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Contributors: AWC initiated the study and coordinated the design of the project, discussed the analysis strategy and the interpretation of the results, and participated in writing the manuscript. ENH was involved in the discussion, developing the design of the project, and analysing and interpreting the results and took the lead role in writing the manuscript. MC performed the statistical analysis and participated in discussions on interpreting results. Julian Smith designed the database and downloaded data. LP designed the study and data abstraction procedure, supervised data collection, checked the data download before statistical analysis, discussed the interpretation of results, and participated in writing the manuscript. Diane Coulson, Heather Forshaw, Christine Kinsella, and Pamela McCrorie performed all the case note abstraction. LP, ENH, and AWC are guarantors for the study.

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Conflict of interest: None.

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Racial discrimination in the allocation of distinction awards? Analysis of list of award holders by type of award, specialty and region

Aneez Esmail, Sam Everington, Helen Doyle

There has been much concern about the possibility of discrimination in the allocation of distinction awards to consultants. The aim of this study was to assess whether there is any disparity between white and non-white consultants in the receipt of distinction awards.

Methods and results

We used the list of all consultants in England and Wales who are currently in receipt of a distinction award published by the Advisory Committee on Distinction

Awards¹ to determine the ethnicity of award holders using the surname of the award holder as a proxy for ethnicity. We classified consultants with Asian, Chinese, and African names as non-white and consultants with Anglo-Saxon, East European, and South European names as white. All consultants are eligible for distinction awards, so for denominator data we obtained the number of consultants by region and specialty from the 1996 census of the NHS workforce carried out by the Department of Health.² This census categorises consultants as white, black, Asian, other ethnic, and not known. We classified black, Asian, and other ethnic as

See editorial by Rubin

Harvard Medical School, Boston, MA 02115-5818, USA

Aneez Esmail
visiting professor of
social medicine

continued over

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Medical
Practitioners Union,
London SE1 1UN
Sam Everington
vice president

Department of
General Practice,
University of
Manchester,
Rusholme Health
Centre, Manchester
M14 5NP
Helen Doyle
research assistant

Correspondence to:
Dr Esmail
aesmail@warren.
med.harvard.edu

non-white. We excluded the not known category in our calculations.

We tabulated results of award holders by type of award, specialty (only those with more than 50 award holders), and NHS region. The ratios of the proportion of white and non-white consultants with awards were calculated together with their confidence intervals (see table).

Comment

Distinction awards are “granted to individuals solely on the grounds of merit. Consultants from all backgrounds, regardless of gender and race, are judged equally.”¹ The systematic differences that we have tabulated between white and non-white consultants therefore need some explanation.

The use of surnames as a proxy for ethnicity is open to criticism because of the problems of misclassification. This method cannot identify people with European sounding names who may be Asian or Afro-Caribbean and who would therefore have been classified as white. Nevertheless, this misclassification would probably not have altered the very large differences that we observed. We did not have ethnicity information on 12% of the consultants eligible for awards. The ethnic distribution of this group is unlikely to differ from the group as a whole, and the

omission of these consultants from the denominator ratio would not produce any serious bias.

If discrimination is an explanation, then it can arise at two stages: at nomination and at awarding. We have no information on the ethnic composition of those who are nominated or on those who are turned down by the regional committees. However, the fact that the end result is the under-representation of consultants from ethnic minorities, particularly in certain specialties and regions, suggests that something other than sheer excellence is operating at these stages. We have no information on the composition of regional award committees, and there is only one consultant from an ethnic minority who sits on the national advisory committee. If these committees are predominantly white and male they could be open to accusations of bias against women and ethnic minorities.

Distinction awards are an important source of income for consultants: an A+ award is worth £52 925 a year, an A award £38 995, and a B award £22 285. A system which appears systematically to exclude a section of the consultant workforce from recognition and reward cannot be defended. We have previously shown that racial discrimination is widespread in the NHS.^{3–5} In the absence of more information on the workings of the distinction award system—at present it is cloaked in secrecy—charges of racial discrimination

Proportion of white consultants obtaining distinction awards compared to non-white consultants by type of award, specialty, and region of employment (1996)

	No of awards to consultants by ethnic group (% of all awards)		No of consultants by ethnic group eligible for awards (% of consultants)			Ratio of proportion of white to non-white consultants in receipt of awards (95% confidence intervals)†
	White	Non-white	White	Non-white	Not known	
Type of award						
All awards	2571 (95)	143 (5)	14 713 (74)	2722 (14)	2342 (12)	3.33 (2.82 to 3.92)
A+	213 (96)	9 (4)				4.38 (2.25 to 8.52)
A	716 (97)	22 (3)				6.02 (3.95 to 9.18)
B	1597 (93)	112 (7)				2.64 (2.19 to 3.18)
Selected specialties						
Anesthetics	200 (97)	7 (3)	1 999 (75)	327 (12)	329 (13)	4.67 (2.22 to 9.84)
Cardiology	62 (98)	1 (2)	327 (78)	44 (11)	47 (11)	8.34 (1.19 to 58.67)
General medicine	249 (97)	7 (3)	246 (72)	38 (11)	59 (17)	
General surgery	210 (96)	9 (4)	921 (79)	92 (8)	147 (13)	2.33 (1.24 to 4.38)
Haematology	64 (94)	4 (6)	332 (74)	51 (11)	67 (15)	2.46 (0.94 to 6.46)
Histopathology	93 (96)	4 (4)	504 (72)	102 (14)	95 (14)	4.71 (1.77 to 12.51)
Medical microbiology	50 (91)	5 (9)	230 (70)	41 (12)	59 (12)	1.78 (0.76 to 4.20)
Mental illness	109 (92)	10 (8)	991 (71)	275 (20)	127 (9)	3.02 (1.61 to 5.70)
Neurology	61 (98)	1 (2)	221 (85)	18 (7)	21 (8)	4.97 (0.73 to 33.78)
Obstetrics and gynaecology	117 (95)	6 (5)	752 (75)	132 (13)	119 (12)	3.42 (1.54 to 7.61)
Ophthalmology	54 (90)	6 (10)	408 (73)	85 (15)	68 (12)	1.88 (0.83 to 4.22)
ENT	44 (88)	7 (12)	304 (69)	80 (19)	54 (12)	1.65 (0.77 to 3.53)
Paediatrics	154 (96)	7 (4)	856 (75)	165 (14)	129 (11)	4.24 (2.03 to 8.88)
Radiology	125 (96)	5 (4)	1 041 (72)	218 (15)	187 (13)	5.24 (2.17 to 12.65)
Orthopaedic surgery	78 (97)	2 (3)	762 (76)	117 (12)	124 (12)	5.99 (1.49 to 24.04)
NHS region						
South and West	250 (97)	8 (3)	1 772 (83)	101 (5)	261 (12)	1.78 (0.91 to 3.50)
North West	291 (93)	23 (7)	2 108 (82)	468 (18)	9 (0.3)	2.81 (1.86 to 4.24)
Wales*	125 (94)	8 (6)	807 (74)	148 (14)	126 (12)	2.87 (1.43 to 5.73)
Northern and Yorkshire	297 (95)	14 (5)	2 119 (83)	379 (15)	62 (2)	3.79 (2.25 to 6.41)
Trent	218 (94)	15 (6)	1 362 (82)	276 (17)	33 (1)	2.95 (1.77 to 4.89)
Oxford and Anglia	264 (96)	10 (4)	1 431 (74)	168 (9)	323 (17)	3.10 (1.68 to 5.71)
North Thames	580 (95)	29 (5)	2 316 (73)	613 (19)	255 (8)	5.29 (3.69 to 7.60)
South Thames	357 (94)	21 (6)	2 041 (75)	375 (14)	289 (11)	3.12 (2.04 to 4.78)
West Midlands	181 (92)	15 (8)	1 434 (77)	327 (18)	91 (5)	2.75 (1.65 to 4.59)

*Distribution of consultants used in denominator calculated from English data.

†Mantel-Haenszel χ^2 of no difference between regions=272; $p<0.0001$.

in the allocation of distinction awards can be also brought against the system.

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Contributors: AE planned the study, carried out the analysis, and wrote the paper and acts as guarantor. HD collected the data from the various reports and prepared them for analysis. SE initiated the idea and participated in writing the paper.

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Conflict of interest: AE and SE are vice presidents of the Medical Practitioners Union, which is opposed to the present system of distinction awards for NHS consultants.

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Correction

Comparison of blood or urine testing by patients with newly diagnosed non-insulin dependent diabetes: patient survey after randomised crossover trial

An error occurred in this paper by Pat Miles and colleagues (9 August 1997, pp 348-9). The first sentence of the final paragraph of the subjects, methods, and results section should read: "At 6 months, 42% (47 [not 63]) opted for urine testing and 48% (53 [not 72]) for blood testing; 10% (11 [not 15]) chose both."

Association between use of a quilt and sudden infant death syndrome: case-control study

Anne-Louise Ponsonby, Terence Dwyer, David Couper, Jennifer Cochrane

The relation between an infant's sleeping environment and development of the sudden infant death syndrome depends on the infant's sleep position.¹ We report how the association between the use of a quilt and the syndrome depends on sleep position.

Subjects, methods, and results

Between 1 October 1988 and 31 December 1995 in Tasmania 107 infants < 1 year old died of the sudden infant death syndrome. Of the families affected, 100 (93%) participated in this study and were compared directly with 196 age matched controls. Methods are described elsewhere.¹ A quilt is a coverlet made by stitching two thicknesses of fabric together with a filling (usually synthetic) enclosed between the layers. Conditional multiple logistic regression² was used to evaluate interaction effects; EGRET 0.26.6 software (Cytel Software, Cambridge, MA, USA) provided matched odds ratios with logit-based 95% confidence intervals.

An adverse effect of quilt use was evident in infants who did not sleep prone but not in infants who slept prone (table). This interaction was not altered by adjustment for sleeping on sheepskin; the interaction between sleeping on sheepskin and sleeping prone; mattress liner; mattress type; use of a quilt under the infant; use of a pillow; infant illness; heating in the bedroom; amount of thermal insulation over the infant; maternal age; or family history of asthma. Adjustment for maternal smoking, breast feeding, or swaddling increased the size of the interaction.

A model was constructed to test whether the interaction was a marker for one of the previously identified modifiers of the prone position,¹ with indicators for maternal smoking, use of a quilt, swaddling during last sleep, use of a natural fibre mattress, infant illness, and use of bedroom heating during last sleep; the

interaction between the last five variables and the prone position was also evaluated. The interaction effect remained ($P = 0.01$). An adverse effect of the use of a quilt was found among infants who did not sleep prone (adjusted odds ratio 6.16; 2.01 to 18.87) but not among those who slept prone. Thus the interaction could not be explained by these factors. The interaction between sleep position and use of a quilt remained for infants and controls who slept in their own cot during the index sleep.

The adverse effect of quilt use among infants who did not sleep prone was greater in infants ≥ 12 weeks old (odds ratio 6.77; 1.14 to 40.21) than in younger infants (odds ratio 1.62; 0.27 to 9.59). Adjustment for being found prone reduced the effect of quilt use (adjusted odds ratio 3.16; 1.16 to 8.60) suggesting that part of the adverse effect of quilts may occur by allowing infants to roll into the prone position. Among infants who did not sleep prone adjustment for swaddling, maternal smoking postnatally, breast feeding, and type of mattress gave an odds ratio of 5.63 (1.69 to 18.72) for quilt use. Review of the data at the infant's death scene showed that infants found supine with facial obstruction were reported by at least one witness to have had an overlying quilt. The risk of the sudden infant death syndrome for quilt use varied by usual sleep position (common odds ratio test

Menzies Centre for Population Health Research, University of Tasmania, GPO Box 252-23, Hobart, Australia 7001

Anne-Louise Ponsonby, deputy director of research

Terence Dwyer, director

David Couper, biostatistician

Jennifer Cochrane, research officer
Correspondence to: Dr Ponsonby A.L.Ponsonby@menzies.utas.edu.au

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Relation between use of quilt and the sudden infant death syndrome according to usual sleeping position. Values are odds ratios (95% confidence intervals)

Usual sleep position	No quilt used during last sleep	Quilt used during last sleep
Supine or on side	1.00	3.81 (1.68 to 8.65)
Prone	9.19 (3.24 to 26.05)	9.53 (3.52 to 25.81)