision-namely, withdrawing artificial support after the diagnosis of brain death.

When transplantation is being considered, artificial support is continued despite the diagnosis of brain death, and circulation and respiration are stopped by the explantation procedure itself. Consent is understood as the essential element for justifying this procedure, and different methods of obtaining consent (opting in or out, with or without consent by proxy) have been developed in different countries. A recent example shows what can be done to improve the quality of consent. Spain has shown impressively that it is possible to inform and educate professionals and the public about "brain-based determination of death"6 and transplantation matters and to promote acceptance at the same time.14 Obviously, every effort should be made to maintain public trust, and high professional standards are essential. 5-8 11 Determination of brain death without a neurologist should never be done for transplantation purposes, nor should anybody involved in this diagnosis be part of the transplant team.6 No physician engaged in euthanasia or medically assisted suicide should be responsible for diagnosing brain death.

Medical progress and social and legal changes will produce new facts,611 and new facts will call for new rules. However, we should oppose attempts to expand the definition of brain death to include patients that are obviously not dead, like those in a persistent vegetative state, the chronic apallic syndrome, or "the minimally conscious state."15 16 We should not disturb the current pragmatic consent that lets the brain dead be dead.5-8 11

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Nuland SB. How we die. London: Random House, 1994.

Clark D. Between hope and acceptance: the medicalisation of dying. BMJ 2002;324:905-7.

Legal Information Institute. Supreme Court collection. 27 June 1997; Vacco v Quill, No 95-1858 (http://supct.law.cornell.edu/supct/html/95-1858.ZS.html) and 26 June1997; Vacco v Quill, No 96-110 (http://supct.law.cornell.edu/supct/html/96-110.ZC4.html); accessed 31 May

European Court of Human Rights. Strasbourg 29 April 2002; Pretty v The United Kingdom: 2346/02. www.echr.coe.int/Eng/Judgments.htm (accessed 31 May 2002). Wijdick EFM. The diagnosis of brain death. N Engl J Med 2001;344:1215-

Capron AM. Brain death-well settled yet unresolved. N Engl J Med

Wijdicks EFM. Brain death worldwide, Accepted fact but no global consensus in diagnostic criteria. *Neurology* 2002;58:20-5.

Swash M, Beresford R. Brain death. Still-unresolved issues worldwide.

Neurology 2002;58:9-10. Shewmon DA. Chronic "brain death." Meta-analysis and conceptual con-

sequences. Neurology 1998;51:1538-45.

10 High Court of Justice, London, Ms B v NHS Hospital Trust; EWHC429 (Fam) 22 March 2002.

Ad Hoc Committee of the Harvard Medical School to Examine the Definition of Brain Death. A definition of irreversible coma. JAMA 1968;205:337-40.

¹² Hollenberg R. Christian Barnard: his first transplants and their impact on

Hollenberg R. Christian Barnard: his first transplants and their impact on concepts of death. BMJ 2001;323:1478-80.
 Mental Health Determinants and Populations. Atlas—country profiles on health resources 2001. WHO. Geneva. http://www5.who.int/mental_health/main.cfm?s=0006 (accessed 7 May 2002).
 Lopez-Navidad A. The Spanish experience of communication in the transplantation field: the youth public transplant information professors.

transplantation lead: the youth public transplant information programme. 5th European conference of national ethics committees, Strasbourg, 4-5 September 2000.

15 Bernat JL. Questions remaining about the minimally conscious state. Neurology 2002;58:337-8.

16 Lo B, Dornbrand L, Wolf LE, Groman M. The Wendland casewithdrawing life support from incompetent patients who are not terminally ill. N Engl J Med 2002;346:1489-93.