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Papers

A survey of general practitioners' views on autopsy reports

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Abstract

Aims—To study the views of general practitioners on the quality and utility of autopsy reports, and on autopsies in general.

Methods—For a period of six months, a questionnaire was enclosed with each autopsy report sent to a general practitioner from the mortuary at Manchester Royal Infirmary.

Results—Most (93.3%) general practitioners found the autopsy report useful, and many (66.7%) thought the bereaved relatives would do so too. However, only a minority (25.2%) would discuss the report the relatives. A considerable proportion (20.0%) found the cause of death surprising, and a significant number (10.4%) felt the report would modify their future clinical practice. There was approval of autopsies in general, with most (88.6%) agreeing that autopsies reveal lesions not detected in life, and many (74.4%) indicating that loss of the autopsy would impair severely the monitoring of clinical standards.

Conclusions—General practitioners appreciate autopsy reports, which may have a significant impact on clinical practice. Autopsy reports provide both case audit and information for relatives.

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 $Keywords: autopsy; family \ practice; \ grief; \ medical \ audit$

Autopsy rates have been declining gradually over several decades in many parts of the world¹⁻⁵ with few exceptions,⁶⁻⁸ despite the procedure's well established role in disclosing clinical diagnostic inaccuracy.^{9 10} Many factors underlie this decline, but one of the most potent is likely to be the attitudes of both health care professionals and the general public. Other workers have studied the views of the general public, ¹¹⁻¹⁵ embalmers and funeral directors, ^{16 17} medical students, ¹⁸⁻²³ hospital clinicians, ²⁴⁻²⁹ and pathologists. ^{25 30-32} Previous studies have examined the distribution of autopsy reports to general practitioners, the understanding that general practitioners have of their access to autopsy services and of which cases should be referred to the coroner, and general practitioners' overall views on

autopsies.³³⁻³⁶ Our study concentrates on general practitioners' views on the utility of individual reports.

Methods

Reports on autopsies carried out by the adult autopsy service at Manchester Royal Infirmary are sent routinely to general practitioners. From 1 May to 30 October 1995, each was accompanied by a questionnaire, an explanatory letter, and a self-addressed return envelope. The questionnaire included a brief section on how the subject's death had been reported to the general practitioner, and a longer section on the characteristics of the report and the value of its content. A few questions on the respondent's views on autopsies in general were taken from a previous study.20 Some of the responses were made on closed categorical scales (tables 1-3), but most were made on five point Likert scales (tables 4 and 5). The last page of the questionnaire was an open-ended invitation to comment on the content of any of the preceding closed questions. Numerical data was analysed with the software package SPSS (Chicago, Illinois, USA). The first 20 returns were intended to be a pilot study, but scrutiny of these revealed that there were no difficulties with the design of the study that required any remedy.

Results

Of 395 questionnaires sent out, 256 accompanied reports on patients who had died in the community and who were subjected to autopsy at the request of the coroner. Of the remaining 139 cases, 129 were coroner's autopsies carried out on patients who had died in hospital; only 10 were clinical interest autopsies, and none of these had been requested by general practitioners. One hundred and thirty five (34.2%) were returned with usable data; eight more were returned blank because they had been sent to the wrong general practitioner, or because the patient's notes were no longer available, despite the fact that all these reports were sent out within three days of autopsy. The completed returns indicated that 24% of respondents had seen the patient during the last week of life, 32% in the last month, 30% in the last year, and 9% more than a year before death; 1% could not remember and 4% did not respond to this question. Very few were present at

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Table 1 Responses to the question "When did you first know of the patient's death?"

	Number (%)	
Present at death	1 (0.7)	
Within one hour	14 (10.4)	
Within one day	71 (53.3)	
Within one week	35 (25.9)	
In over a week	9 (6.7)	
No response	5 (3.7)	

Table 2 Responses to the question "How did you find out about the death?"

	Number (%)	
Own observations	3 (2.2)	
Relatives	29 (21.5)	
Police	25 (18.5)	
Hospital clinical personnel	29 (21.5)	
Mortuary staff	14 (10.4)	
Other sources	28 (20.7)	
No response	7 (5.2)	

Table 3 Summarised responses to the question "How many days, from the patient's death, has it taken for this report to come to you?"

	Number (%)	
Within one day	1 (0.9)	-
Within one week	63 (46.6)	
Within a fortnight	43 (31.8)	
Within a month	6 (4.4)	
Over a month	3 (2.2)	
No response	19 (14.1)	

death, but the majority knew within one day that death had occurred. A few were not aware of the death for over a week, although at least a proportion of these general practitioners were on annual leave when death had occurred (table 1). They were first informed of the deaths by a variety of agents, including clinical personnel at the hospital, relatives of the deceased, the police, and mortuary staff (table 2). The autopsy report had reached the general practitioner within one week in nearly half the cases, and very few took over a month (table 3); again, the longer delays were associated with the general practitioners' absence. Table 4 indicates respondents' views on a number of aspects of the autopsy report itself, and table 5 is concerned with their views on the autopsy in general.

Discussion

Our mortuary has a public mortuary function, serving the City of Manchester, as well as being the hospital mortuary for Manchester Royal Infirmary. With the coroner's permission, we routinely send copies of our autopsy reports to general practitioners, but until this study, we had no understanding of whether this practice was valued by the recipients. There is an enormous literature on the potential benefits of autopsy reports³⁷ but this relates almost exclusively to the value of the autopsy in a hospital setting.

We have no personal information about the recipients of our questionnaires, apart from

Table 4 Responses to attitude statements relating to the autopsy reports and their contents

A	ttitude statement	Strongly agree	Agree a little	Neither agree nor disagree	Disagree a little	Strongly disagree	Mean rank*	No response
1 I 1	found the report useful	102 (75.6)	24 (17.8)	7 (5.2)	1 (0.7)	1 (0.7)	1.3	0
l I a	anticipate the patient's relatives will find							
th	e report useful	58 (45.0)	32 (28.4)	25 (19.4)	5 (3.9)	9 (7.0)	2.3	6
· I v	was surprised that an autopsy was carried							
οι	at	6 (4.5)	4 (3.0)	10 (7.5)	5 (3.7)	109 (81.3)	4.5	1
Ιf	found the report to be too long	10 (7.5)	18 (13.4)	23 (17.2)	36 (26.9)	47 (35.1)	3.7	1
T	he report will modify my future clinical							
pr	ractice	4 (3.0)	10 (7.5)	51 (38.1)	20 (14.9)	49 (36.6)	3.7	1
Îí	found it difficult to find the statement of	` ′	` '	` '	, ,	` '		
th	e cause of death	6 (4.5)	10 (7.5)	14 (10.5)	20 (15.0)	83 (62.4)	4.2	2
	he circumstances leading to the patient's	- \/	· · · - /	- \ /		` -/		
	eath were clearly summarised	68 (50.4)	41 (30.4)	13 (9.6)	8 (5.9)	5 (3.7)	1.8	0
	have discussed the report with the	00 (3012)	(551-)	(,,,,	- ()	- ()		-
	latives or intend to do so	13 (10.4)	21 (16.8)	32 (25.6)	11 (8.8)	48 (38.4)	3.5	10
	he autopsy report was the first indication	13 (10.1)	-1 (10.0)	3= (=310)	(0.0)	()		- *
	got that my patient had died	12 (8.9)	0	4 (3.0)	3 (2.2)	116 (85.9)	4.6	0
	he autopsy report was the first indication	12 (0.)	v	1 (3.0)	3 (2.2)	110 (05.7)		v
	got from the hospital that my patient had							
	ed	20 (15.0)	1 (0.8)	4 (3.0)	4 (3.0)	105 (78.2)	4.3	1
	he autopsy report was the first indication	20 (15.0)	1 (0.0)	1 (3.0)	1 (3.0)	103 (10.2)	1.5	•
	got of how my patient had died	58 (43.3)	17 (12.7)	7 (5.2)	9 (6.7)	43 (32.1)	2.7	1
	he autopsy report was the first indication	J0 (4 3.3)	17 (12.7)	1 (3.2)	9 (0.7)	45 (52.1)	2.1	•
	got from the hospital of how my patient							
	ad died	54 (41.2)	9 (6.9)	7 (5.3)	9 (6.9)	52 (39.7)	3.0	4
			1 (0.7)	9 (6.7)	5 (3.7)	117 (86.7)	4.7	0
	wish I had never seen the report he cause of death given on the report was	3 (2.2)	1 (0.7)	9 (0.7)	3 (3.1)	117 (00.7)	4.1	U
		17 (10 0)	10 (7.5)	10 (12 5)	15 (11.3)	73 (54.9)	3.9	2
	complete surprise to me	17 (12.8)		18 (13.5)			3.6	0
	he patient's death was expected	14 (10.4)	18 (13.3)	27 (20.0)	20 (14.8)	56 (41.5)	3.0	U
	he reason that the autopsy was carried	114 (04 4)	10 (7.4)	2 (1 5)	3 (2.2)	6 (4.4)	1.3	0
	at is clear to me	114 (84.4)	10 (7.4)	2 (1.5)	3 (2.2)	6 (4.4)	1.5	U
	he autopsy report is written in a helpful	00 ((5 0)	25 (25 O)	0 (5 0)	2 (1.5)	1 (0.7)	1.4	0
	anner	89 (65.9)	35 (25.9)	8 (5.9)	2 (1.5)	1 (0.7)	1.4	U
	he report makes it difficult to determine							
	e relation between clinical observations	F (2 P)	7 (5 2)	26 (10 5)	36 (27.1)	59 (44.4)	4.0	2
	nd pathological findings	5 (3.8)	7 (5.3)	26 (19.5)			4.0	2
	he report contains too much jargon	2 (1.5)	5 (3.8)	23 (17.3)	27 (20.3)	76 (57.1) 3 (2.3)	1.6	2
	found the report interesting he patient's death was a complete	77 (57.9)	41 (30.8)	9 (6.8)	3 (2.3)	3 (2.3)	1.0	2
		38 (28.1)	17 (12.6)	21 (15.6)	20 (14.8)	36 (26.7)	3.0	3
su	rprise to me	20 (20.1)	17 (12.0)	21 (15.0)	20 (14.0)	30 (20.7)	3.0	9

^{*}Mean ranks are calculated by ascribing a score of 1 to strongly agree, 2 to agree a little, etc.

Numbers in parentheses are percentages, calculated after exclusion of non-responders from the denominator.

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> their names and practice addresses; therefore, we cannot make the conventional claims that the views of those who responded are likely to be representative of those who did not. We chose not to send follow up letters to non-respondents, which largely explains the low response rate, because we wanted the respondents' immediate responses to the reports, and because the pilot stage showed that some respondents felt unable to fill out the questionnaire after the patients' notes had been returned to the Family Health Services Authority. Surveys of general practitioners are notorious for producing low response rates.3

> Even with a low return rate, we feel that the findings are important, and support our view that the distribution of autopsy reports to general practitioners is worthwhile. For instance, 102 of the 135 (75.6%) respondents agreed strongly that they found the report useful, and even if we assume that all the non-responders held the contrary view, this would still indicate a success rate of 25.8% (102 of 395). Similarly, even the small proportion who feel the report may change their clinical practice is, in our view, ample justification for the generation and distribution of one extra copy of each report.

> We did a follow up survey by telephone of those who had indicated that they might change their clinical practice, and a number of interesting insights were gleaned. Some could not be contacted, but we can guess the response of the general practitioner who reintroduced warfarin into a psychotic patient's regimen after discharge from hospital (without reinstituting monitoring of prothrombin times despite previous poor anticoagulant control) to learning of the patient's death from an acute subdural haemorrhage. Comments by those who could be contacted were mainly about policy issues, rather than specific features of management. For instance, one general practitioner indicated that an intention to institute regular home visits to elderly patients who did not attend the surgery was crystallised into action by our finding of an unanticipated bronchial carcinoma in such a patient, and another signalled an intent to chase up younger non-attenders after a 38 year old man died of hypertensive heart disease after failing to attend follow up appointments. More specific changes are illustrated by a general practitioner

in a deprived inner city area who indicated that an autopsy report had alerted him to a better understanding of the possible sites of sepsis in intravenous drug abusers.

The majority of respondents anticipated "that the relatives will find the report useful", which contrasts with the observation that only 27.2% had discussed, or intended to discuss, the report with relatives. Several respondents indicated that their lack of intention to discuss the report with relatives was because they had no means of contacting them, or that they felt inhibited about contacting individuals on the lists of other general practitioners. Others may have been inhibited by the standard admonition that appears on each report, at the request of the coroner, that the content should not be disclosed to a third party without his permission. Anecdotal evidence suggests that some coroners prevent the dissemination of reports through any route, 39 even though the Coroners' Society takes the view that it is appropriate for coroners to forward copies of autopsy reports general practitioners who provide a stamped, self-addressed envelope. Relatives have no statutory rights to details, and so a general practitioner in possession of a copy of an autopsy report may be in an invidious position when asked for details. Autopsies may reveal findings relevant to the future wellbeing of surviving relatives, 40 and in such cases the general practitioner may feel a moral responsibility to pass on such information even when this is in conflict with the legal requirement of confidentiality. We can only suggest that general practitioners concerned by such conflicts should explain the situation to the coroner, but that they should be prepared for refusal to divulge details to relatives if an inquest is to be held, at least until the hearing is over.

The utility of the autopsy report to relatives may, therefore, be compromised by the structure of the health care system and by the requirements of the legal system, a difficulty which might be addressed if and when a long overdue overhaul of the legal aspects of death certification takes place.41 This is an important issue because accurate information about a relative's death, such as that derived from autopsy, can help families deal with grief. 42 43 In general, hospital staff make few systematic

Table 5 Responses to attitude statements about the autopsy in general

	Attitude statements†	Strongly agree	Agree a little	Neither agree nor disagree	Disagree a little	Strongly disagree	Mean rank*	No response
22	The only justification for autopsy is the suspicion of serious crime	10 (7.6)	6 (4.6)	10 (7.6)	20 (15.3)	85 (64.9)	4.2	4
23	The autopsy often reveals pathological processes not detected in life	79 (59.4)	39 (29.3)	6 (4.5)	5 (3.8)	4 (3.0)	1.7	2
24	Autopsies can be interesting even if no unanticipated findings are made	50 (37.9)	52 (39.4)	18 (13.6)	7 (5.3)	5 (3.8)	2.0	3
25	The autopsy is a thoroughly unpleasant procedure	17 (12.8)	26 (19.5)	38 (28.6)	23 (17.3)	29 (21.8)	3.1	2
26	Without the autopsy, our ability to monitor standards of clinical practice would be impaired severely	63 (47.7)	35 (26.5)	18 (13.6)	11 (8.3)	5 (3.8)	1.9	3
27	The autopsy represents unacceptable mutilation of a human being	6 (4.5)	9 (6.8)	19 (14.3)	25 (18.8)	74 (55.6)	4.1	2

Numbers in parentheses are percentages, calculated after exclusion of non-respondents from the denominator.

Mean ranks are calculated by ascribing a score of 1 to strongly agree, 2 to agree a little, etc.

[†]These statements are based on items in a previous study.²

Table 6 Cause of death on reports where respondents strongly agreed with the statement "the cause of death was a complete surprise to me'

Case	Sex and age (years) of patients	Cause of death
1–7	F 77; M 80; M 75; M 72; M 56; M 52; M 36	Complications of coronary artery atheroma
8	M 69	Pulmonary embolism associated with deep vein thrombosis
9	M 36	Mitral valve prolapse
10	F 60	Acute subdural haemorrhage; patient on warfarin
11	M 73	Subarachnoid haemorrhage associated with berry aneurysm
12	F 37	Bronchopneumonia; carcinoma of the bronchus
13	F 84	Primary malignant tumour of the liver
14	M 37	Overdose of dothiepin

No details available for three cases because of obliteration of case numbers on returned question-

efforts to provide such assistance by discussing autopsy results with relatives, although paediatricians are often an exception.44 45 Pathologists may contribute to postautopsy conferences with bereaved relatives, especially the bereaved parents of children, 44 46 47 but this is not yet standard practice in the UK. In a service like ours, where the majority of the autopsies are on subjects who died outside hospital, the general practitioner represents the only realistic route of disseminating autopsy results to relatives.

In this hospital, there is a centralised office (known locally as the RMO's Office), which deals with issues such as death certification and liaison with the Coroner's Office, but it does not concern itself with subjects who die outside of the hospital. Because of this, and to facilitate rapid completion of autopsies, the mortuary staff contact general practitioners to determine whether they feel able to issue Death Certificates in such cases. By this means they provide the general practitioner with the first indication of the patient's death in 10.4% of cases, and in another 8.9% receipt of the autopsy report appears to perform the same function. This last figure is surprising, as the police, the mortuary staff, or a member of the RMO's Office staff telephone general practitioners' surgeries soon after each death. We can think of no simple explanation, apart from poor communication within surgeries, but our finding coincides with a previous observation that general practitioners often learn of their patients' deaths only after a delay.4

One of the benefits of autopsy is its function in audit, 10 37 a feature supported by the fact that 40.7% of respondents were surprised by the patient's death, and 20.3% were surprised by the cause of death. Table 6 provides details of some of the cases where general practitioners were surprised by the cause of death. Almost all cases were coroner's cases, recently shown to reveal many clinically silent lesions.49 Others have found that general practitioners have an imperfect understanding of which cases should be reported to the coroner,³⁶ which correlates with our observation that 7.5% were surprised that autopsy had been carried out, and that only 91.8% understood why. Overall, general practitioners agree that the autopsy reveals diagnoses not detected in life, and that it has a role outside the investigation of crime, including the audit of clinical practice. They tended to disagree with the view that autopsies repre-

sent unacceptable mutilation, and to agree that they can be interesting even if they demonstrate no unanticipated lesions.

This study was conceived initially as an audit of the quality of our reports. These are full reports, typically consisting of patient identification data, a list of the pathological lesions, a summary of the clinical presentation, a description of the findings, brief explanatory comments that may correlate clinical and pathological observations, and a cause of death in the standard World Health Organisation format. This format reflects the recommendations of the Royal College of Pathologists.⁵⁰ One or more of these sections may be omitted at the discretion of the pathologist, for example when no clinical history is available. It is of concern that 12.8% of respondents found the statement of cause of death difficult to find, and that 20.9% found the report too long; one respondent requested that a condensed version be produced especially for general practitioners. However, very few disagreed with the contention that the report was written in a helpful manner, and few believed it contained too much jargon.

We know from informal discussions that many other autopsy services send copies of reports to general practitioners routinely, whereas some are forbidden to do so by their coroner. We even have an example where a coroner will not allow reports to be distributed within the hospital where the patient died. Our study suggests that general practitioners appreciate autopsy reports, and that they may have a significant impact upon practice, both as a form of case audit and feedback for relatives. Distribution of autopsy reports to general practitioners should become the norm, and legal barriers to this dissemination should be demolished.

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