Death certification and doctors' dilemmas:
a qualitative study of GPs' perspectives

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ABSTRACT

Background
Death certificate inaccuracies have implications for funding and planning public health services, health research and family settlements. Improved training has been identified as a way of reducing inaccuracies. Understanding the influences on certifying doctors should inform that training.

Aim
To explore what factors influence GPs as they complete death certificates.

Design
Focus groups held by teleconference with 16 GPs.

Setting
New Zealand general practice.

Method
Four teleconferenced focus groups were taped and transcribed. Transcripts were examined for emerging themes. Credibility, transferability and confirmability were underwritten by a clear audit trail.

Results
Participants identified two factors that influenced death certification: clinical uncertainty and the family. Other themes provided an understanding of the personal and professional concerns for GPs.

Conclusion
Improving death certification accuracy is a complex issue and needs to take into consideration factors that influence certifiers.

Keywords
certification; clinical practice variation; death certificates; epidemiology; family practice; uncertainty.

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INTRODUCTION

Death certification became a statutory obligation in England in the 1830s, and a state function in the US in 1844.[1] Information on causes of death has been published in New Zealand since 1872 for Europeans, and 1920 for Maori.[2] The completed certificate attests to the fact and cause of death. Death certificates now have additional functions:[3–5]

- to monitor trends and patterns in disease;
- to guide health promotion, resource allocation, service planning, priority determination;
- research and epidemiology; and
- settlement of estates, welfare and pension entitlements and insurance payments.

The consequences of erroneous information are significant, not only for families, but also for health planners and funders.

International reports of inaccuracies in death certificates range from 20–65%.[6–9] Inaccuracies can emerge from the initial entry by the attending doctor or coroner, and the assignment of codes by coders. Attempts to improve accuracy have been through training certifiers, audit and review,[3–5] re-design of the certificate and updated guidelines.[10]

Occasional reference has been made to the possibility that the attitude of medical practitioners influences inaccuracies.[8,11,12] Bloor described death certification as one of a number of activities where 'wide and largely unacknowledged variations in practice occur with each practitioner investing his or her own practices with moral worth'.[12] Maudsley and Williams have indicated a need to go beyond the 'traditional perspective' to improve the quality of death certification.[3]

In New Zealand the Registrar General keeps the register of the causes of death as submitted on each death certificate or coroner's report. Approximately 11% of deaths have postmortem examinations and the subsequent reports are taken into consideration in stating the cause of death.[2]

The New Zealand Medical Certificate of Causes of Death has been designed in accordance with the World Health Organisation's recommended

How this fits in

Causes of inaccuracies in death certification are largely attributed to inadequate training and coding errors and, occasionally, to the attitudes of the certifiers. This study exposes uncertainty, the role of the family of the deceased, and cultural issues as factors influencing New Zealand GPs completing death certificates.

International Form of Medical Certificate of Cause of Death. This provides for international uniformity of the questions on the certificate.

The doctor attending the patient during the final illness completes the death certificate. Under some circumstances the doctor must report a death to the coroner and the Coroners Act 1988 (Section 4) specifies the deaths that need to be reported. These include every death that appears to have been without known cause, or suicide, or unnatural or violent.

In New Zealand GPs complete approximately 30% of death certificates (R Smyth, personal communication, 29 Nov 1995). The aim of this study was to explore what New Zealand GPs consider influences them as they complete death certificates.

METHOD

Participants

Purposeful sampling of 16 GPs in active general practice was made to include those in urban and rural settings; solo and group practice; and with locum, hospice, private hospital/rest home commitments. The GPs were members of the Royal New Zealand College of GPs (RNZCGP) and independent practitioner associations. The GPs were first contacted by telephone and informed of the study. Each GP was then sent supporting information, following which they indicated whether they would participate.

Teleconferencing allowed all GPs access, no matter where they lived in New Zealand. Meetings were held in the evenings, and most GPs chose to participate from home.

Focus groups

Four focus groups were held by teleconference.[13–16] Each teleconference was of 60–90 minutes' duration, and comprised four GPs, a facilitator and the researcher, who made audiotape recordings but did not otherwise participate. Beyond the initial introduction, the format of each teleconference was unstructured.

Participants used first names only. Anonymity, confidentiality and respect for all participants' contributions were required. The facilitator had three prompts if there was a lapse in the discussion: past training; feedback about completed certificates; and death certificate for a patient seen to clutch his chest suddenly and die. The facilitator's principal role was to ensure that each GP had the opportunity to contribute. A further role was to guarantee that there was support following the teleconferences, should a participant feel the need.

Analysis

Each teleconference was recorded, and then transcribed in full. The transcriptions were analysed for emerging themes, guided by Lincoln and Guba's *Naturalist Inquiry* framework.[17] Key features of this method include a natural setting (general practice); use of tacit (intuitive) knowledge; purposive sampling; inductive data analysis; idiographic interpretation; special criteria for trustworthiness (credibility, transferability, dependability and confirmability); and tentative application.

The transcriptions were read exhaustively, annotations were made and key phrases and words were highlighted, cut out, and sorted according to themes. The researcher's supervisors then reviewed and critiqued the process and the findings.

RESULTS

Participants

The aim was to involve 16 GPs in four focus groups. We identified 20 potential participants. Of the first 18 approached, two declined because of other commitments coinciding with the planned teleconference dates, leaving 16 who agreed to participate. The participant's characteristics are shown in Table 1.

Two major themes

Two overarching themes emerged: clinical uncertainty in general practice; and the role of the deceased's family. These themes evoked the most discussion in all focus groups and were acknowledged by participants as factors influencing them in completing death certificates.

A number of other themes emerged, describing personal and professional challenges for GPs.

Clinical uncertainty

All participants talked of the experience of clinical uncertainty and its effect on stating the cause of death:

Table 1. Characteristics of participants (*n* = 16).

Age (years)	
30–39	3
40–49	10
50–59	3
Sex	
Male	10
Female	6
Practice structure	
Solo	3
Group	13
Practice type	
Urban	8
Rural	6
Academic (urban)	1
Locum (urban)	1

'Yes, I feel the same. I wish I were more accurate, but um, I often can't be. Um ... and having discussed things with the coroner over the years … some people who are ill in a general sense, and losing weight, and just unwell — he's happy to take that as bowel cancer, as indeed is the Cancer Society — to take as bowel cancer, and give free nursing services, to those sort of people, even though there has never been a proctological, pathological or even clinical diagnosis of cancer. So if it works in life, it works in death as well. It's inaccurate.'

It is in the nature of general practice to be confronted by emerging problems without diagnoses. For GPs uncertainty is normal:

Dr A: *'The final analysis is really that what we certify is often a … best guess … um situation.'*

Dr B: *'But the uncertainty is the reality.'*

Dr A: *'... and the uncertainty is the reality.'*

They use their skills to make a considered working diagnosis for the patient:

'Wearing my geriatric hat, I should have had, you know, all the hospital tests, and the diagnoses there in front of me. But very often there were people who had given up on rehabilitation long ago, and um, with sitting around in hospital, and … a pulmonary embolism or a bronchopneumonia seemed to be the likely cause. And certainly once they got to that stage you wouldn't be throwing x-rays and scans at them to try and find out why they were suddenly going off.'

This skill is also invoked when confronting sudden deaths:

'And in the area of sudden death … it's the area where there's a great deal of uncertainty. And that, both for people who have documented cardiac disease, we … we very … I certainly very frequently would resort to a diagnosis of acute myocardial infarction, with … a cardiac arrest. Although the certainty of that if examined closely is … pretty unclear.'

'Yeah, I have a similar sort of problem. Most, er, all the people who suddenly die. You think it's a catastrophic event. Is it a blood vessel in the heart, or is it a blood vessel in the head? And occasionally the coroner hasn't been that helpful in achieving an accurate pathological diagnosis. If there has been any hint of a pathological process in the past … even as simple as left ventricular hypertrophy on ECG …'

Age compounds uncertainty about a diagnosis. The older the patient, the less likely a diagnosis was pursued in life and the more likely management was guided by symptoms and overall comfort:

'Getting back to clinical correlations, though, I had to fill one in at the rest home the other day. And … she had heart failure for a while … I actually don't know what her heart failure was from. And then I thought she was getting better with my frusemide. And then she suddenly died in the night. Well, I mean, um, you know … I sort of made something up to put on the form.'

Most GPs felt that an effective way to reduce inaccuracies would be to allow a category for death from natural but unspecified causes. This would also reduce pressure from, and on, families. GPs talked, with a degree of cynicism, of their practice to use certain terms on death certificates in certain circumstances:

'But I still like hypostatic pneumonia.'

'I think that most of the diagnoses are a selection out of half a dozen.'

'I think that most of my Maori patients died of a myocardial infarction.'

'All those deaths are "myocardial infarction". All older people are "bronchopneumonia"; and everybody else has got "secondary cancers".'

'People die lots of heart disease, therefore that's a good thing to put down on the death certificate when they don't know.'

'I was speaking with the undertaker today, and he said we all need a rubber stamp thing "bronchopneumonia".'

'There might have been inferior vena cava pressure, which I find myself diagnosing a lot in people with um … hepatomegally.'

'... the last three elderly people that died of mine, all just decided that they had had enough. But you know, you lie and say that they had, you know, heart attack or something like that, but … [it] *gives more work for the National Heart Foundation.'*

One participant's Freudian slip for 'certificate' said much:

'That's what I've got on the counterfeit.'

Participants expressed concern that they might miss a death that was not from natural causes. They developed strategies for managing this uncertainty — having a high index of suspicion; using 'intuition'; and seeking a detailed account from the people close to the deceased.

No GPs questioned how inaccuracies arose. They did rue that inaccuracies happen:

'Or the science of medicine is still ... I mean, there's so much art in medicine … and I'm a firm believer in that, but I mean, science has got its part to play as well. And you know, it's a bit of a worry that the science of this particular area is so poor.'

The role of the family

Participants discussed the importance of the death certificate for relatives:

'The patient is gone, you know. I mean, for him it doesn't really matter what you write on the death certificate. I mean, it's important for the family.'

Without a death certificate, a family faces difficulties — starting with moving the body, then burial or cremation:

'I think for the relatives, it's as someone said … it's the final rite of ticketed passage, and it's almost a confirmation that they've done the right thing when the patient dies. I mean, if you don't give him a death certificate to allow the undertaker to come and so on, um, then they've got new problems to deal with. So I see it as quite an important ceremonial type process.'

Without certain details on the certificate there can be difficulty with insurance payouts and welfare benefits. And with certain details (for example, infectious diseases), there can be hurdles to transporting the body, or discomfort or stigma for subsequent generations:

'[In a novel I once read] *… it's a Japanese–English kind of story … and a geisha girl had committed suicide, and a GP went out to certify that death, and he wrote myocardial infarction, and felt that he had been en-nobled by hiding the fact of suicide from her family. And it occurs to me that, that's the most important value when I'm writing out a death certificate, is the protection of the family.'*

If death is anticipated, families often contact the GP beforehand to make the process easier:

'Patients come up, or their relatives bring them up to see us, because they think they might be dying in the next sort of month or so. And they want to be sure that we will do a death certificate.'

Some ethnic groups have customs that are significantly disrupted if postmortem examinations are undertaken. Participants described their difficulties in completing death certificates in those circumstances:

'I think the … the area where I probably write things where I may not be a 100% sure is, with um racial groups who don't cope well with people having postmortems.'

They described how pressure from the family can be compelling:

'We all have the pressure, and particularly among Maori people, very much a pressure than not, that there's not to be a postmortem.'

'With the Maori patient it really is like that. You just don't get a coroner … a coroner's case out of

it, even if you would like to, and you're not sure.'

Families' needs and feelings are wide-ranging. These are not always known at the time. While some want to know the content of the certificate at the time of death; some only become aware a few weeks later when they receive a copy of the certificate; and some may have regrets years later:

'I've had people who've said when someone else has filled out the death certificate, "the doctor wasn't certain, but said that he would fill out the death certificate and we wish now we had an autopsy so it would … we would have known what dad did actually die of".'

Other themes — personal and professional challenges

There are 'frequent' and 'infrequent' certifiers. One participant and her colleague completed 14 death certificates in the previous 4 months. Another completed 25 in 15 years. One infrequent certifier described how he read the rules, and studied the forms each time; and how it felt like 'quite a responsibility':

Dr J: *'What gives you discomfort when you're writing out the certificate?'*

Dr K: *'Just the not knowing. It gives me discomfort every time I'm not sure.'*

The dilemmas around death certification touched both the professional and personal integrity of GPs:

'Is it that we are acting dishonestly, in that we're signing something we're not sure about?'

Anxiety, guilt and levels of comfort about honesty were feelings commonly described:

'And then, we aren't honest actually, and we are liars, and we shouldn't be doctors.'

Around postmortem examinations there were mixed feelings — 'Do I have any justification for perpetrating violence on this family?'. Postmortems are uncommonly requested, and have an impact on the requesting GP:

'I'd felt pretty guilty after that, 'cos I'd sold that postmortem to the family, and I realised afterwards I was doing it more for my benefit than theirs.'

Although they considered postmortems a method of improving accuracy, some felt that their early student experiences and personal feelings influenced them:

'Given the way in which we are introduced to postmortems as medical students ... most of us have a certain amount of post-traumatic stress associated with the memory of what it's like …'

Most participants consulted the coroner, with a varied outcome:

'The coroners have a certain leeway, which I … presumably they're controlled fairly stringently by the Act they work under. But the leeway seems to be interpreted differently throughout the country, and we've got a coroner who's pretty almost to the point of being lax, one sort of thinks at times.'

Some coroners expected more evidence than a clinical diagnosis; and others expected GPs to enter a cause of death about which they were uncomfortable. There was an understanding that the beliefs and practices of the 'local coroner' varied throughout the country:

'It's not just a racial issue, is it? I've had more sensitivity towards Maori reluctant to have a postmortem, but, um, organising a postmortem is quite a hassle in a rural area. And ... it's something that I don't like ah, having to resort to. I frequently will discuss the clinical circumstances with, with the local coroner, who's happy to accept my, um, my reasonable guess.'

Participants found some coroners reluctant to pursue the cause of death via postmortem examination:

'Yeah. But the coroner is not [always] *medically qualified. So how on earth can they accept responsibility for it?'*

Some participants felt that the expense of postmortems was a factor in coroners' decision making.

GPs had experienced variable levels of training, and it was poorly recalled:

'It's not a lack of education, it's a lack of … I think death certification is unrealistic. It doesn't … it er … you're falsifying, um, reality. You

write a ... set of words on a bit of paper. I mean, if they wanted an essay ...'

GPs were almost never contacted following death certificate completion and most took this as an indicator that the task was done satisfactorily. Many participants did not know how the death certificate was processed or used once they had completed it. Some GPs found that the ritual of completing the death certificate allowed time and space for reflection:

'All my life is always three things going on at once, you know. There's the staff, and the phone, and all the rest of it. But to ... but to fill out death certificates generally I shut myself in my office, and ... can get out the death certificate and ... ah look back through the patient's notes, and refresh myself about their illness. And as you say, quite important, often you know, the length this ... the process of filling it out is ... reflecting on the person's life, and your relationship with them, and reflecting on the illness, and perhaps how you managed it, and what you might do differently next time. It's one of the things that I can't do with a lot of other background activity going on.'

DISCUSSION

Summary of the main findings

Uncertainty in clinical medicine contributes to GPs having difficulty completing death certificates with certainty. Factors that GPs identified as having some influence on how they complete death certificates were the family of the deceased, and cultural needs and/or practices. Sometimes these are compelling.

Strengths and limitations of this study

Being GPs, the researcher and the facilitator brought 'insider' insight to the direction of the study. This statement on bias could lead readers to dismiss the findings. Limitations are inevitable in natural settings, however, the researcher ensured that the interpretation of the data was confirmed through comparison with existing literature and this was validated by the facilitator, who was present at the teleconferences, and an independent reviewer of the data.

There were several advantages of holding focus groups by teleconference. Participants took part from their own homes throughout New Zealand, so there was no face-to-face contact during the group meetings. Participants contributed frankly and freely about a sensitive, possibly high-risk, aspect of their working life. This medium may have provided participants with a sense of anonymity, and facilitated disclosure.

There was minimal intrusion on the participants' time beyond the duration of the teleconference. Resources (for funding, travel and venues) were constrained, and without access to teleconferencing, the small number of focus groups and participants would have been smaller.

The limitations of this adaptation of a focus group method were that visual cues were sacrificed, and facilitator needed to be skilled in picking up on audio cues. The presence of a silent moderator was useful to ensure that the group process was established and ethical standards maintained through strict adherence to set protocol.

Consistent with qualitative methods, the findings cannot be assumed to apply to all GPs, and generalisability is not possible. Instead, the range of issues and experiences is explored through purposeful sampling of participants. The third and fourth focus groups provided more detail, but no new information; that is, redundancy was achieved. Practical and economic constraints determined the sample size, but reaching the point of redundancy fitted with the recommendation for this method that the number of participants sought is terminated when no new information is forthcoming.

Comparison with existing literature

Bloor recognised there are frequent and infrequent certifiers.[12] He described the completion of death certificates as unsupervised, unreported, invisible and unconsidered. The findings in this study support his description, particularly regarding the invisible and unconsidered aspects. The participants were forthcoming in their willingness to participate and disclose their experiences.

The doctor–patient relationship has been shown to influence the completion of sickness certificates.[18] GPs resented the effect of their certification role on the doctor–patient relationship. Sheils *et al*, have described strikingly similar patient factors associated with sickness absence.[19] Certifying sickness and death may share similar issues concerning the doctor–patient/family relationship.

To improve sickness certification, addressing the 'underlying problems for gatekeepers' was seen as important, and necessary, beyond training. Similarly the 'traditional perspective' of improving death certificates has been through training, audit and review; and has been insufficient. This study shows that GPs' perspectives of the role of clinical uncertainty, family interests and cultural practices

need to be considered if death certification by GPs is to have greater accuracy.

Implications for clinical practice and future research

The possible bias of GPs to accommodate the interests of the deceased's family, and/or cultural mores needs to be acknowledged. A consultation process, with colleagues or coroners, may reduce uncertainty about the cause of death if there has been uncertainty in the clinical setting. These perspectives need to be integrated into education for medical students and GPs.

Further research will be needed to establish the quantity of effect of uncertainty, family interest and cultural mores on death certification. Similarly, studies exploring factors influencing other groups of certifying doctors (for example, junior hospital doctors and intensivists) are warranted, as different groups may have specific, and as yet unacknowledged, influences. Since this paper was submitted, reports from the Shipman Inquiry[20] have suggested the reform of death certification by GPs.

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Competing interests

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