Do GPs want or need formal support following a patient suicide? – A mixed methods study

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Abstract

Background

Patient suicide can be a devastating event for some general practitioners (GPs). Few guidelines exist to aid or support GPs in the aftermath of patient suicide.

Aim

To explore GPs views on how they are affected by a patient suicide and the formal support available to them following a patient suicide.

Design

Questionnaires and Semi-structured interviews.

Setting

General practices in the northwest of England.

Methods

198 semi-structured interviews were conducted as part of a retrospective study. Interviews were transcribed verbatim and analysed using descriptive statistics and a framework thematic approach.

Results

GPs were aged between 31 to 67 years, 144 (73%) were male, and the number of years in practice varied between 8 and 40 years (median = 24 years). GPs were based at 133 (67%)

urban and 65 (33%) rural practices, 30 (15%) were single-handed GP practices and 168 (85%) practices had two or more GPs. 131 (66%) GPs reported being affected by patient suicide through feelings of grief, guilt and self-scrutiny. A greater number of years in practice may have been protective against these effects. 54 (27%) GPs reported having mostly 'informal' support from peers or colleagues and support was less available to younger and single handed GPs.

Conclusions

Our findings suggest that the majority of GPs are affected by patient suicide and most seek informal support from their peers and colleagues. Although many indicated that informal support systems were adequate and provided a protective environment, procedures should be developed to ensure the availability of guidelines for those who may require formal support.

Keywords: suicide, general practitioner, general practice, primary care, support services.

Introduction

The role of the General Practitioner (GP) in the UK includes suicide prevention, professional attendance at the scene of a suicide, comforting the bereaved (1) and the critical incident review (2). Less well understood is the impact of suicide on GPs (3). Considering that the majority of suicide patients (over 90%) have consulted their GP shortly before death (4), GPs may require formal support to deal with patient suicide.

GPs support requirements may differ following a patient's death by suicide compared to death from other causes related to physical ill health because GPs may see suicide patient deaths as preventable. Practices are increasingly exploring the use of critical incident reviews in primary care following patient suicides (2) to highlight the lessons that may be learned to improve patient outcomes and reduce future suicides.

Although patient suicide is uncommon in a GP's career - one in every 3-7years per GP (1,5) and six in every 10 years per GP practice (6); it is important to place appropriate emphasis on the effects of patient suicide on GPs. Psychiatrists in the UK can look to the British Medical Association [BMA], the Royal College of Psychiatrists and the National Counselling Service for sick doctors for formal assistance. Although GPs can also make use of generic medical support mechanisms, the extent to which specific services are accessible to GPs working in primary care is unclear and needs exploring.

To date, one study conducted in Ireland, reported that the impact of patient suicides on GPs included changes in clinical practice with increased reports of psychiatric referral, more accurate record-keeping, an increase in antidepressant prescribing and increased use of colleague consultation (1). Others have reported that on a personal level GPs express feelings

of guilt after a patient suicide (1,2,3), a disruption of their relationship with the victim's family (1), self-scrutiny (3) and a fear of being blamed (2). GPs reported a fear of being held accountable for their own decisions when managing patients at risk in primary care and a shared perception of increasing expectations to prevent events outside of their control (2). Some GPs commented on being 'absolutely devastated'(1; p.296), 'very upset' (2; p.1118), having an 'appalling experience' (3; p.115) or having had their 'sleep pattern affected for up to six months' (1; p.296) after patient suicide but only a small proportion sought support and most reported managing their emotions themselves without seeking help. Of note, 62% of GPs said that they would use a support system if available (1). Feelings of sadness, guilt, responsibility and powerlessness are also reported by GPs reflecting on patients who died for other reasons than suicide (7,8). However, overall there is a lack of research focussing on GPs' responses to patient death (8).

Previous studies have concentrated on collating data via survey questionnaires or interviewing a small number of GPs and have included predominantly young male suicide cases from one geographical region; thus making the generalisability somewhat limited. Given the significant knowledge gap in mixed methods suicide research in the literature, our study's purpose was to explore GPs views on how they are affected by a patient suicide and the formal support available to them following the death of their patients who died by suicide to provide findings that are relevant to primary care service providers and practitioners. The most appropriate methods were chosen on the basis of which approach was likely to answer the research question most effectively and efficiently. Adopting a mixed methods approach, grounded in pragmatism, allowed the examination of the issues from multiple angles and development of a 'rich' analysis of the problems that would not have been available had

qualitative or quantitative approaches been used exclusively. The specific objectives of this study were to:

1) investigate whether GPs were affected by patient suicide and what levels of formal support were available following patient suicide;
2) compare the characteristics of those GPs who were and were not affected by patient suicide;
3) compare the characteristics of those GPs who did or did not have access to formal support services following a patient suicide;
4) describe GP views on what support was needed following patient suicide.

Methods

Sample and participants

GPs were approached for a consecutive case-series of 336 patients who had died by suicide in the North West of England between 1st January 2003 and 30th June 2007. Details of the patients were obtained from the National Confidential Inquiry into Suicide and Homicide by People with Mental Illness (Inquiry). The Inquiry collates a UK-wide case-series of all suicides by people in contact with mental health services in the year prior to death. The ascertainment procedures are robust and the response rates high - over 95% (9). Contact details for GPs were obtained from patient coroner files or administrative departments of NHS Trusts.

Interviews

GPs were contacted by letter to participate in the study. Of the 336 potential participants, 198 (59%) consented to take part. One-hundred and thirty-six GPs did not participate as they had retired, left the practice or died, did not have enough time and two GPs changed their mind about participating at the time of the interviews. One-hundred and ninety-eight semi-structured face-to-face interviews were conducted with GPs between January 2005 and October 2009 and lasted between 20 and 40 minutes. Fifty-four of the GPs were female, 144 were male and the length of time since qualifying ranged from 8 to 40 years, with an average of 23 years.

All interviews took place in the GP surgeries and were recorded with permission and then transcribed verbatim onto the questionnaire proforma. Where patient's own GP was

unavailable, practices were contacted to nominate a suitable alternative GP that had treated the patient in the year prior to death. This occurred for 54 of the 198 patient cases included in this study (27%); however for 15 out of the 54 patient cases, the nominated GP was the last GP the patient had seen (27%). All interviewees were sent a participant information sheet and indicated their willingness to participate by completing a consent form. An interview schedule was used to collect data and adapted from tools used in previous research (4,10,11).

Semi-structured interviews were used to collect data from 198 GPs (59%). One interview was conducted with each of the 198 GPs; however, the first author (PS) completed the majority (n=166, 81%). Although other researchers carried out data collection, standardised questionnaires and interview tools were used to ensure consistency of data. Questionnaires included details of physical and mental health problems reported in all consultations and treatment offered in the year before death (specifically the final consultation). Interviews enquired about: GP views on their concerns for the patient; antecedent factors contributing to death; factors which could have prevented the death; GP training on self-harm, suicidal ideation and suicide risk assessments; policies GPs' followed for patients at risk of suicide; the effect of patient suicide on GPs; and, support availability for GPs following a patient suicide. Regular team meetings were held to discuss the information being collected and about potential changes or additions to the questionnaires or interview schedules. The semi-structured nature of interviews meant that participants had the freedom to address topics of conversation not identified *a priori* on the interview schedule. This proved to be simultaneously an advantage and a disadvantage. Whilst this flexibility led to some fruitful and unanticipated lines of discussion, sometimes researchers struggled to guide more verbose interviewees back if discussion strayed off-topic for too long. Similarly, the ability to reorder questions was useful in allowing me to pursue natural shifts in conversation thereby

preserving flow. Overall, the semi-structured format was largely successful and effective.

Data analysis

Descriptive statistics

Descriptive statistics were used using SPSS version 21 (12). We calculated frequencies, percentages, odds ratios, 95% confidence intervals (CI) and *P* values to quantify the independent relationships between the GP variables and our two outcomes of effect and support. The questions for the effect on GPs and support for GPs following a patient suicide were divided into two categories: 'effect' or 'no effect' and 'support' or 'no support'. Where the GPs responded to having 'no support' or 'not knowing of any formal support', the responses were combined into the 'no support' category for the analysis. Support could include both formal and informal support. 'Formal' support was categorised as support from external agencies to the GP practice (e.g. BMA) unless GPs stated otherwise and 'informal' support was categorised as support from peers or colleagues within their or other GP practices. The rating for how well GPs' knew their patients was based on GP responses rather than operationalised in any way and is a subjective judgement. Many of the independent variables in the questionnaire proformas were in binary format (presence/absence of factors). For variables providing more than two possible responses, the main factor of interest was selected and the response recoded into a binary format. As some of the responses occurred in only a small number of cases; binary coding provided more reliable estimates of odds ratios (13). The independent variables are listed in Table 1.

Qualitative analysis

An inductive approach to the interview data was used, utilising framework analysis (14) to identify key themes for the 198 GP interview transcripts. In the early stages of the project we discussed the transcripts until satisfied that any inconsistencies had been resolved to ensure similarity in transcription style across the whole dataset. We checked all data for errors by listening back to the audio-recording and reading the proformas simultaneously. PS conducted majority of the interviews (81%) and listened back to the audio-recorded interviews to become familiar with the whole data set. This familiarisation process was essential in cases where PS did not conduct the interview. Familiarisation through reading and making notes in this way enabled PS to find her way easily around hundreds of pages of data later in the analysis.

No software was used to code the transcripts. PS coded the transcripts and used the left hand margin to describe the content of each passage with a label or code. This could range from only a few words, to parts of sentences or whole paragraphs. PS used the right hand margin to record more detailed notes and ideas, for example questions to bear in mind as the analysis proceeded, and ideas for explanations or patterns in the data. In this approach, one piece of data (e.g. one statement, one theme) was taken and compared with all information for similarities or differences. The data was set out on a framework of three main themes, sub themes and quotes as examples for each sub theme. The analysis was principally conducted by the primary researcher (PS). Transcripts were examined across the whole data set by PS and analysed using thematic framework analysis. The proformas with transcript extractions were read independently and emergent themes and key issues were discussed with the secondary researcher (KC). The data were interpreted and reanalysed within the thematic

framework to interpret and structure the component statements. After discussion, a set of codes was agreed and this formed the initial analytical framework.

Results

Characteristics of the patient suicide and GP sample

Between 2003 and 2007, 336 patient suicides were recorded in the North West of England; approximately 6% of the national sample (n=5,552). In terms of the characteristics of patients for whom we had GP interview data (n=198, 59%) the median age was 47y (18y-95y) and 130 (66%) were male.

Baseline characteristics of the GPs and GP practices are given in Table 1. There was a significant association between the number of years in practice with GP age (X_2 (2) = 6.03, p<0.05) and GPs knowing their patient well (X_2 (4) = 48.74, p<0.001).

Quantitative findings

One-hundred and thirty (66%) GPs reported that they were affected by patient suicide in some way, through feelings of grief, guilt and/or self-scrutiny, 14 (7%) reported not being affected and 54 (27%) did not know (Table 2). Fifty-four (27%) GPs reported having access to some form of support following patient suicide, 74 (37%) had no access and 70 (35%) did not know of any support services for GPs following patient suicide. Thirty percent of GPs (n=60) who did not have access to support and 10% (n=20) who did not know of any support, reported patient suicides having an effect on them. GPs reported that they could seek support from their peers and colleagues (n=33), secondary care (n=3) and the BMA (n=6). Six GPs reported that they have never needed support following a patient suicide but would be able to find some services if they looked. Three GPs reported that their practice now completed critical incident reviews following a patient suicide and that these were also a debriefing opportunity for them.

Factors associated with the effect of patient suicide on GPs

Data for the effect of patient suicide on GPs was available for 145 GPs, of which 131 (90%) reported being affected by suicide through feelings of grief, guilt, and in some cases self-scrutiny of the care and management of the patient in primary care. Table 3 shows the factors associated with the effect on GPs. However, more years in practice appeared protective against GPs being affected by patient suicide (Table 3).

Factors associated with support for GPs following patient suicide

Data were available for all of the GPs regarding support availability and 54 (27%) reported access to support. Table 4 shows the factors associated with GPs who did and did not have access to support. Younger GPs may have had less access to support relative to GPs in middle age (Table 4). GPs who knew their patients well reported needing significantly more access to support.

GP interviews

Our data suggested that although the majority of GPs were affected in some way by suicide deaths - emerging themes emphasised their feelings of grief, guilt and/or self-scrutiny - younger GPs were perhaps particularly vulnerable. Most GPs did not seek formal support but gained informal support from their colleagues and younger and older GPs needed support significantly more than those GPs aged 40 to 50 years. Following the thematic analysis process, three inter-related themes were conceptualised as reflecting the corpus of this material.

The first theme relates to varying views of GPs about how patient suicide fits into their job role and was conceptualised as *'Part and parcel'*. The second theme identified was *'Failing patients'* and relates to the main reason given by GPs for being affected by a patient suicide. The third theme *'Informal support systems'* identified the lack of formal guidelines and highlighted the importance of informal support available to GPs following a patient suicide and highlights the positive feedback from GPs with regards to significant event analyses, appraisals or critical incident reviews following patient suicide.

'Part and parcel'

There was evidence of GPs trying to be practical by stating that patient suicide just had to be dealt with and accepted within their job role as a GP:

"I'm sure support is available if you look but to be honest it is part and parcel in the job" (GP119).

Yet others felt it was in their job role but were still affected and reported being frustrated about not being able to help their patients, particularly those patients they knew well:

"*I've been a GP for 30 years and you just have to deal with it and accept it, however this one affected me more as I knew and helped the patient a lot but her demons did not leave her"(GP174).*

The findings indicate that older GPs needed more support than middle aged GPs; this could be related to GPs having a longer relationship with patients and a need to help them recover from their years of mental distress. Many GPs spoke of their grief of patient suicides being directly related to how well they knew the patient:

"It depends on the patient whether it has an effect on us and how well we know them. I think there is some professional distance from these things but it's obviously distressing but not such that it warrants professional counselling" (GP170).

"It would affect me if I knew the patient well and I hadn't picked up they were suicidal and if they had fallen through the net" (GP168);

However, some still reported that it would not affect them enough to require formal support thus suggesting that they accepted the psychological angst as part of their job as GPs. Participants who were not affected by the suicide were aware of the fact that they could not prevent some patients from dying. They were pragmatic about this and did not always feel that support was needed:

"It's a fact of life I'm afraid you know even with the best will in the world you can't stop some people from taking their own lives" (GP95).

Failing patients

GPs commented on whether they thought they had failed the patient in some way, and how preventable they felt the suicide might have been:

"The first thing you think is was it my fault, could I have prevented it, should I have referred him to someone sooner, should I have picked up warning signs, was he on the right medication, did he take an overdose of his medication or did I give him the medication he then killed himself with? There is a whole host of things" (GP160).

GPs reported great self-scrutiny particularly when they were more involved in their patients care and knew their patients well. They recounted looking back at the medical consultations to ensure they had not missed any warning signs or to learn for future patient consultations. Some GPs exhibited more emotion and information about patients who they felt was on the 'road to recovery':

"In this particular case, yes, it had come just before Christmas and I actually thought I'd had a…I'd built up a very good professional relationship with the patient, I actually admired her because she'd gone quite a long way from having a very disadvantaged childhood and background and one where I think there had been quite a few childhood issues that were never covered by me… It certainly did affect me because I felt I put myself out and say that I wanted to help her, for example she wanted housing and my usual attitude is there are systems for them to go through housing departments but in her case I thought it appropriate and actually wrote her a letter and felt that a move would be in her best interest..." (GP174).

This quote emphasises how some GPs, particularly those who cared for their patient over a number of years, become involved in many aspects of a patient's life which results in a deeper GP-patient relationship with a high level of professional attachment which also had emotional dimensions. These findings may indicate why older GPs needed more support than middle aged colleagues who may not have known their patients as well.

Informal support systems

Prior to interviewing, 'support' was assumed to be categorised as formal support available to GPs that was accessible when required, such as from the BMA, counselling services or specific helplines. In this study, support from colleagues or partners were the main source of (informal) support and this was an accepted and welcomed system for many GPs. The majority of GPs spoke of the value and importance of informal support they received from peers, colleagues, friends or family:

"*Yes, we would get support from own colleagues if affected by suicide*" (GP29);

However, there were different interpretations for how GPs interpreted support. as the some GPs reported that this type of informal support was reported as having no support following a

patient suicide Above the GP answers that they receive 'formal' support from their colleagues but below a GP states that they do not receive 'formal' support as 'informal' support is available within their practice:

"No we don't receive any support, we're very good at supporting each other within the practice…So we have a supportive network within the practice and talk it through ourselves but we don't have any formal back up or counselling involved" (GP47).

These illustrations highlight the importance of guidance for GPs on the available procedures following a significant event such as the death of a patient, including informal support from peers and colleagues and more formal guidelines for those GPs who may requires further support.

Overall, GPs were extremely vague about what formal support was available to them following a patient suicide and their answers varied across the participants;

"I suppose if we looked into it we could find it, we have access to counselling here we could turn to if we needed to" (GP182);

"I've never needed support yet. If I did I think there is a phone line distressed doctors can ring or I could find some" (GP72);

"There might be if you go to occupational health I suppose" (GP45);

"I probably would ring the BMA cause we're BMA members and they'd give you some sort of helpline" (GP101).

The following quote illustrates that the type of support required by GPs may vary depending on each individual suicide case;

"Don't know. There probably is and I think doctors are quite good at wriggling into somewhere to get support if they need it and it depends how or what kind of support you

needed. If it's just emotional support after a bereavement reaction like I know for one of my patients that died then that's ok but if you've been looking after somebody who commits suicide and then there is anger towards you as their GP then that's a different kind of support you may need. So first of all I'd go to my colleagues and my friends a lot of whom are medical and I think that's quite a standard supportive system to have around you." (GP86).

Here, the GP obtains informal support through similar avenues as previously reported but they also raise an important point about each GP dealing with the aftermath of individual patient deaths; thus they may require different types of support. GPs seem unaware of any formal guidance for GPs in any of these scenarios. However, it does appear that their informal systems of support work are adequate for most cases.

GPs highlighted positive feedback about speaking with colleagues, peers, family or friends following a patient suicide. This is consistent with previous research (8). Some of the most recent interviews with GPs reported on the new requirement of completing critical incident reviews following each patient suicide:

"*Obviously we've had several and there is support actually. We've had other suicides and we've gone to a group meeting with the secondary care team and this is really beneficial. And I found that really helpful." (GP27).*

All of the GPs who mentioned being part of such a procedure reported feeling better having discussed the case with peers and colleagues. This gave GPs an opportunity for reflection and learning which has been reported as an important part of the grieving process for GPs for other types of patient death (7).

Discussion

Summary of the main findings

This study is the first to our knowledge to explore the effects of patient suicides on a large sample of GPs. Our data suggest that the majority of GPs are affected by patient suicide and most seek informal support from their peers and colleagues. GPs that had fewer years in practice were perhaps more affected by patient suicides. Many GPs who were not affected reported that dealing with patient suicide was part of their job role. An interesting finding of the current study was the apparent lack of formal support systems and the varied responses from GPs about what encompasses support. This indicates an area for concern where support might need to be available and support mechanisms may need to be developed or where they exist to be more visible. There was positive feedback about debriefing sessions for GPs following patient suicide as this was perceived as an opportunity to learn from cases for future suicide prevention. These findings are of interest to those who plan and provide support services for GPs dealing with the impact of patient suicides.

Comparison with existing literature

Only a small fraction of the literature has concentrated on the reactions of medical doctors in primary care settings and the grief responses of those has been largely ignored (15). Zambrano and Barton reported that GPs coping mechanisms following a patient death comprised of talking with colleagues, finding positives, acceptance of death and drinking more than usual (8). GPs reported the lack of training received on coping with patient death and learning with experience over time (8) which may explain the findings in this study with regards to GPs who knew their patients well needing more support (particularly older GPs who may have formed a stronger GP-patient relationship over years of consultations) and

younger GPs needing support who may have been less experienced. These findings may reflect GPs lack of training in dealing with significant events and being more professionally isolated than has previously been identified (1,16).

Strengths and limitations of the study

The present study findings must be interpreted in the context of a number of strengths and limitations. However, this study arguably provides a useful contribution to an area of clinical importance in which there has been little published research. We obtained larger interview data on 59% of a large sample of GPs (n=336) than previous survey or interview, studies (1,2,3,7,8). In some cases GP interview data was unavailable as the GP had retired or died. Others declined to be interviewed, often citing pressures of time, although it is possible that some may have been concerned about their management of suicidal risk. This may have introduced a selection bias. However, where we were able to compare the baseline characteristics of those for whom we did and did not have case record data and for those for whom we did and did not have GP interview data there were no statistical differences between the groups.

There have been few qualitative studies on these topics in primary care. Whilst such studies have the advantage of generating rich data on participant experiences, in doing so they necessarily focus on GP self-report. Our main aim was to examine GP responses following patient suicides and this could only be done with a sample of patients who had died by suicide. However, GPs recruited for the study may have had different views from GPs who experienced a patient death but who did not participate. A prospective study would not have

been feasible. Whilst the retrospective questioning has its potential weaknesses, it is a well-established method that has been used in suicide research for a number of years. However, the emotional aspect of guilt or self-scrutiny following a patient suicide could have contributed to a possible 'under reporting' on the effects of patient suicide.

GPs were interviewed for a sample of patients in current or recent contact with mental health services from the North West of England. However, no comparison group was included, i.e. interviews with GPs who had patients who died by suicide and did not have contact with mental health services prior to death. It might be that this group of GPs are more affected by their patient's suicide and are more in need of support in case they felt that their assessment of suicide risk was inaccurate or that secondary care services were unavailable at the time when the patient may have benefitted from them. Hence, our main results are likely to be underestimates.

Our findings may not be representative of the rest of the UK although many of the issues we identified are still likely to apply. It should also be noted that some of our data are now several years old. As a consequence some of the study findings might not necessarily reflect current clinical practice.

Implications for future research and clinical practice

Further research should be undertaken to establish whether the effect of patient suicide on GPs is reflected among those who were more involved in the care of their patient compared to patient deaths from physical health conditions. In specialist mental health and hospital

settings, recommendations for standard practice include psychiatric staff engaging in formal debriefing, case audit and managerial reviews after an unexpected death (17). However, studies in psychiatry settings indicate that most health professionals gain informal support from their peers, colleagues, families and friends (16,18,19). The GPs in our study indicated that Critical Event Review combined with meaningful peer support is essential but some were left to their own devices with little outside support. However, many indicated that informal support systems were adequate and provided a protective environment and they would find out about more formal support systems should this be required. In view of the close involvement of GPs in the lives of their patients and families, procedures should be developed to ensure the availability of information for those who may require formal support and for greater mental health protection for professionals who are likely to experience psychological injury following the death of a patient by suicide. In recognition of the emotional dimension for professionals who care for patients that die by suicide, such procedures may potentially be of interest to GPs themselves, Clinical Commissioning Groups (CCG), those who plan services in primary care and those who plan post graduate education and Continued Professional Development (CPD) to GPs. The recent structure of CCGs and the rapid development of GP postgraduate education through the introduction of Practice Professional Development Plans provide an excellent opportunity for change.

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Ethics: Ethical approval was granted by the North-west Research Ethics Committee (REC reference: 02/8/74) and individual R&D approvals were obtained from all the relevant Mental Health Trusts included in the study.

Competing interests: NK was Chair of the Guideline Development Group for the National Institute for Clinical Excellence (NICE) guidelines for the longer term management of self-harm and sits on the Department of Health's National Suicide Prevention Strategy Advisory Group.

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Table 1. Baseline characteristics of GP practice information was collected between January 2005 and October 2009 for 198 GPs whose patients died by suicide between Jan 2003 to Jul 2007

Variable	***n***	**%**
Sex (*n* = 198)		
Male	144	73
Female	54	27
Age, years (*n* = 198)		
30 > 40 years	60	30
40 > 50 years	63	32
> 50 years	75	38
Years in practice (n = 198)		
8-19 years	62	31
20-27 years	65	33
> 28 years	71	36
Practice type (n = 198)		
Urban practice	133	67
Rural practice	65	33
Practice size (n = 198)		
Single GP	30	15
2 or more GPs	168	85
GP knew the patient well (n = 183)		
Yes	125	68
No	58	32

(figures in brackets are number of valid responses for each variable)

Table 2: How did GPs responses compare for effect of patient suicide and access to support following a patient suicide?

	Is there any support for GPs when patients commit suicide			**Total**
Do suicides have an effect on you as a GP		no	yes	not known	Total
	no	7	4	3	14
	yes	60	50	20	130
	not known	7	0	47	54
Total		74	54	70	198

Table 3: Factors associated with a reported effect of patient suicide on GPs

(Interview data was collected between January 2005 and October 2009 for 198 GPs whose patients died by suicide between Jan 2003 to Jul 2007)

Domain Variable (*n* = no. of valid responses)	Effect *n* (%)	No effect *n* (%)	*p*-value	Odds ratio (95% CI)
Male (n=145)	95 (90)	10 (10)	0.931	1.06 (0.31-3.58)
Age				
30>40 years (n=44)	36 (82)	8 (18)	0.078	base
40>50 years (n=53)	51 (96)	2 (4)	0.034*	5.67 (1.14-28.27)
>50 years (n=48)	44 (92)	4 (8)	0.171	2.44 (0.68-8.78)
Years in practice				
8-19 years (n=48)	46 (96)	2 (4)	0.031*	1.41 (0.23-8.81)
20-27 years (n=52)	49 (94)	3 (6)	0.071	base
>28 years (n=45)	36 (80)	9 (20)	0.045*	0.25 (0.06-0.97)
Urban practice (n=99)	90 (91)	9 (9)	0.736	1.22 (0.36-3.87)
Single handed GP (n=23)	22 (96)	1 (4)	0.364	2.62 (0.33-21.12)
GP knew the patient well (n=106)	95 (90)	11 (10)	0.952	0.96 (0.25-3.69)

***p*=<0.05 ** *p*=<0.001**

base: This parameter is set to 1.00 because it is the reference category

Table 4: Factors associated with access to support for GPs following patient suicides

(Interview data was collected between January 2005 and October 2009 for 198 GPs whose patients died by suicide between Jan 2003 to Jul 2007)

Domain Variable (*n*= no. of valid responses)	Support *n* (%)	No support *n* (%)	*p*-value	Odds ratio (95% CI)
Male (n=198)	35/54 (65)	109/144 (76)	0.128	0.59 (0.30-1.16)
Age				
30>40 years (n=60)	12 (22)	48 (33)	0.029*	base
40>50 years (n=63)	25 (46)	38 (26)	0.019*	2.63 (1.17-5.91)
>50 years (n=75)	17 (31)	58 (40)	0.708	1.17 (0.51-2.69)
Years in practice				
8-19 years (n=62)	21 (34)	41 (66)	0.343	0.69 (0.32-1.48)
20-27 years (n=65)	17 (26)	48 (74)	0.335	base
>28 years (n=71)	16 (23)	55 (77)	0.148	1.76 (0.82-3.79)
Urban practice (n=133)	39 (29)	94 (71)	0.355	0.72 (0.36-1.44)
Single GP (n=30)	4 (13)	26 (87)	0.072	0.36 (0.12-1.09)
GP knew the patient well (n=125)	41 (33)	84 (67)	0.017*	2.66 (1.19-5.93)

***p=<0.05**

base: This parameter is set to 1.00 because it is the reference category