

Research papers

'Last seen before death': the unrecognised clue in the Shipman case

Guy Houghton MA MB FRCGP

GP Advisor, Birmingham Public Health Hub, and Senior Partner, Greenbank Surgery, Hall Green, Birmingham, UK

ABSTRACT

There have been very few mortality surveys at individual practice level. This lack of robust comparative information is one of the reasons why the full extent of Harold Shipman's possible murderous activities went unrecognised until Richard Baker undertook his comprehensive study as a part of the official Shipman Inquiry.

This review looks at 752 deaths over 11 years in a single suburban Birmingham practice. In addition to recording the age and sex of the patient, and the place and cause of death, the extra, previously unrecorded, parameter of when the general practitioner last saw the patient alive was included. Only

8% of patients were seen alive on the day of death, in comparison with Dr Shipman actually in attendance at almost 20% of his patients' deaths.

Although these are only the results of a single practice study, they offer a benchmark for further comparative data collection to define patterns of mortality in the community. They also suggest only minor modifications to the notification of cause of death procedures are needed to identify another Shipman.

Keywords: cause of death, last seen before death, place of death

Introduction

The discovery of the full extent of Dr Harold Shipman's murderous exploits has highlighted the lack of corroboration of general practitioners' (GPs') evidence in death certification. As a result of the Shipman Inquiry led by Dame Janet Smith, there have been proposals for changes in death certification in the United Kingdom and in the role of the coroner.¹ Suggestions include the concept of a medical coroner, the need for signatures of two independent practitioners, death registers with greater epidemiological scrutiny and automatic referral to the coroner of any case where the doctor is the only person present at the moment of death.²⁻⁵

Although routine information from death certificates is entered nationally into Office for Population Censuses and Surveys (OPCS) statistics, there remains very little available practice-specific data. Recent studies on deaths in general practice have been concerned with place and cause of death, particularly concentrating on quality issues in palliative and terminal care and looking to reduce avoidable factors associated with premature deaths.⁵⁻⁷ Although the

form for the notification of cause of death asks when the certifying practitioner last saw the patient before death, there have been no studies looking at the significance of this statistic. There would have been no indication for the Registrar of Births and Deaths to have recognised the difference between the certificates issued in hospital, where the certifying doctor might be expected to have seen the patient on the day of death, and in general practice where it is much less likely.

As a part of the Shipman Inquiry, Richard Baker had to perform an exhaustive analysis of the patterns of death among Dr Shipman's patients in order to demonstrate the likelihood of unnatural death. Not only did he have to go through clinical records, surviving cremation certificates, and data obtained from the registration of deaths concerning Dr Shipman's patients, but he also had to collect comparative data from other general practices in the locality of Todmorden. As a result he was able to show three features related to the possibility of unlawful killing:

- 1 the twofold increase in the percentage of deaths between 1 pm and 7 pm (55% of Shipman's patients against 25% of those of other doctors)

- 2 the threefold increase in deaths taking place within half an hour of the onset of symptoms (60.4% against 22.7% respectively)
- 3 the 20-fold increase in the number of deaths actually attended by the GP. Dr Shipman was present at one in five of all his patients' deaths (19.5%) as compared with less than once in 100 (0.8%) for other practices.⁸

Baker and his colleagues have suggested a number of further parameters for a system of monitoring deaths in general practice.⁹ So, in view of this lack of published data on deaths in general practice, I decided to review our own practice mortality statistics to see if any could be used simply to identify potential Shipman situations.

Method

Over the last 11 years, since we started to use computerised patient data routinely for clinical and administrative purposes at Greenbank Surgery, I have kept an additional paper record of details of all patient deaths, whether at home or in hospital. These details were noted at the time of completing the front of the Lloyd George envelope when the health authority requested return of a patient's records, following official notification of death.

We are a four partner training practice in suburban Birmingham. The practice population has been relatively stable with an annual turnover until recently of 8% and a list size which is increasing from 6600 to 7200. The practice profile has tended to a higher than average proportion of elderly, with 9% between 65 and 74 years of age and 11% over 75. New registrations are reducing this at the same time as increasing the Asian ethnic minority to more than 20%. In terms of deprivation, we receive 455 additional Jarman payments, 400 at level J1, 50 at J2 moderate and five at J3 high-level deprivation.

There was a cumulative total of 752 deaths over the 11 calendar years. The year-on-year figures are within variation limits expected by Poisson calculation. The most recent comparable overall data were published by Holden *et al*, who collated details of 1263 deaths from four practices in St Helens between 1992 and 1996.⁵ Their demographic mortality details were very similar to those at Greenbank Surgery although there is a greater number of very elderly people in Hall Green.

I collated the following information, where available, about every patient's death:

- 1 age of patient in age bands (under 50, 50–59, 60–69, 70–79, 80–89, 90+ years)
- 2 sex (male, female)
- 3 place of death (home, hospital, nursing home, hospice, away/other – including in street, on holiday etc)
- 4 cause of death: principal cause on certificate of notification of cause of death (summarised in the following categories):
 - vascular, including ischaemic heart disease, stroke, thromboembolic disorders
 - cancer, to include all malignant processes and leukaemias
 - respiratory, usually bronchopneumonia or chronic airways obstruction
 - murder/suicide
 - other, comprising:
 - infection (septicaemias)
 - trauma (usually fractured neck of femur)
 - renal (acute or chronic renal failure)
 - alimentary (gastrointestinal bleeding)
 - neurological disorders (e.g. Parkinson's disease or motor neurone disease)
 - old age
 - unknown
- 5 last seen before death by GP member of practice (on day of death, within 7 days, within 2 weeks, within 4 weeks, within 8 weeks, within 12 weeks, more than 12 weeks before).

The data were entered onto a simple Excel spreadsheet and the results correlated using pivot tables.

Results

In view of the marked discrepancy between Dr Shipman's presence at the point of death compared with the other Todmorden GPs, I concentrated on the analysis of patients actually seen at home by a GP on the day of death. The results are summarised in the tables. Tables 1 and 2 show the overall demography of age/sex and place/cause of death of all the 752 patients in the practice. Tables 3, 4, 5 and 6 all relate to the correlations between when patients were last seen alive and their sex, age at death, and place and cause of death.

Just 61 or 8% of all patients dying were seen by a GP on the day of death. Eleven of these patients were actually certified dead at the hospital, three in the hospice and a further four in nursing homes, which Baker found to be a safe haven from Dr Shipman's nefarious activities. Seventeen patients died at home of known cancers: although the presence of such confirmed pathology does not necessarily exclude a hastened death, friends and relatives are likely to be involved as carers. We are left with a total of 26 patients seen alive by a GP at home on the day of

Table 1 Age/sex mortality data at Greenbank Surgery (n)

Age band (years)	Sex		Total	%	Cumulative %
	Female	Male			
Under 50	18	22	40	5	5
50–59	11	29	40	5	10
60–69	42	41	83	11	21
70–79	87	106	187	25	46.5
80–89	141	128	269	36	82
90+	101	27	128	17	100
Total	399 (53%)	353 (47%)	752	100	

Table 2 Cause/place of death of patients at Greenbank Surgery (n)

Cause	Place of death						Total
	Not known	Away	Home	Hospital	Nursing home	Hospice	
Unknown	4	4	9	18	2		37
Alimentary		1	3	14			18
Cancer	2	1	40	97	6	52	198
Septicaemia			3	13	1	1	18
Renal failure			2	15			17
Murder			4				4
Neurological			8	15	8	1	32
Old age			14	2	5		21
Respiratory			15	70	9		94
Suicide		3	2	1			6
Trauma		1	1	9			11
Vascular	1	13	110	162	10		296
Total	7 (1%)	23 (3%)	211 (28%)	416 (55%)	41 (5.5%)	54 (7%)	752

death, who were certified as dying from potentially uncorroborated causes over an 11-year period. Twenty patients were certified as dying of vascular causes, two of respiratory causes and four of old age.

This means that, for our practice, we are looking at three cases a year in which a GP attended the patient

on the day of death: I have not the recorded details of whether the doctor was actually present at the time of death, but the Todmorden study and memory suggests that the expected number would be less than seven over the 11 years or rather fewer than one per year.

Table 3 Last seen/sex data for patients at Greenbank Surgery (n)

Last seen alive	Sex		Total	Cumulative %
	Female	Male		
On day of death	36	25	61	8
Within one week	118	108	226	38
Within 2 weeks	52	44	96	51
Within 4 weeks	60	72	132	68.5
Within 8 weeks	65	46	111	83
Within 12 weeks	26	21	47	89.5
More than 12 weeks	38	32	70	99
Not known	4	5	9	1
Total	399 (53%)	353 (47%)	752	100

Table 4 Last seen/age data for patients at Greenbank Surgery (n)

Last seen alive	Age band (years)						Total	Cumulative %
	Under 50	50–59	60–69	70–79	80–89	90+		
On day of death	2	4	6	13	21	15	61	8
Within 1 week	6	6	19	69	81	45	226	38
Within 2 weeks	4	8	10	19	38	18	97	51
Within 4 weeks	6	4	20	39	46	16	131	68.5
Within 8 weeks	9	10	12	27	40	13	111	83
Within 12 weeks	1	1	9	11	18	7	47	89.5
More than 12 weeks	11	5	5	12	25	12	70	99
Not known	1	2	2	1	2	1	9	1
Total	40 (5%)	40 (5%)	83 (11%)	188 (25%)	271 (36%)	127 (17%)	752	100

Conclusions

Much has been made of the fact that the current system of death certification failed to identify Dr Shipman's falsified notification of cause of death in so many people for so long. It is certainly true that there is a lack of corroborative evidence of cause of death, particularly when one doctor has been the sole

medical attendant of a patient for several years, which is more likely in the context of a single-handed GP. However, it appears that the initial doubts and concerns expressed by neighbouring practitioners about the frequency of cremations, and the undertakers' surprise at the number of patients dying fully clothed in the afternoon were disregarded since it was felt inconceivable that a doctor might be systematically killing his patients. Although we now know

Table 5 Last seen/place of death for patients at Greenbank Surgery (n)

Last seen alive	Place of death						Total
	Not known	Away	Home	Hospital	Nursing home	Hospice	
On day of death			43	11	4	3	61
Within one week		1	90	104	21	10	226
Within 2 weeks			17	65	4	10	96
Within 4 weeks	1	7	25	84	3	12	132
Within 8 weeks	1	5	14	72	3	16	111
Within 12 weeks	1	1	8	32	3	2	47
More than 12 weeks	2	9	13	42	3		70
Not known	2		1	6			9
Total	7 (1%)	23 (3%)	211 (28%)	416 (55%)	41 (5.5%)	54 (7%)	752

Table 6 Last seen/cause of death data for patients at Greenbank Surgery (n)

Last seen alive	Cause						Total
	Vascular	Cancer	Respiratory	Other	Murder/ suicide	Old age	
On day of death	22	22	10	1		6	61
Within 1 week	94	47	31	37		11	226
Within 2 weeks	36	30	13	17		1	96
Within 4 weeks	52	42	17	18		2	132
Within 8 weeks	39	38	10	21	2	1	111
Within 12 weeks	25	10	4	8			47
More than 12 weeks	26	5	9	22	8		70
Not known	1	4		4			9
Total	296 (39%)	198 (26%)	94 (12.5%)	131 (17.5%)	10 (1%)	21 (2.5%)	752

this was the case, we must take care not to be overtaken by the extreme converse that therefore all doctors must be treated as if they are likely to be potential murderers.

Baker has shown that Dr Shipman was present at 20% of all his patients' dying at home. In our practice fewer than 6% of patients certified as dying in their homes were seen alive on the day of death, let alone with one of us in attendance. As I pointed out in the introduction, until now, a registrar of deaths could not

have been expected to appreciate the significance of the 'last seen before death' question on the notification of cause of death form. What is needed is some form of corroboration or formal notification that another doctor has seen the patient – perhaps within the previous two weeks – and is in a position to confirm the cause of death. This should be reinforced by the informal enquiries made by the registrar at the time of registration. Any remaining doubts must of course be notified to the coroner.

Even if all our 26 deaths at home had been passed on to the Coroner's Office, this is fewer than half of the 59 that we had to notify when the patient had not been seen by a GP within the two-week period before death. It is interesting to note that there were an almost equivalent number of 25 who died at home and had not been seen in the two-week period but had been seen within four weeks. If certification within a month were to be allowed with the possibility of a named second doctor who could be contacted in case of doubt or disquiet, there may be no further burden on the current registrar and coroner systems.

I would suggest that wholesale changes are not necessary in the aftermath of the Shipman affair, if we continue to collect and publish simple routine data with sufficient scientific rigour to identify and challenge possible abnormal patterns of behaviour. More studies are required to confirm the wider applicability and generalisability of our practice data. I have supplied the comparative tables between Hall Green and St Helens in Appendix 1 so that any interested practitioner can compare his or her individual practice statistics with published data.

ACKNOWLEDGEMENTS

This study was a part of a programme of work commissioned by the Birmingham Public Health Hub. GH was entirely responsible for design, data collection, analysis and writing of the paper, but would like to thank Professor Richard Baker for his assistance in the initial discussions.

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CONFLICTS OF INTEREST

None.

ADDRESS FOR CORRESPONDENCE

Dr Guy Houghton, 102 Delius House, Symphony Court, Birmingham B16 8AG, UK. Tel: +44 (0)121 689 5727; email: guy@houghtons.org.uk

Accepted 8 October 2003

Appendix 1

Comparative mortality data in Hall Green and St Helens

Age and sex	Total	Age band (years)	Male	Female	Total
Hall Green	752	0–54	37	24	61 (8%)
		55–74	117	91	208 (28%)
		74+	199	284	483 (64%)
Total			353 (47%)	399 (53%)	
St Helens	1263	0–54	66	37	103 (8%)
		55–74	285	220	505 (40%)
		74+	273	382	655 (52%)
Total			624 (49.5%)	639 (50.5%)	

Hall Green list size 7000, over 11 years; St Helens list size 30 790, over 40 months

Place of death	Place <i>n</i>	Hospital <i>n</i> (%)	GP care <i>n</i> (%)	Hospice <i>n</i> (%)	Other <i>n</i> (%)
Hall Green	752	415 (55)	252 (33)	54 (7)	30 (4)
St Helens	1263	733 (58)	482 (38)	11 (1)	37 (3)

Cause of death	Major cause <i>n</i>	Vascular <i>n</i> (%)	Malignancy <i>n</i> (%)	Respiratory <i>n</i> (%)	Other <i>n</i> (%)
Hall Green	752	296 (39)	198 (26)	94 (12.5)	164 (22)
St Helens	1263	553 (44)	351 (28)	172 (13)	187 (15)