



# The role of doctors' religious faith and ethnicity in taking ethically controversial decisions during end-of-life care

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## ABSTRACT

**Background and Aims** The prevalence of religious faith among doctors and its relationship with decision-making in end-of-life care is not well documented. The impact of ethnic differences on this is also poorly understood. This study compares ethnicity and religious faith in the medical and general UK populations, and reports on their associations with ethically controversial decisions taken when providing care to dying patients.

**Method** A postal survey of 3733 UK medical practitioners, of whom 2923 reported on the care of their last patient who died.

**Findings** Specialists in care of the elderly were somewhat more likely to be Hindu or Muslim than other doctors; palliative care specialists were somewhat more likely to be Christian, religious and 'white' than others. Ethnicity was largely unrelated to rates of reporting ethically controversial decisions. Independently of speciality, doctors who described themselves as non-religious were more likely than others to report having given continuous deep sedation until death, having taken decisions they expected or partly intended to end life, and to have discussed these decisions with patients judged to have the capacity to participate in discussions. Speciality was independently related to wide variations in the reporting of decisions taken with some intent to end life, with doctors in 'other hospital' specialities being almost 10 times as likely to report this when compared with palliative medicine specialists, regardless of religious faith.

**Conclusions** Greater acknowledgement of the relationship of doctors' values with clinical decision-making is advocated.

Medical end-of-life decisions can involve difficult ethical choices, such as whether to withdraw or withhold treatment, to provide a treatment expected to affect the length of life, to provide sedation, or (in jurisdictions in which this is permitted) to provide euthanasia or assisted suicide. While the role of religious faith in influencing attitudes towards end-of-life decisions in UK medical practice has been explored in several studies,<sup>1–3</sup> its influence on actual end-of-life decisions is poorly understood.<sup>3</sup> Ward and Tate<sup>4</sup> in a 1994 study in one English region, reported that 12% of 273 doctors had 'ever taken active steps to bring about the death of a patient who had asked you to do so', with no association between this and doctors' religious faith (although faith was associated with the willingness to provide euthanasia should it ever be made legal). More recently, Seale<sup>5 6</sup> has reported that non-religious UK doctors are more likely to

report decisions taken with some intent to end life, or provide continuous deep sedation until death.

Outside the UK, a multinational survey of neonatologists showed that withholding and withdrawing treatment was more commonly reported by non-religious doctors.<sup>7</sup> Another multinational study<sup>8</sup> reports non-religious doctors being more likely to administer drugs with the explicit intention of hastening death. A more mixed picture was shown for the influence on 'terminal sedation' and the use of drugs estimated as likely to shorten life. US oncologists have been shown to be more likely to report having performed euthanasia or physician-assisted suicide if they were also 'less spiritual'.<sup>9</sup> Very religious Israeli doctors are less likely to agree with euthanasia, withdrawal of life-sustaining treatment, or with providing pain medication if it might shorten life.<sup>10</sup> In European countries, religious doctors are more likely to be opposed to following patients' requests for non-treatment or to allow patients to decide on hastening their own deaths, and are more likely to support the view that good palliative care prevents requests for assisted dying.<sup>11</sup> The study by Asch and DeKay<sup>12</sup> of US critical care nurses showed that religious nurses were less likely to report involvement in euthanasia.

The ethnicity of doctors is related to the type of religion followed and in the USA the medical population has been shown to differ from the general population, being more likely to be Jewish, Hindu, Muslim, orthodox Christian, Mormon and Buddhist than the US general population, less likely to be Protestant or Catholic, but with similar proportions claiming no faith; in addition, family doctors are more religious than others.<sup>13 14</sup> A study in seven European countries showed that 50–73% of doctors claim to have a 'religion or philosophy of life' such as Catholicism, Protestantism or humanism, with Italian doctors most likely and Dutch doctors least likely to say this.<sup>11</sup>

In the UK, the medical population differs in ethnic profile from the UK general population, with significant proportions of doctors having trained overseas, and entrants to UK medical schools increasingly coming from ethnic minorities.<sup>15 16</sup> In the 2001 Census 92% of the general population self-described as 'white', but only 63% of doctors in 2003.<sup>15</sup> The proportion of doctors who are South Asian is higher than the proportion of South Asians in the general population. Past patterns, whereby overseas trained doctors occupied less popular specialities, are now declining as the National Health Service (NHS) becomes less dependent on the recruitment of doctors trained abroad.<sup>16</sup>

The ethnic or cultural background of doctors is associated with the willingness to take certain end-of-life decisions. Religious doctors in the USA and those who are Muslim or Hindu are more likely to object to physician-assisted suicide and terminal sedation; they are also less likely to feel they should disclose information about or refer patients for procedures to which they object on moral grounds.<sup>17</sup> In the UK, a study of doctors in one hospital<sup>3</sup> showed first that their ethnic and religious composition differed significantly from that of the general population they served, with fewer Christian doctors and more Muslims or Hindus. Nurses on the other hand mirrored the general population in this respect. Religious views were not related to reported attitudes towards physician-assisted suicide. The authors acknowledge that their study was small.

The prevalence of religiosity, how this relates to the ethnic composition of the UK medical population, and how this compares with the general British population, is not known. The relationship of UK doctors' religiosity and ethnicity to actual end-of-life decisions is poorly understood. The present study reports findings on these from a nationally representative survey of doctors, using methods that allow for comparison with censuses and surveys of the general UK population.

## METHODS

### Sample and questionnaire return

Binley's database (<http://www.binleys.com>) was used to send questionnaires to 8857 working UK doctors. This database is updated quarterly, based on returns from NHS administrative staff and aims for complete coverage of the population of working doctors. It is likely that the small number of doctors in the UK who practise without NHS appointments are not included. Separate random samples were drawn, of 2829 general practitioners (GPs) (7% of GPs listed by Binleys), 443 neurologists (43% of neurologists listed), 836 specialists in the care of the elderly (21% of these doctors), 462 specialists in palliative medicine (54% of these doctors) and 4287 in other hospital specialities excluding specialities such as public health in which doctors do not normally treat people who die (15% of these doctors). Neurologists, palliative medicine and care of the elderly specialists were oversampled in relation to their proportions in the medical population to enable exploration of the circumstances of elderly people, people receiving specialist palliative care and those with multiple sclerosis and motor neuron disease. The mailing and two follow-up reminders were sent, with postage-paid reply envelopes, between November 2007 and April 2008. The sensitive nature of the subject matter was addressed by ensuring (as in earlier surveys using this method) that respondents knew their replies could not be traced back to them. No identifying marks were placed on the questionnaire, and a card was returned by respondents separately to indicate that a response had been made and no further reminders should be sent.

### Questionnaire and analysis

A structured questionnaire asked for respondents' age, gender and medical speciality. If doctors reported having attended a patient who died in the past year they were asked other questions about the care of this patient. Doctors were asked about their ethnicity in a question worded as for the 2001 UK census. Questions about the type and strength of religious faith were worded as in the 1998 British Social Attitudes survey<sup>18</sup> (see appendix, available online only). They were asked about their attitudes towards the legalisation of euthanasia or physician-assisted suicide in questions worded as in the 2005 British Social

Attitudes survey.<sup>19</sup> They were asked whether they had provided their patient with continuous deep sedation until death, using a question<sup>6</sup> that allowed for comparability with surveys performed in other countries ('Was the patient continuously and deeply sedated or kept in a coma before death?') and a series of questions about whether they had expected or partly intended to hasten death when taking decisions about limiting treatment, or providing treatment that might have an effect on the length of life. Seale<sup>5</sup> reports these questions and a scale derived from them to measure the degree of expectation or intent that a decision will hasten the end of life. For the purposes of this paper, decisions either expected or to any extent intended to end life are combined, and contrasted with cases in which a decision was taken, but without any such expectation or intent. Finally, doctors who took decisions that contained such an expectation or intent were asked whether they had discussed the decision with their patient, and if that person was considered by the doctor to have had the capacity to engage in such discussion.

Four dichotomous dependent variables were constructed:

1. Attitude: whether doctors supported the legalisation of assisted dying;
2. Sedate: whether doctors provided continuous deep sedation until death for their patient;
3. Intent: whether doctors had taken a decision in the care of that patient that involved an expectation or some degree of intent to hasten the end of life;
4. Discuss: whether doctors taking a decision as in point 3 above had discussed their decision with the patient (only for cases in which the patient was judged to have capacity to engage in such a discussion).

Analysis involved first comparing the distribution of ethnicity and type and strength of religious faith in the medical population with data from other published censuses and surveys of both the general and the medical population (tables 1 and 2). Second, the distribution of these variables across medical specialities was investigated (table 3) and the relationship of ethnicity with strength of religious faith was assessed (table 4). The dependent variables were then examined to see how their distribution varied across ethnic categories, type and strength of religious faith and speciality (table 5). Finally (table 6),

**Table 1** Ethnic composition of medical and general population in the UK (percentages)

	This survey of doctors* 2007–8	NHS medical survey (21) 2008	2001 UK Census 2001
White			
Any white background	77.3	71.5	1.2
Mixed †	2.1	1.9	1.2
Asian or Asian British	16.1	12.0	4.0
Indian	10.6	—	1.8
Pakistani	2.1	—	1.3
Bangladeshi	0.4	—	0.5
Any other Asian	3.0	—	0.4
Black or black British	1.8	1.3	2.0
Caribbean	0.1	—	1.0
African	1.6	—	0.8
Any other black	0.1	—	0.2
Chinese or other			
Chinese	1.5	2.4	0.4
Any other	1.1	1.9	0.4
Not stated	—	9.0	—
N	3681 (52 missing)	59 719	58 789 194

\*Weighted by speciality.

†Mixed=White and black Caribbean, White and black African, White and Asian.

**Table 2** Strength and type of religious faith in medical and general populations in the UK

	This survey of doctors* 2007–8	BSA 2008
Would you describe yourself as	%	%
Extremely religious	1.5	0.4
Very religious	11.9	6.0
Somewhat religious	36.4	32.1
Neither religious nor non-religious	17.5	30.5
Somewhat non-religious	11.8	13.4
Very non-religious	12.0	8.0
Extremely non-religious	8.7	6.7
Can't choose	3.7	2.9
Total (100%)	3465	797
Not answered	268	17

  

	Doctors* 2007–8	Census 2001
Religion	%	%
Christian	51.6	71.6
Buddhist	1.1	0.3
Hindu	7.5	1.0
Jewish	1.7	0.5
Muslim	5.8	2.7
Sikh	0.7	0.6
Any other	1.2	0.3
None/not stated	30.3	23.2
Total (100%)	3733	58 789 194

\*Weighted by speciality.  
BSA, British Social Attitudes.

a multivariate analysis using logistic regression, was carried out to examine the independent influence of ethnicity, strength of religious faith and speciality on the four dependent variables. All data were analysed using SPSS version 16, and when results are reported for the medical population as a whole they are weighted to make findings representative of the actual distribution of specialities in the sampling frame. A note is provided at the base of the tables when weighting has been applied.

**Table 3** Medical speciality by type and strength of religious faith and ethnicity (percentages)

	Palliative	Elderly	GP	Other hospital
Christian	63.5	48.0	53.9	50.3
Hindu or Muslim	4.0	23.4	11.7	14.9
Other religions	4.8	4.2	4.9	4.8
No religion	27.7	24.4	29.5	30.0
N	249	394	969	2063
p value*	<0.0001	<0.0001	n.s.	n.s.
Very or extremely religious	19.7	14.2	13.5	13.1
Neither or mild	65.5	69.7	67.7	63.0
Very or extremely non-religious	14.8	16.1	18.8	23.9
N	229	380	905	1949
p value*	0.005	<0.05	n.s.	<0.0001
White	92.1	65.4	81.2	73.5
Mixed	1.2	2.5	1.8	2.5
Asian	5.6	24.2	13.8	18.2
Black	0.4	3.6	1.3	2.4
Other	0.8	4.3	1.9	3.3
N	252	393	969	2052
p value*	<0.0001	<0.0001	<0.0001	0.003

\*p value is based on  $\chi^2$  test, comparing each column with the other three columns combined.  
GP, general practitioner; n.s., not significant below 0.05.

**Table 4** Strength of religious faith by ethnicity (percentages)\*

	White	Mixed	Asian	Black	Other
Very or extremely religious	11.6	18.9	17.7	45.6	18.9
Neither or mild	64.5	58.1	74.5	51.5	65.3
Very or extremely non-religious	23.9	23.0	7.8	2.9	15.8
N	2643	74	565	68	95
p value†	<0.0001	n.s.	<0.0001	<0.0001	n.s.

\*Weighted by speciality.

†p value is based on  $\chi^2$  test, comparing each column with the other three columns combined.

n.s., not significant below 0.05.

## RESULTS

### Response rate and response bias

Specialists in palliative medicine produced the highest response rate (67.3%; n=311), then specialists in care of the elderly (48.1%; n=402), neurologists (42.9%; n=190), other hospital specialities (40.1%; n=1717) and GPs (39.3%; n=1113). The overall response rate was 42.1% (3733 doctors, of whom 2923 reported on the care of a patient who had died). An investigation of response bias is reported more fully elsewhere.<sup>2</sup> To summarise: comparisons of responding doctors with national medical workforce statistics and a survey of 2000 randomly selected non-responders (to which 348 (17.4%) replied) were performed. As in a similar study,<sup>20</sup> non-responders were not significantly different from responders in their degree of support for euthanasia or physician-assisted suicide. They tended to be younger, with inadequate time to complete the questionnaire, and to believe it was only relevant to reply if they normally attended dying patients or were involved in terminal care. The patients reported on by responders were more likely to have died from cancer and were less likely to have died from cardiovascular disease than in national mortality statistics.

**Table 5** Relationship of ethnicity, strength of religious faith and speciality to attitudes and actions in end-of-life care (% and N)

	Sedate	Intent	Attitude	Discuss
Ethnicity*				
White	18.6 (2152)	39.9 (2027)	37.4 (2775)	86.4 (338)
Asian	19.4 (417)	39.7 (383)	33.5 (565)	84.9 (73)
Other	18.8 (186)	38.9 (175)	24.8 (238)	81.3 (32)
p value	n.s.	n.s.	<0.0005	n.s.
Religious type*				
Christian	17.5 (1445)	38.4 (1358)	28.1 (1889)	83.7 (227)
Hindu or Muslim	19.4 (351)	38.1 (318)	29.9 (478)	81.0 (58)
Other	22.3 (121)	35.1 (114)	37.6 (170)	77.8 (18)
None	20.0 (841)	43.8 (790)	52.2 (1057)	92.3 (143)
p value	n.s.	0.05	<0.0005	0.05
Religious strength*				
Very or extremely religious	16.4 (359)	32.3 (331)	15.5 (459)	64.1 (39)
Neither or mild	18.3 (1683)	39.0 (1568)	35.2 (2217)	88.7 (284)
Very or extremely non-religious	22.7 (541)	50.0 (512)	51.1 (702)	87.9 (107)
p value	0.03	<0.0005	<0.0005	<0.0005
Speciality				
Palliative medicine	15.0 (246)	9.8 (246)	11.7 (307)	92.9 (14)
Elderly	10.6 (246)	38.5 (262)	26.8 (395)	74.1 (27)
General practice	17.5 (732)	32.5 (710)	35.1 (1073)	81.5 (130)
Other hospital	21.4 (1502)	48.7 (1394)	38.3 (1842)	87.8 (244)
p value	<0.0005	<0.0005	<0.0005	n.s.

\*Weighted by speciality.

n.s., not significant below 0.05.

**Table 6** Logistic regression of sedation, intent, attitude to legalisation and reports of discussion, on speciality, ethnicity and strength of religious faith

	OR	95% CI	p Value
<b>(1) Sedation*</b>			
Speciality			
Palliative care	1		
Elderly	0.60	0.35 to 1.03	0.06
General practice	1.14	0.75 to 1.73	0.54
Other hospital	1.43	0.97 to 2.12	0.07
Religious faith			
Very or extremely religious	1		
Neither or mild	1.14	0.84 to 1.56	0.40
Very or extremely non-religious	1.45	1.02 to 2.06	0.04
Ethnicity			
Other	1		
Asian	1.11	0.70 to 1.75	0.67
White	0.93	0.62 to 1.39	0.73
<b>(2) Intent†</b>			
Speciality			
Palliative care	1		
Elderly	6.46	3.81 to 10.94	<0.0005
General practice	4.70	2.89 to 7.64	<0.0005
Other hospital	9.64	6.02 to 15.45	<0.0005
Religious faith			
Very or extremely religious	1		
Neither or mild	1.25	0.96 to 1.62	0.09
Very or extremely non-religious	1.83	1.35 to 2.48	<0.0005
Ethnicity			
Other	1		
Asian	1.11	0.76 to 1.64	0.58
White	1.20	0.86 to 1.69	0.29
<b>(3) Attitude‡</b>			
Speciality			
Palliative care	1		
Elderly	2.66	1.66 to 4.26	<0.0005
General practice	3.99	2.59 to 6.14	<0.0005
Other hospital	4.45	2.93 to 6.77	<0.0005
Religious faith			
Very or extremely religious	1		
Neither or mild	3.02	2.29 to 3.98	<0.0005
Very or extremely non-religious	5.47	4.04 to 7.40	<0.0005
Ethnicity			
Other	1		
Asian	1.51	1.07 to 2.14	0.02
White	1.47	1.08 to 2.01	0.02
<b>(4) Discuss§</b>			
Speciality			
Palliative care	1		
Elderly	0.22	0.02 to 2.77	0.24
General practice	0.30	0.03 to 3.13	0.31
Other hospital	0.55	0.05 to 5.71	0.61
Religious faith			
Very or extremely religious	1		
Neither or mild	4.10	1.92 to 8.74	<0.0005
Very or extremely non-religious	4.29	1.74 to 10.57	<0.0005
Ethnicity			
Other	1		
Asian	1.14	0.35 to 3.74	0.83
White	1.14	0.40 to 3.25	0.80

\*Sedation: 2573 cases.

†Intent: 2407 cases.

‡Attitude: 3362 cases.

§Discuss: 412 cases.

**Ethnicity and type and strength of religious faith**

Table 1 compares 2001 Census data on the ethnic composition of the general UK population with two sources of information about this in the medical population: NHS data on the medical workforce<sup>21</sup> and the 2007–8 survey of doctors. The medical population contains a higher proportion of people from ethnic minority backgrounds than the general population, particularly so for Asian and Asian British doctors.

Table 2 shows the strength and type of religious faith in the medical population, comparing this with the general population.<sup>18</sup> A  $\chi^2$  test comparing the two surveys for the question about strength of religious faith showed a significant overall difference ( $p < 0.0001$ ) between the two groups, with doctors being particularly less likely than the general population to report being neither religious nor non-religious. In line with the evidence in table 1 about ethnicity, the second part of table 2 shows Christianity to be less prevalent in the medical population than in the general public ( $p < 0.0001$ ;  $\chi^2$  test), with doctors who are Buddhist, Hindu, Jewish, Muslim and 'any other' ethnicity being significantly more common in the medical population ( $p < 0.0001$ ;  $\chi^2$  test applied to each category). The difference for Sikhs is statistically non-significant ( $p > 0.05$ ;  $\chi^2$  test).

Table 3 shows that specialists in palliative medicine are more likely to be Christian, white and report being 'very or extremely religious' than doctors in other specialities. Care of the elderly is a speciality more likely than others to contain Asian, Hindu or Muslim doctors. Doctors in 'other hospital' specialities are more likely than others to report being 'very or extremely non-religious'.

Table 4 shows that white doctors, the most numerous ethnic group, are the least likely to describe themselves as very or extremely religious. Strong religious faith is more common in the small group of black doctors. Asian doctors, who are quite numerous, are somewhat unlikely to be very or extremely non-religious.

**Attitudes, actions and their predictors**

The bivariate relationships between ethnicity, type and strength of religious faith and speciality with the four independent variables are shown in table 5. Stronger religious faith is associated with lower rates of continuous deep sedation, and speciality is also associated with variation in this, with lower rates being reported by palliative medicine specialists and higher rates by 'other hospital' specialists. Reporting a decision involving an expectation, or some degree of intent, to hasten the end of life is more likely among those who describe themselves as very or extremely non-religious, and in specialities other than palliative medicine (particularly 'other hospital' specialities). Support for the legalisation of assisted dying is associated with ethnicity, with doctors describing themselves as 'white' being more likely than others to support legalisation. Support for this is also stronger in doctors saying 'none' in answer to the question about type of religion, in those who report they are very or extremely non-religious and who are not specialists in palliative medicine. Being very or extremely religious is associated with fewer discussions of decisions with patients judged competent to do so, when decisions were taken that involved an expectation, or some degree of intent, to hasten the end of life.

The independent relationship of speciality, strength of religious faith and ethnicity with the four dependent variables is shown in table 6. Regarding sedation, the relationship with being 'very or extremely' non-religious found in bivariate analysis holds, but the relationship with speciality does not reach statistical significance. Speciality remains significantly related to

reporting a decision containing an expectation or some intention to hasten the end of life, with doctors in 'other hospital' specialities being the most likely and doctors in palliative medicine the least likely to report this. Doctors who report being very or extremely non-religious are almost twice as likely as those who report being very or extremely religious to report decisions containing an expectation or some intention to hasten the end of life, but ethnicity is unrelated.

Table 6 also shows that all of these variables are significantly related to attitudes towards the legalisation of assisted dying, with palliative care, more religious and 'other' ethnic group doctors being more opposed to this. While speciality and ethnicity are not related to whether discussions with patients were reported, strength of religious faith is strongly related to this, with more religious doctors being less likely to report such discussions.

## DISCUSSION

Compared with the general UK population, the UK medical population contains more doctors from Asian and Asian British backgrounds, and some other ethnic minorities are also more highly represented. Strength of religious faith, compared with this in the general population, is similar although doctors are perhaps clearer than many members of the general UK population in knowing whether they are particularly religious or non-religious. The type of religion followed by doctors differs somewhat from the population they serve, with fewer Christians and more from other faiths, particularly Hindus and Muslims, reflecting the high proportion of Asian doctors in the UK medical population. The finding that the ethnic composition of medical and general populations differs mirrors similar findings in the USA.<sup>13</sup>

Doctors in the specialities of palliative medicine and care of the elderly attend higher numbers of people who die than other specialities and differ somewhat from doctors in other specialities on ethnicity, type and strength of religious faith. Specialists in care of the elderly are somewhat more likely to be Asian, Hindu and Muslim; palliative medicine specialists are somewhat more likely to be Christian and white. Unlike the USA, where family doctors have been found to be particularly likely to be religious,<sup>15</sup> British GPs are not markedly more likely to report strong religious faith than other doctors. Strength of religious faith is related to ethnicity, with non-white doctors being more religious. Doctors describing themselves of 'mixed' ethnicity, are also unlikely to be non-religious. The small group of doctors describing themselves as 'black' report particularly strong religious faith, probably reflecting the prevalence of Christianity among black African populations.

While strength and type of religious faith and speciality are related to a number of indicators of the willingness to take ethically controversial decisions, ethnicity is less so, although ethnicity is related to attitudes towards the desirability of legal change to allow assisted dying. This attitudinal variable, in both bivariate and multivariate analysis, is the dependent variable most sensitive to variations by ethnicity, religion and speciality. As previously reported,<sup>2</sup> being a palliative care doctor and reporting a stronger religious faith are independently associated with opposition to such legislation; this analysis adds to this by showing that being of 'other' ethnicity, rather than white or Asian, is also independently associated with opposition.

As has been reported elsewhere,<sup>5, 6</sup> the analysis shows that speciality and strength of religious faith are associated with variation in the reporting of decisions expected or partly

intended to end life, and that strength of religious faith is related to the incidence of continuous deep sedation until death. This paper adds to this by showing that these relationships hold true in multivariate analysis: being 'very or extremely non-religious' increases the odds of a doctor reporting sedation or a decision with some intent to end life regardless of speciality. Palliative care doctors are particularly unlikely to report decisions with some intent to end life, regardless of the strength of their religious faith. The results also show that willingness to discuss with a competent patient a decision expected or partly intended to end life is less likely if a doctor is very or extremely religious, regardless of either speciality or ethnicity. This is similar to the finding from a US study,<sup>22</sup> which found more religious doctors to be less likely to feel they should disclose information about procedures to which they objected on moral grounds (birth control for adolescents, abortion and 'terminal sedation' in dying).

The largest OR in table 6 relate to the relationship between speciality and the reporting of a decision in which there was some intention to end the life of the patient. Quite independently of the strength of religious faith (which is mildly associated with this) it appears that there is variation in clinical practice between specialities. Now, of course, the patients seen by each group of specialities will have differed in their needs, and this study does not control for variation in this. The inclusion of some intensive care doctors in the 'other hospital' specialities subsample partly explains the high numbers for this group,<sup>6</sup> but the fact that doctors in 'other hospital' specialities are nearly 10 times as likely to report decisions containing such intentions as palliative care doctors seems difficult to explain by saying that this must be wholly due to the variation in patients' clinical profiles. It is equally plausible that doctors in different specialities have different approaches to the care of people who are dying.

One potential response to the findings about the influence of religious faith is to suggest, as other have done,<sup>22</sup> that religious doctors disclose their moral objections to certain procedures to patients so that patients can choose other doctors if they wish. This assumes that religiosity is the 'exception' to be set against the non-religious 'norm'. It is equally plausible to argue that non-religious doctors should confess their predilections to their patients. After all, the data show some religious faith is held to by almost half of the medical population and approximately two-fifths of the general population (table 2). Whether religious or non-religious, it would seem advisable that doctors become more aware of how broader sets of values, such as those associated with religiosity or a non-religious outlook, may enter into their decision-making in end-of-life care.

## Strengths and weaknesses of the study

The study benefits from using questions worded in ways that permit comparability with other national studies and from a disproportionate stratified sample that allows for comparison among specialities. However, the overall response rate raises concerns about representativeness. The investigation of non-response showed a bias towards cases involving terminal illness and cancer deaths. The comparisons between groups of doctors are not affected by this bias if it is presumed that the direction of the bias would apply equally to all categories involved in any one comparison. More detailed, qualitative, observational research of particular care settings is needed to overcome the limitations inherent in any questionnaire relying on retrospective recall and fixed-choice questions. This is needed to provide a better understanding of the issues raised by this study and to

understand the range of circumstances involved in providing end-of-life care.

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## REFERENCES

1. **Lee W**, Price A, Rayner L, *et al*. Survey of doctors' opinions of the legalisation of physician assisted suicide. *BMC Med Ethics* 2009;**10**:2.
2. **Seale C**. Legalisation of euthanasia or physician-assisted suicide: survey of doctors' attitudes. *Palliat Med* 2009;**23**:205–12.
3. **Pugh EJ**, Song R, Whittaker V, *et al*. A profile of the belief system and attitudes to end-of-life decisions of senior clinicians working in a National Health Service hospital in the United Kingdom. *Palliat Med* 2009;**23**:158–64.
4. **Ward BJ**, Tate PA. Attitudes among NHS doctors to requests for euthanasia. *BMJ* 1994;**308**:1332–4.
5. **Seale C**. Hastening death in end-of-life care: a survey of doctors. *Soc Sci Med* 2009;**69**:1659–66.
6. **Seale C**. Continuous deep sedation in UK medical practice: descriptive study. *J Pain Symptom Manage* 2010;**39**:44–53.
7. **Cuttini M**, Nadai M, Kaminski M, *et al*. End-of-life decisions in neonatal intensive care: physicians' self-reported practices in seven European countries. *Lancet* 2000;**355**:2112–18.
8. **Cohen J**, van Delden J, Löffmark R, *et al*; on behalf of the Eureld Consortium. Influence of physicians' life stances on attitudes to end-of-life decisions and actual end-of-life decision-making in six countries. *J Med Ethics* 2008;**34**:247–53.
9. **Emanuel EJ**, Fairclough D, Clarridge BC, *et al*. Attitudes and practices of U.S. oncologists regarding euthanasia and physician-assisted suicide. *Ann Intern Med* 2000;**133**:527–32.
10. **Wenger NS**, Carmel S. Physicians' religiosity and end-of-life care attitudes and behaviors. *Mt Sinai J Med* 2004;**71**:335–43.
11. **Miccinesi G**, Fischer S, Paci E, *et al*; on behalf of the EURELD consortium. Physicians' attitudes towards end-of-life decisions: a comparison between seven countries. *Soc Sci Med* 2005;**60**:1961–74.
12. **Asch DA**, DeKay ML. Euthanasia among US critical care nurses—practices, attitudes, and social and professional correlates. *Med Care* 1997;**35**:890–900.
13. **Curlin FA**, Lantos JD, Roach CJ, *et al*. Religious characteristics of US physicians: a national survey. *J Gen Intern Med* 2005;**20**:629–34.
14. **Catlin EA**, Cadge W, Ecklund EH, *et al*. The spiritual and religious identities, beliefs and practices of academic pediatricians in the United States. *Acad Med* 2008;**83**:1146–52.
15. **Bowler I**. Ethnic profile of the doctors in the United Kingdom. *BMJ* 2004;**329**:583–4.
16. **Goldacre MJ**, Davidson JM, Lambert TW. Country of training and ethnic origin of UK doctors: database and survey studies. *BMJ* 2004;**326**:597.
17. **Curlin FA**, Nwodim C, Vance JL, *et al*. To die, to sleep: US physicians' religious and other objections to physician-assisted suicide, terminal sedation, and withdrawal of life support. *Am J Hosp Palliat Med* 2008;**25**:112–20.
18. **British Social Attitudes**. *Information system*. <http://www.britisocatt.com> (accessed 8 Jan 2010).
19. **Clery E**, McLean S, Phillips M. Quickening death: the euthanasia debate. In: Park A, Curtice J, Thomson K, *et al*, eds. *British social attitudes: perspectives on a changing society*. 23rd Annual report. London: Sage, 2007:35–54.
20. **Fischer S**, Miccinesi G, Hornung R, *et al*. Responders and non-responders in a study on medical end-of life decisions in Denmark, the Netherlands, Sweden and Switzerland. *Soc Prev Med* 2006;**51**:24–33.
21. **NHS Information Centre**. *NHS hospital and community health services: medical and dental staff*, 2009. The Health and Social Care Information Centre, <http://www.ic.nhs.uk>, (accessed 8 Jan 2010).
22. **Curlin FA**, Lawrence RE, Chin MH, *et al*. Religion, conscience, and controversial clinical practices. *N Engl J Med* 2007;**356**:593–600.