should be more aware of a dancer's limitations and of dancers' needs to rest as soon as injuries occur; and dancers need immediate access to adequate

The profession of dance is believed to be fairly conservative in responding to recommended changes. The current climate within the profession, however, is ripe for initiating discussions about preventing injuries to dancers, given the awareness of dancers of the high rates of injury and the increasing interest in the potential of sports and dance medicine.

I thank Dr Richard Pearson for his contribution and advice; Mr Justin Howse and the National Organisation for Dance and Mime Medical Advisory Panel for their help; the following companies and their administrators who made the survey a reality: the Royal Ballet, London Contemporary Dance Theatre, Sadler's Wells Royal Ballet, Diversions Dance Company, Rambert Dance Company, Dundee Repertory Dance Company, English Dance Theatre; the Calouste Gulbenkian Foundation and British Actors Equity Association for their generous sponsorship; the Arts Council of Great Britain for information; and the National Organisation for Dance and Mime executive for their help and support.

- 1 Anonymous, Bionic ballerinas [Editorial], Lancet 1985;ii:481-2.
- Washington EL, Musculoskeletal injuries in theatrical dancers: site, frequency, and severity. Am J Sports Med 1978;6:75-97.
- 3 Hirat I. The doctor and the athlete. Philadelphia: Lippincott, 1972.
- 4 O'Donoghue DH. Treatment of injuries to athletes. Philadelphia: Saunders,
- 5 Carlsson GS. Validity of injury data collected by interview: a study of men born in 1913 and 1923. J Neurol Neurosurg Psychiatry 1983;46:818-23.

 6 Langley JD, Silva PA, Williams SM. Absence of psychosocial bias in the
- under-reporting of unintentional childhood injuries. J Epidemiol Community
- 7 United States Department of Health, Education and Welfare. Experiments in interviewing techniques: field experiments in health reporting, 1971-1977. Ann Arbor: National Center for Health Services Research, University of Michigan, 1977.
- 8 Martin C. Monitoring maternity services by postal questionnaire: congruity between mothers' reports and their obstetric records. Stat Med 1987;6:
- 9 Draper J, Field S, Thomas H. The early parenthood project: an evaluation of a community ante-natal clinic, Cambridge: Hughes Hall, 1984.
- 10 Cartwright A, Smith C. Some comparisons of data from medical records and from interviews with women who had recently had a live birth or stillbirth. J Biosoc Sci 1979;11:49-64.
- 11 Cartwright A. Health surveys. London: King's Fund, 1983.
- 12 Department of Health and Social Security and Medical Research Council. In: James WPT, comp. Report on research on obesity. London: HMSO, 1976.

 Royal College of Physicians. Obesity. London: RCP, 1983.

 Cox BD, Blaxter M, Buckle AJL, et al. The health and lifestyle survey. London:
- Health Promotion Research Trust, 1987.
- 15 Howse J, Hancock S, eds. Dance techniques and injury prevention. London: Black, 1988.

(Accepted 16 December 1988)

For Debate

AIDS on the death certificate: the final stigma

Michael B King

Births, deaths, and marriages have been recorded for centuries in England and Wales. The first attempt to keep a record for the whole nation dates from the time of Henry VIII, and even in the Tudor era efforts were made to start a central registry. The main impetus arose from a desire for marriage to be accredited a proper degree of publicity and regularisation by a civil authority as well as for a source of documentary proof of age, legitimacy, and ancestry. Reformers in the early nineteenth century such as Edwin Chadwick were the first to realise the advantage of a central registry for monitoring social conditions and health. Chadwick pressed the government for a cause of death to be included in the death register, partly out of interest in infant mortality, which was known to be a sensitive indicator of social conditions.

Accuracy of certification

Registration thus became constitutional law in 1836, and physicians have been entreated ever since to accurately record the cause of death. Although the system has proved worth while in a legal and medical sense,2 the accuracy of death certification has been vigorously debated, particularly in this century in medical journals in Europe and the United States. Scrutiny of records has revealed incorrect clinical diagnosis, clerical errors,35 and confusion of "mode" of death with "cause" of death, resulting in imprecision and delay for relatives. 56 Cynics have even depicted the statistical data from death certification as "rubbish in—rubbish out."7 Although findings at necropsy increase the accuracy of medical information,8 morbid anatomical and histopathological findings may have no direct connection with the fatal outcome.3 Indeed, death certificates issued by coroners who are not usually medically trained which contain a summary of morbid anatomical findings may conceal the greatest number of errors in relation to the actual cause of death.9



Sir Edwin Chadwick, public health reformer of the early nineteenth century, who realised the importance of notifying the cause of death

Stigma of cause of death

Until the advent of AIDS more liberal attitudes in society had lessened the stigma of most causes of death as an obstacle to their accurate certification.8 10 Before a change in the law in England and Wales in 1984 chronic alcoholism was considered to be within the broad remit of unnatural deaths due to poisoning and was therefore subject to a public inquest. To avoid

Institute of Psychiatry, DeCrespigny Park, London Michael B King, MRCPSYCH,

senior lecturer

Br Med J 1989;298:734-6

embarrassment for relatives "relevant facts were often overlooked." Pathologists proposed more acceptable causes of death such as myocardial ischaemia, thus avoiding the need to inform the coroner. Cirrhosis of the liver was attributed to poor nutrition rather than ethanol. Evidence that such practices were widespread was seen in the large differences in mortality due to cirrhosis between England and Wales and Scotland, where the requirement did not apply. A retrospective study of patients in whom liver disease had been diagnosed who died between 1976 and 1984 showed that although non-alcoholic liver diseases were recorded accurately on death certificates, in only one third of cases of irreversible alcoholic liver disease was this cause of death certified. 12

Besides guilt and embarrassment certifying suicide as the manner of death can result in reduction or loss of life insurance benefits for the victim's dependents. Reliability of death certification of suicide has been questioned since the time of Durkeim's original sociological study of the phenomenon.13 In the 1930s Zilboorg considered that the statistical data were "nearly useless" as suicides often appeared to be accidents, were often not recorded when the victim died some time after the attempt, and were concealed by families.¹⁴ Doctors, coroners, and registration officials may be unwilling to certify suicide where the facts are uncertain or to spare families the stigma.15 In the USA medicolegal officials may be sued for certifying a death as due to suicide when there is serious doubt. It is debatable whether this systematic bias is a main source of error when statistics are used to study patterns and possible aetiological factors in suicidal behaviour.15-18

Certification of AIDS

With AIDS has come the greatest stigma to affect death certification for decades. Public fear of any disease can be difficult to overcome, but particularly in the case of AIDS where people at risk may also be feared or stigmatised serious medical, psychological, and ethical problems may result for physicians, patients, and relatives. 19-21 AIDS or HIV infection will usually appear on the Cause of Death Certificate as the underlying condition that started the process leading to death (part I) or possibly as another condition not directly causing death (part II). The distress for families or close friends begins with the legal requirement on them to register the death. In my experience concerned doctors who complete this certificate may try to preserve the dignity of relatives by substituting other causes of death or not stating the underlying diagnosis of HIV infection.

The dilemma is illustrated by the case of a 37 year old homosexual who knew that he was positive for HIV antibodies, having agreed to testing during a routine visit to a clinic for sexually transmitted diseases three years earlier. Although he had informed his sister and close friends, he had not discussed either the test result or his homosexual lifestyle with his parents. He became ill, was admitted to hospital, and died. The medical staff had met his sister and parents to explain to them the gravity of their son's condition. The coroner overruled the concern of the medical staff to keep the diagnosis of AIDS or HIV infection off the Cause of Death Certificate. The parents were legally obliged to present this certificate to the Registrar of Births and Deaths, whose office was located in the neighbourhood where they were well known. The death certificate clearly stated the cause of death and subsequently had to be produced for their son's former employer, insurance corporation, mortgage company, solicitor, and others. Any hope of privacy was illusory.

Death certification of AIDS clearly has ramifications

for the bereaved. Where AIDS has caused the death of a parent or child it may also have implications for surviving family members with regard to placement of children in foster homes. Many doctors believe that by informing the Centre for Communicable Diseases of the case they have fulfilled their public duty and may omit the diagnosis of AIDS from the certificate.

For the historical reasons discussed the Register of Deaths is a public record, although access is possible only by purchasing certified copies of individual entries. It is not uncommon for journalists to establish the causes of deaths of prominent people from the Register of Deaths. They are free to publicise the information without fear of action. Should this invasion of privacy be tolerated? Clearly, cause of death is important in AIDS for many reasons, not least for mortality statistics²² and for insurance payments. It is not of concern to employers, bank managers, or journalists.

AIDS and statistics

A review of death certificates is an easy and rapid means of evaluating AIDS surveillance.23 Certificates can be a useful adjunct to other methods of surveillance of AIDS if they are accurate, clearly distinguishing between deaths from AIDS where there are clinically apparent consequences of immune deficiency meeting diagnostic criteria for AIDS or AIDS related complex and deaths where HIV infection merely coexists.22 If we wish to increase the accuracy of medical certification of AIDS we must consider issues of privacy. There have been many suggestions to improve the accuracy of death certification, 24 5 9 15 including educating doctors concerning the administration of death certification, the correct use of the International Classification of Diseases, and the functions of the Office of Population Censuses and Surveys. It has been suggested that senior doctors should complete certificates instead of delegating the task to the most junior and least experienced member of the hospital team. But in disorders where a public stigma persists it is rarely considered that ensuring privacy for the bereaved might clear the way for doctors to be more frank. If confidentiality of medical information is considered sacrosanct in life there is no justifiable reason why this view should change after death.

Two part certificates

In the USA the use of a two part death certificate has been suggested—one part for disposal and immediate legal purposes and the other for medical certification. This might reduce delay for relatives when further clinical or necropsy findings are required and also ensure greater privacy. Relatives would receive a two part certificate, one part giving evidence of death without stating cause for the administrative requirements after death. Although public records would still be open to scrutiny, this would help to reduce the agony of partners and families who are required to produce the certificate for many purposes.

Government proposals

A recent government green paper²⁴ suggests that it should be made easier for members of the public to scrutinise registration records, particularly genealogists and solicitors who are trying to trace ancestry, to settle wills and estates, or to establish pedigrees. Recognising the "sensitivity" of allowing greater access to records of those who have recently died, the green paper recommends changes only for records made at least 75 years ago. Furthermore, with an explicit reference to "sensitive" causes of death such as AIDS the government has suggested that records of recent

BMJ volume 298 18 march 1989 735

deaths should be available only to "those who have a legitimate reason for wanting them." Applicants would be asked to provide details which could not be derived from public indexes, such as the full name of the deceased, date and place of death, age or year of birth, and occupation. Unfortunately, it is unlikely that such measures will go far enough to stop the "intrusions into privacy, personation and fraud" with which the government is concerned.

A final right to privacy

The right to privacy, although not a part of the Constitution of the United States, has been recognised as defendable in American law for almost 100 years.25 In the United Kingdom it is also important to protect what some might regard as our diminishing right to privacy. People with AIDS face many social and psychological difficulties, 19 26 and the importance of confidentiality is highlighted in clear guidelines from the American Medical Association, 27 28 the General Medical Council of Britain,29 the BMA,30 and the Royal College of General Practitioners.31 In their present form death certificates provide no safeguard for people after death and thereby render efforts to preserve confidentiality during life ultimately impotent.

I thank Mrs G T Marsh, Registrar of Births and Deaths, Camberwell, London SE5.

- 1 Office of Population Censuses and Surveys. Population and health statistics in England and Wales. London: OPCS, 1980.
- 2 Joint Report of the Royal College of Physicians and the Royal College of Pathologists. Medical aspects of death certification. JR Coll Physicians Lond 1982;16:206-18.
- 3 Alderson MR, Bayliss RIS, Clarke CA, Whitfield AGW. Death certification. Br Med J 1983;287:444-5.
- 4 Leadbeatter S. Semantics of death certification. J R Coll Physicians Lond
- 5 Kircher T, Anderson RE. Cause of death. Proper completion of the death certificate. JAMA 1987;258:349-52.
- 6 Zumwalt RE, Ritter MR. Incorrect death certification. An invitation to obfuscation. Postgrad Med 1987;81:245-54.

- 7 Tyrrel S. Rubbish in, rubbish out—or an irreverent view of death certificates.
- 8 Carter JR. The problematic death certificate. N Engl J Med 1985;313:1285-6. 9 Medical Services Study Group of the Royal College of Physicians of London.
- Death certification and epidemiological research. Br Med \mathcal{J} 1978;ii:1063-5. 10 Gau DW, Diehl AK. Disagreement among general practitioners regarding
- cause of death. Br Med 7 1982;284:239-41 11 Maxwell JD. Accuracy of death certification for alcoholic liver disease. Br J
- Addict 1986;81:168-9.
- 12 Maxwell JD, Knapman P. Effect of coroners' rules on death certification for alcoholic liver disease. Br Med 7 1985;291:708.
- 13 Durkeim E. Le Suicide. Paris, 1897.
- 14 Zilboorg G. Suicide among civilized and primitive races. Am J Psychiatry 1936:92:1347-9.
- 15 Jobes DA, Josselson AR. Improving the validity and reliability of medicallegal certifications of suicide. Suicide and Life-Threatening Behaviour 1987;17:310-25.
- 16 Barraclough BM. National differences in suicide rates. Br J Psychiatry 1973;122:95-106.
- 17 Kolmos L, Bach E. Sources of error in registering suicide. Acta Psychiatr Scand [Suppl] 1987;76:22-43.
- Eisele JW, Frisino J, Haglund W, Reay DT. Teenage suicide in King County, Washington. Rates of suicide for 26 years. Am J Forensic Med Pathol 1987:8:208-9
- 19 Ward MW, Papadakis MA. Untrapping the metaphor of AIDS. Am J Med 1987:83:1135-7.
- 20 Kelly JA, St Lawrence JS, Smith S, Hood HV, Cook DJ. Stigmatization of
- AIDS patients by physicians. Am J Public Health 1987;77:789-91. 21 Murphy TF. Is AIDS a just punishment? J Med Ethics 1988;14:154-60
- 22 Klatt EC, Noguchi TT. The medical examiner and AIDS. Death certification, safety procedures, and future medicolegal issues. Am J Forensic Med Pathol 1988:9:141-8.
- 23 Hardy AM, Starcher ET, Morgan WM, et al. Review of death certificates assess completeness of AIDS case reporting. Public Health Rep 1987;102: 386-91
- 24 Her Majesty's Government. Registration: a modern service. London: HMSO, December 1988. (CM531.)
 25 Binder RL. AIDS antibody tests on inpatient psychiatric wards. Am J
- Psychiatry 1987;144:176-81.
- 26 King MB. Psychosocial status of 192 out-patients with HIV infection and AIDS. Br J Psychiatry 1989;154:237-42.
- 27 American Medical Association. AIDS policy: guidelines for inpatient psychiatric units. Am J Psychiatry 1988;145:542.

 28 American Medical Association. AIDS policy: confidentiality and disclosure.
- Am J Psychiatry 1988;145:541.
 29 General Medical Council. HIV infection and AIDS: the ethical considerations.
- London: GMC, 1988.
- 30 British Medical Association Foundation for AIDS, HIV infection and AIDS, Ethical considerations for the medical profession. London: BMA, 1987
- 31 Working Party of the Royal College of General Practitioners. Human immunodeficiency virus infection and the acquired immune deficiency syndrome in general practice. J R Coll Gen Pract 1988;38:219-25.

(Accepted 6 January 1989)

BOOKS RECEIVED

Acquired immune deficiency syndrome

The Heterosexual Transmission of AIDS in Africa. Ed D Koch-Weser, H Vanderschmidt. (Pp xv+295; figs; \$29 paperback.) Massachusetts: Abt Books, 1988. ISBN 0-89011-604-0.

Immunology Series. No 44. "AIDS Pathogenesis and Treatment." Ed J A Levy. Editor-in-chief N R Rose. (Pp xxi+632; figs; \$119.50.) New York: Dekker, 1989. ISBN 0-8247-7684-4

Addiction

Illustrated Handbook of Drug Abuse: Recognition and Diagnosis. H S Robin, J B Michelson. (Pp xiv+187; figs; £19 paperback.) Chicago: Year Book Medical Publishers, 1989. Distributed by Wolfe Medical Publications. ISBN 0-8151-5871-8

Clinical Anatomy, H H Lindner, Illustrated by L V Schaubert. (Pp ix+690; figs; £22.25 paperback.) London: Prentice-Hall International, 1989. ISBN 0-8385-1118-X.

An Atlas of Planar and SPECT Bone Scans. I Fogelman, B D Collier. (Pp x+320; £79.95.) London: Dunitz, 1989. ISBN 0-948269-77-4.

The Management of Acute Stroke, C.M.C. Allen, M J G Harrison, D T Wade. (Pp xiv+215; figs; £35.) Tunbridge

Wells: Castle House Publications, 1988. ISBN 0-7194-0122-4.

Practical Clinical Neurology. F J Master. (Pp 618; figs; Rs 75 paperback, 1987.) Vora Medical Publications, Agarwal Bhawan, Flat No 3, Gr. Floor, Kidwai Marg, Wadala, Bombay 400 031, India.

Nuclear medicine

Manual of Nuclear Medicine Procedures R Mistry. (Pp xvii+197; figs; £14.95 paperback.) London: Chapman and Hall, 1988. ISBN 0-412-30240-3.

Respiratory medicine

BMA Family Doctor Guides. "Asthma." I Rees. Series editor T Smith. (Pp 98; figs; £2.99 paperback.) Welling borough: Equation, in association with the British Medical Association, 1988. ISBN 1-85336-049-X.

Rheumatology

BMA Family Doctor Guides. "Arthritis." P Dieppe. Series editor T Smith. (Pp 127; figs; £2.99 paperback.) Wellingborough: Equation, in association with the British Medical Association, 1988. ISBN 1-85336-050-3.

General Surgery at the District Hospital. Ed J Cook, B Sankaran, A E O Wasunna. (Pp 231; figs; Sw frs 30 paperback.) Geneva: World Health Organisation, 1988. ISBN 92-4-

Liposuction Surgery and Autologous Fa Transplantation. S Asken. (Pp xi+166; figs and colour plates, £117.70.) Connecticut: Appleton and Lange, 1988. Distributed by Prentice and Hall. ISBN 0-8385-5684-1.

The Original Bassini Operation for Inguinal Hernia. Centenary Edition. A Chinaglia. (Pp xii+116; colour figs; £22.) Padua: Piccin, 1988. ISBN 88-299-0299-2.

Third World

World Bank Technical Paper Number 82. "Cost Recovery in the Health Care Sector: Selected Country Studies in West Africa." R J Vogel. (Pp xi+192; \$12 paperback.) Washington DC: World Bank, 1988. ISBN 0-8213-1051-8.

Advances in Urology. Vol 1. Editor in Chief B Lytton. (Pp xvi+318; figs; £37.50.) Chicago: Year Book Medical Publishers, 1988. Distributed by Wolfe Medical Publications. ISBN 0-8151-5668-5.

Clinical Practice in Urology. "Contro versies and Innovations in Urological Surgery." Ed C Gingell, P Abrams. Series editor G D Chisholm. (Pp xvi+ 512; figs; £112.) London: Springer, 1988. ISBN 3-540-17491-5.

Miscellaneous

Information Pack on Buildings and Health. Compiled by A Watts. (Pp v+ 117; £18.50 paperback.) London: Institution of Mechanical Engineers, 1988. ISBN 0-85298-678-5.

M.E. and You: a Survivor's Guide to

Post-Viral Fatigue Syndrome. S Wilkinson. (Pp 112; £4.99 paperback.) Wellingborough: Thorsons, 1988. ISBN 0-7225-1802-1.

Medical Handbook for Mountaineers. P Steele. (Pp 248; figs; £8.95 plastic back.) London: Constable, 1988. ISBN 0-09-468570-3.

Misclassification of Smoking Habits and Passive Smoking. A Review of the Evidence. P N Lee. (Pp xi+103; £27 paperback.) Berlin: Springer, 1988. ISBN 3-540-19425-8.

The Moral Limits of Criminal Law. Vol 4. "Harmless Wrongdoing." J Feinberg. (Pp xxix+380; £25.) New York: Oxford University Press, 1988. ISBN 0-19-504253-0. New Library of Pastoral Care, "Help-

ing the Helpers: Supervision and Pastoral Care." J Foskett, D Lvall. General Editor D Blows. (Pp xi+164; £5.95 paperback.) London: Society for Promoting Christian Knowledge, 1988. ISBN 0-281-04386-8.

The Pied Piper of Hamelin. Retold by Sara and Stephen Corrin. Ilustrated by E Le Cain. (Pp 32; colour plates; £6.95.) London: Faber and Faber, 1988. ISBN 0-571-13762-8.

Progres Recents des Biomateriaux. Ed R Benichoux, J Lacoste. (Pp 221; figs; colour plates; Frs 250 paperback.) Paris: Masson, 1988. ISBN 2-225-

Psychological Effects of Political Repression. DR Kordon, LI Edelman, D M Lagos, et al. (Pp 197; price not stated; paperback.) Buenos Aires: Sudamericana/Planeta, 1988. Sponsored by Rehabilitation Centre for

Torture Victims, Copenhagen. ISBN 950-99202-0-7.

Public Expenditure: the Public Spending Process. A Likierman. (Pp ix + 229; £4.99 paperback.) London: Penguin, 1988. ISBN 0-14-022686-9.

Recognising Health. K Barlow. (Pp ix+ 142; £4.95 paperback.) London: McCarrison Society, 1988. ISBN 0-9513171-0-5.

Smallpox is Dead. A Sanderson. Illustrated by S Harrison. (Pp 29; colour figs; £5.95 paperback.) London: Farrand Press, 1988. ISBN 1-85083-013-4.

What Teenagers Want to Know About Sex: Questions and Answers. Ed R P Masland Jr, D Estridge. (Pp viii+181; £9.95.) Boston: Little Brown, 1988. ISBN 0-316-25063-5.

Who Should be Sleeping in Your Bedand Why. J Oliver. (Pp 223; £2.99 paperback.) London: Penguin, 1988. ISBN 0-14-010951-X.

Worse than the Disease: Pitfalls of Medical Progress. D B Dutton. (Pp xvi+528; £25.) Cambridge: Cambridge University Press, 1988. ISBN 0-521-34023-3.

You Might As Well Be Dead. R Ingrams. Illustrations by W Rushton. (Pp iii+88; £3.95 paperback.) London: Quartet Books, 1988. ISBN 0-7043-0078-8.

Gabriele Zerbi, Gerontocomia: On the Care of the Aged and Maximianus, Elegies on Old Age and Love. Trans-lated from the Latin by L R Lind. (Pp 346; \$20.) Philadelphia: American Philosophical Society, 1988. ISBN 8-87169-182-5