

PRACTICE OBSERVED

Practice Research

Death certification in general practice: review of records

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Abstract

The records of death that had been certified by general practitioners in one practice over 18 years were assessed in the light of the recent joint publications of the Royal College of Physicians and the Royal College of Pathologists. Over this period roughly 30% of the deaths in the practice population occurred outside hospital and a total of 262 certificates were issued.

A review of 262 counterfoils of records of death certification showed that 12 counterfoils (4.6%) had no age and sex mentioned, and three counterfoils did not describe the place of death. The average age at death outside hospital was 71.6 years—the age of women being 75.1 years compared with that of men of 68.2 years. Only 2% of patients had had a necropsy. The common causes of death stated in the certificates were: cardiovascular 41%, carcinoma 35%, respiratory 15%, and stroke 8%. All contributory causes are also mentioned. Ninety seven per cent of the patients were seen after death by the doctors in the practice and 68% had been seen in the two days preceding death.

We emphasize the importance of keeping accurate records of deaths in general practice for audit and research as well as for planning services for terminally ill and recently bereaved patients.

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Introduction

The recent joint publication by the Royal College of Physicians and the Royal College of Pathologists on medical aspects of death certification is the first review of this important subject since the publication of the Brodrick report in 1971.¹ Both reports contain recommendations of relevance to the general practitioner, particularly with regard to the accuracy of information contained in the death certificate and its use in medical audit.

Motivated by these reports we decided to review the available records which had been made in our group practice over the years 1964-82. In analysing the data we attempted to identify deficiencies highlighted in the reports and to examine the solutions.

Method

In general practice the only record of death in the practice community, certified by the general practitioners, is the counterfoil in the books of Medical Certificates of Cause of Death, since the medical records of the deceased are not available for review. In our group practice we had records of 262 such deaths, covering the years 1964-82. We extracted the following information from these counterfoils: (a) Age, sex, and date of death. (b) Cause of death, both primary and contributory factors. (c) Place of death. (d) Date last seen alive and name of practitioner who certified death. (e) Referral for further examination (coroner necropsy).

Results and discussion

Although our list size had remained fairly static at around 8000 patients, the average number of deaths certified outside hospital had doubled from 10 patients a year in the first decade to 21 patients a year in the second decade. In the past three years the overall death rate, obtained from the records of the family practitioner committee, had averaged 9.6 per 1000 patients

The joint report of the royal colleges, in affirming this view, calls for an increase in the number of necropsies performed.¹

The death certificate is usually provided by the coroner when the case is referred to him; in certain cases, however, it is the local practice for the general practitioner to issue the certificate after discussing the details with the coroner.

The value of the death certificate as an accurate statement of the cause of death depends on the accuracy of the information contained therein. Increasing the number of necropsies performed on deaths outside hospital would certainly improve the accuracy and the validity of the national mortality statistics. In addition to certifying death, however, the general practitioner also has to counsel the bereaved. Given the available facilities for performing necropsies, increasing the number performed would inevitably lead to delays in funeral arrangements and would adversely affect managing the bereaved. Preventing this delay would require improved pathology services to cope with the increased workload.¹ In the present economic climate and given the pattern of mortality in our study we think that this would not be cost effective.

Conclusion

The significance of the death certificate to the general practitioner may be spelled out as follows:

- (1) It has medicolegal importance.
- (2) It provides a means of auditing the quality of care offered to those who are terminally ill and recently bereaved.
- (3) It provides an account of the pattern of death, the experience needed for the care of the dying, and the supportive services necessary to cope with the demand.
- (4) It could be an important research tool in occupational medicine. It is a pity that the occupation of the deceased is not entered on the death certificate.

The results of this review show that the documentation of death in general practice is deficient in 6% of the counterfoils. Several factors seem to be responsible: (a) Inadequate understanding of the importance of the death certificate. (b) A virtual

lack of training at undergraduate and postgraduate levels in the mechanics of completing the certificate. (c) An absence of meetings in general practice to discuss deaths, which provide a forum not only to reinforce the above but also to review the overall care of the dying.

At a practical level the following solutions might be considered: (a) Adequate training should be given to all medical students, which would then be reinforced in vocational training. (b) Meetings to discuss deaths should be held and attended by all members of the primary health care team. (c) Certificates should be issued in all cases of death, including those referred to the coroner, and updated with the results of possible findings. Furthermore, all deaths that occur in general practice should be recorded in the practice so that an accurate and complete record of the pattern of death is obtained.

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Generic alternatives in general practice

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Abstract

Using a standard analysis of one month's prescribing in a general practice we showed a potential saving of 8.8% (£883.22) of the net cost of drugs to the National Health Service by the use of generic substitution as suggested in the Greenfield report. Although substitution was theoretically available in most therapeutic classes, two thirds of the potential savings pertained to two classes, preparations acting on the nervous system and preparations acting on the cardiovascular system and

diuretics. Of the prescriptions (31%), with potential generic alternatives, less than three quarters were actually available.

Introduction

The cost of drugs has provoked much discussion both political and professional.¹ Prescribing by approved name (generic prescribing) has been encouraged to reduce cost without detriment in the quality of treatment or loss of the doctor's clinical freedom.

In Northern Ireland the average net cost of ingredient per person per year in 1980 was 28%, higher than in Britain.² Arrangements for pricing prescriptions in Northern Ireland are fully computerized and a variety of analyses of their prescribing are available confidentially to general practitioners from the Prescribing Monitoring Unit, Department of Health and Social Security, Northern Ireland.

This study arose from discussions about prescribing with the two general practitioners of an urban general practice

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a year. Thus in our practice deaths outside hospital represented 30% of our total death rate, in keeping with the national mortality statistics.¹

AGE AND SEX (TABLE 1)

The mean age at death was 71.6 years, and 82% of patients had reached their 60th birthday. As expected, the mean age at death of women (75.1 years) was greater than that of the men (68.2 years).¹ There was one report of neonatal death at home and two deaths in early infancy. It was not possible to analyze the results by age and sex in 12 cases because no details were included on the counterfoils.

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Despite the unavoidable element of selection introduced, the results agree with those published in other series and the usual major causes of death predominated.¹

PLACE OF DEATH

Details of place of death were included in 259 counterfoils. Most (208) died at home, 42 died in residential care, seven in hospital, one in an ambulance, and there was one sudden death in a social club.

TABLE 1—Contributory causes of death

Cause of death	No. of deaths
Cardiovascular disease (n=37)	10
Hypertension	6
Heart failure	6
Atherosclerosis	3
Peripheral vascular disease	3
Myocardial infarction	2
Coronary heart disease	1
Aneurysm	1
Cancer (n=3)	1
Respiratory disease (n=49)	28
Chronic bronchitis and emphysema	20
Influenza	2
Central nervous system and mental disease (n=16)	1
Stroke	6
Alcoholism	1
Paracetamol poisoning	1
Depression	1
Atypical and unknown disease (n=14)	7
Diabetes	1
Liver failure	1
Obesity	1
Amoebic	1
Hypothyroidism	1
Hypothermia	1
Gastrointestinal disease (n=3)	2
Peptic ulcer	2
Intestinal obstruction	1
Musculo-skeletal disease (n=8)	4
Osteoarthritis	3
Rheumatoid arthritis	1
Fracture	1
Drugs (n=3)	1
Clarithromycin	1
Isotretinoin (acne)	1
Diuretic (stroke)	1
Other (n=3)	1
Chronic meningitis	1
Duodenal syndrome	1
Methicillin	1

DATE LAST SEEN ALIVE AND PRACTITIONER WHO CERTIFIED DEATH

The date when the patient was last seen alive and the name of the doctor who certified the death are important for three reasons. Firstly, they can be taken as a measure of the standard of care offered to terminally ill patients and those who have been bereaved. Secondly, they indicate the frequency of unexpected death in general practice. Finally, they are important in assessing the quality of the information entered on the death certificates.

We found a range of 0-89 days between the date of death and the last contact with the general practitioner. The average interval was 4.7 days. In only nine cases was there an interval of over one month and in all these cases the deaths were sudden and unexpected. Sixty eight per cent of patients were seen after death by the attending doctor or another partner.

FURTHER EXAMINATION

The quality of death certification in England and Wales has been compared favourably with that practised in other countries.¹ Several authors, however, have commented on the discrepancy between clinical and necropsy diagnosis of the causes of death.^{1,2}

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where RJA spent two weeks of his fourth year medical course. Permission was given to us to obtain details from the Prescribing Monitoring Unit of all prescriptions written by the practice in November 1982. The practice has a list of 3327 patients and is in south Belfast in the Eastern Area Board. There is a very high proportion of elderly patients (table 1). Studies of such practices should show maximum savings in the number, type, and duration of medication.³ We proposed to examine the potential reduction in cost by replacing proprietary preparations, where possible, with alternative generic versions.

TABLE 1—Distribution of elderly people in April 1982. (Source: Central Services Agency)

Age (years)	Northern Ireland	Eastern Area Board	South Belfast	Study practice (%)
65 and over	11.75	12.80	15.08	28.50
75 and over	4.46	5.00	5.96	12.23

Method

With the written permission of the two general practitioners we obtained a standard analysis of their prescribing for November 1982. The month chosen was retrospective to avoid bias by the practitioners. The analysis was by therapeutic class and gave details of all medications prescribed by form, strength, quantity, and cost. It also made available the amount and cost per prescription.

The strategy followed by Wade and McDevitt in their assessment of prescribing was adopted, using the *British National Formulary* as an authoritative and acceptable standard.⁴ Without altering the quantities

TABLE 2—Comparison of average net cost of ingredients per prescription of study practice with local and national prices

	No. of prescriptions	Total net cost of ingredients (£)	Average net cost of ingredients per prescription (£)
Study practice Nov 1982	2,425	10,093.00	4.16
Northern Ireland Nov 1982*	1,145,365	928,606.04	0.81
Northern Ireland Jan to Dec 1982*	43,886,663	3,126,323.00	0.71
United Kingdom Jan to Sept 1982*	231,100,000	716,000,000.00	3.10

*Analysis of prescribing by therapeutic class, Central Services Agency, Northern Ireland Report 1982.
*Northern Ireland Health and Social Services, Central Services Agency, Annual Report 1982.
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TABLE 3—Study practice analysis by number of prescriptions, November 1982

Therapeutic class	Generic preparations	Generic alternatives		Proprietary preparations only	Total No of prescriptions (%)
		Potentially available	Actually available		
Preparations:					
01-02	Acting on the nervous system	17	249	196	202
03	Acting on the gastrointestinal system	14	24	10	24
04	Acting on the cardiovascular system and diuretics	16	158	131	220
05	Acting on the respiratory system	16	41	41	237
06	Acting on the eye	10	10	10	10
07	Acting on the stricture and urinary tract	3	10	10	13
08	Acting on the ear	11	110	110	124
09	With hormone or antihormone activity	22	30	23	41
10	Affecting haemostasis and the blood	10	6	6	40
11	For the treatment of malignant disease	10	10	10	44
12	For nutritional disorders and the blood	10	10	10	50
13	Affecting allergic reactions	10	23	10	193
14	Acting locally on the skin and mucous membranes	10	10	10	226
15, 16, 17, 18, 19, 20, 21	For immunology	0	44	0	44
22	Used in diagnosis, dressings, and appliances	0	0	0	100
23	Disinfectants, antiseptics, and industrial sprays, and other drugs and preparations	7	0	6	13
0	Unclassified	0	0	0	138 (5)
Total No (%)	164 (7)	818 (31)	592	1365 (53)	2625 (100)

CAUSE

Table II gives the primary causes of death for each case, and table III gives the range and frequency of contributory causes (where mentioned). The details include only the accounts of the records available in the practice book of death certificates. The details of causes of death in the practice community not accessible to the general practitioner occur in the following cases: (i) sudden and unexpected deaths referred to the coroner and when no certificate has been issued; (ii) some deaths occurring in hospitals.