Sixth National GP Worklife Survey

Final Report

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Executive summary

NPCRDC undertook national surveys of GPs' working conditions, job satisfaction and current policy developments in 1998, 2001, 2004, 2005 and 2008. The sixth survey was undertaken in the autumn of 2010. This report provides key findings from the survey and makes comparisons with previous surveys. The surveys have cross-sectional and longitudinal elements.

GP commissioning

With respect to future commissioning arrangements, respondents stated that the coverage of the new GP consortia should generally be wider than their existing PBC arrangements. However, only 30% of respondents thought consortia should commission emergency inpatient care. The majority (65%) of respondents thought that practice income should not be related to consortia performance. Respondents tended to believe that the introduction of commissioning consortia would increase efficiency, equity and quality but expressed concerns about the impact on their personal workload and the time they could spend on direct patient care. Few respondents thought they would have a formal role in the new consortia: expressions of interest generally came from GPs who already had a formal role relating to PBC in their area.

Job Satisfaction

On a seven-point scale, overall job satisfaction had increased slightly, from 4.7 points in 2008 to 4.9 points in 2010. This change is observed in both the cross-sectional and longitudinal samples and is robust to the changing age-sex composition of GPs. The largest increases in job satisfaction were with 'freedom to choose [one's] own method of working', 'recognition for good work' and 'hours of work'. The mean level of overall job satisfaction reported by GPs in 2010 was higher than in all previous surveys except the survey undertaken straight after the introduction of the new contract in 2005. On the specific domains of job satisfaction, respondents to the 2010 survey reported higher satisfaction on all domains than in 2008 and, with two exceptions ('physical working conditions' and 'amount of variety in job') lower satisfaction than in 2005.

GP workload

Respondents to the 2010 survey reported working an average of 41.4 hours per week. This is unchanged compared to the 2008 survey. There was a slight decline in the percentage of GPs who indicated that they worked at least one weekday evening session in a typical week (from 59% in 2008 to 57%), but a corresponding increase in the percentage who indicated that they worked at least one weekend session in a typical week (from 13% in 2008 to 15%). Significantly fewer GPs reported undertaking out-of-hours work in 2010: the percentage who reported undertaking such work declined from 32% in 2008 to 21% in 2010. Respondents to the 2010 survey also reported devoting a higher percentage of time to direct patient care than in previous surveys.

Stressors

The 2010 respondents reported most stress due to 'increasing workloads' and 'paperwork'. Average levels of stress caused by 'increased demand from patients' and 'dealing with problem patients' rose consistently between 2005 and 2008 and between 2008 and 2010. However, reported levels of stress have decreased between 2008 and 2010 on two stressors that increased substantially between 2005 and 2008: 'adverse publicity from the media' and 'changes imposed from the PCT'. The proportion of respondents reporting that they 'have to work very intensively' was 92%. Between 2008 and 2010, there have been substantial increases in the proportion of respondents reporting that they 'always know what [their] responsibilities are' and are 'consulted about changes that affect [their] work' and a substantial decrease in the proportion saying that they are 'required to do unimportant tasks, preventing completion of more important ones'.

Intentions to quit

Compared to 2008, the proportion of GPs expecting to quit direct patient care in the next five years in 2010 has fallen from 7.1% to 6.4% amongst GPs under 50 years-old and from 43.2% to 41.7% amongst GPs aged 50 years and over.

Conclusion

The findings from the 2010 survey suggest that GPs' working lives have improved slightly since 2008.

Background

The National Primary Care Research & Development Centre has undertaken postal surveys of General Practitioners' working lives in 1998 (Sibbald et *al.*, 2000), 2001 (Sibbald et *al.*, 2003), 2004 (Whalley et *al.*, 2005, 2006a), 2005 (Whalley et al., 2006b, 2008) and 2008 (Hann et al., 2009). The sixth in this series was undertaken in the autumn of 2010.

This series of questionnaires now spans over a decade and continues to provide a unique resource for tracking long-term trends as well as identifying the key policy and environmental issues impacting on GPs' working lives.

The 2010 survey performed a number of important functions:

- to contribute to the ongoing tracking of GP satisfaction throughout the primary care reform process, in particular to determine whether the decline in job satisfaction since 2005 that was observed in the 2008 survey, continued or had reversed;
- to provide further evidence on trends in GP hours and activities; and
- to both monitor current participation in Practice Based Commissioning and, with the introduction of GP Consortia imminent, gauge opinion about commissioning in the future.

Methods

The data were collected via a postal questionnaire survey administered to a sample of GPs between September and November 2010.

Target sample

The target sample included principals and salaried GPs (PMS and other salaried) in England, drawn from the General Medical Services (GMS) Statistics database maintained by the Department of Health (DH). This database is derived from an annual census (1st October each year) and contains the GMC number, age, gender and contract status of all GPs in contract with the NHS in England and Wales at the census date. The database is updated annually and made available nine months after collection.

Following the methodology employed in previous surveys, and with the permission of the DH and the British Medical Association (BMA), two samples of GPs were drawn from the October 2009 GMS Statistics Database provided by the Health and Social Care Information Centre¹:

- 1. 2010 cross-sectional random sample A random sample of 3,000 GPs, excluding GP retainers and registrars, representing approximately 1/12th of the GP population;
- 2. Longitudinal sample 2,788 GPs who could be located in the 2009 GMS Statistics database, and who either responded to the 2008 survey or at least two of the three surveys prior to 2008.

The random sample of 3,000 GPs was drawn first. Those GPs eligible for the longitudinal sample but not already selected as part of the random sample were added to form the overall study sample. The total target sample contained 5,519 GPs.

Response rate

Reminders were sent at three and six weeks after the initial mailing. Each mailing included a covering letter, the survey questionnaire and a reply-paid envelope. Respondents were asked to return blank questionnaires if they did not wish to participate and wanted to avoid reminders.

Table 1 shows the outcomes for the distributed questionnaires. The response rate in the cross-sectional survey was 36% (1,073/2,980) and in the longitudinal sample was 59% (1,633/2,780). Both response rates were lower than was achieved for the corresponding elements in 2008 (44% for the cross-section element; 70% for the longitudinal element).

Some of the questionnaires were not completed by the GP to whom they were addressed. Cross-referencing the age and gender reported by the respondent with that of the intended recipient recorded on the GMS Statistics database suggested that 349 (14%) out of 2,498² questionnaires were completed by a different GP than the GP to whom the letter was addressed. Proportionately, this happened more frequently in the cross-sectional element of the survey than the longitudinal element (17.3% vs. 11.5%).

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² 44 questionnaires had missing age and/or gender.

Table 1: Outcomes for the distributed questionnaires

	Cross-Se	Cross-Sectional		l Sample
	Sample (N	= 3,000)	(N = 2,	788)
	N	%	N	%
Returned - Completed	1,073	35.76	1,633	58.57
Returned - Blank	329	10.97	193	6.92
Not Returned	1,578	52.60	954	34.22
Undelivered	17	0.57	3	0.11
GP had Retired/ Left the Practice/ Died or was	3	0.10	5	0.18
on Maternity Leave				

Note: The data for **each sample** includes 269 GPs who were in **both samples** (164 completed returns (of which 145 (89.5%) were the intended recipient)).

The achieved samples in previous NPCRDC GP satisfaction surveys have been reasonably representative of the entire GP populations at those times. Adjustments for observed differences between the achieved samples and the populations have made little difference to key statistics. Furthermore, while previous surveys have shown an inverse relationship between average satisfaction and response rates, previous analysis has shown that this relationship does not lead to bias in the estimated changes in mean satisfaction or in the estimated effects of the determinants of satisfaction (Gravelle, Hole and Hussein, 2008).

The age, gender and contract type compositions of the entire GMS database and the cross-sectional sample of respondents are summarised in Table 2. There is good representation of all groups, though the respondents are somewhat less likely to be in the very youngest (under 35 years) or very oldest (60 years and over) age categories and more likely to be 'Providers'.

Table 2: Representativeness of the 2010 cross-sectional element of the survey

	All GPs - GMS 2009 (excl. Retainers/ Registrars)	2010 Worklife Survey Respondents
N	34,991	1,073 (36.0%)
Age (years)		
< 35	4,356 (12.4%)	78 (7.4%)
35 - 39	5,129 (14.7%)	144 (13.7%)
40 - 44	5,475 (15.6%)	134 (12.8%)
45 - 49	6,563 (18.8%)	232 (22.1%)
50 - 54	5,765 (16.5%)	228 (21.7%)
55 - 59	4,209 (12.0%)	165 (15.7%)
60 +	3,494 (10.0%)	68 (6.5%)
Missing		24
Mean Age (Std. Dev.)	46.6yrs (9.7)	47.6yrs (8.5)
Gender		
Male	19,665 (56.2%)	583 (55.3%)
Female	15,326 (43.8%)	472 (44.7%)
Missing		18
GP 'Type'		
Provider	28,061 (80.2%)	909 (86.2%)
Other (Salaried) + Locum	6,930 (19.8%)	146 (13.8%)
Missing		18

Samples analysed

We use different samples throughout this report depending on the focus of the analysis: (i) repeated cross-sections; (ii) a longitudinal sample and (iii) a pooled sample, representing all respondents to the 2010 survey. The sample used for each table is indicated in the table notes. In general, where a question has been asked in previous surveys, and the primary purpose is to compare a representative sample of GPs in 2010 with a representative sample in earlier years, we include only the GPs in the cross-sectional sample in 2010. Where possible we complement this analysis with analysis of the same individuals over time, using the 2008-2010 longitudinal sample. This serves to assess the robustness of the findings from the comparison of two repeated cross-sections and provides more detailed consideration of how the distributions of the variables have changed over time. Where a question has not been asked in previous surveys, and the primary purpose is an accurate representation of the current situation, we present figures based on all available responses from the pooled sample.

Questionnaire content

The questionnaire contained sub-sections covering: personal, practice, job and area characteristics; job stressors; job attributes; intentions to quit or retire; job satisfaction; GP commissioning; and the GPs' role in patient health, work and wellbeing. Many of the questions used in the 2010 survey were the same as those used in previous surveys conducted by NPCRDC. The main content is outlined below.

Personal, practice, job and area characteristics

Questions included: age; sex; contract type; estimated hours of work (during surgery hours and out-of-hours); estimated allocation of time between direct and indirect patient care and administration; and practice size (numbers of doctors, nurses and patients).

Job stressors

Respondents were asked to rate the amount of pressure they experience from each of 14 potential sources of job stress on 5-point response scales.

Job attributes

GPs were asked to indicate the extent to which they agreed or disagreed (on a 5-point scale) with 15 statements relating to their job control, workload, job design and work pressures. Three job attributes - feedback on performance, relationships at work and working autonomy - that had been used in previous national surveys, but not in 2008, were added to the questionnaire. These three attributes are directly comparable with questions in the NHS Staff Survey.

Intentions to quit or retire and other changes in work participation

GPs were asked about the likelihood (rated on a 5-point scale) that they would make certain changes in their work life within five years, including: increasing work hours, reducing work hours, leaving direct patient care, and leaving medical work entirely.

Job satisfaction

Job satisfaction was measured with the reduced version of the Warr-Cook-Wall questionnaire (Warr et *al.*, 1979; Cooper et *al.*, 1989), which asks about nine individual facets of job satisfaction and satisfaction overall. Each item in the measure is rated on a

7-point scale, ranging from 'extremely dissatisfied' (score=1) to 'extremely satisfied' (score=7).

GP Commissioning

GPs were asked about their own and their practice's current involvement in Practice Based Commissioning. They were also asked about how GP Commissioning should be structured in the future and what impact, if any, the forthcoming introduction of GP Commissioning consortia would have both on them and their patients.

GPs' role in Patient Health, Work and Wellbeing

This section of the questionnaire was developed for the 2010 survey in conjunction with policy customers in the Health Work and Well-being Delivery Unit, led from the Department for Work and Pensions. The 19 items selected relate to GPs' views on: the relationship of work to health; GPs' role, training and confidence in supporting patients with health problems into work; their views on the fit note; and the availability of services to support patients into work. The findings from this section of the questionnaire are available in a separate report (Hann and Sibbald, 2011).

GP Commissioning

Current commissioning arrangements

GPs were asked about their practice's and their own involvement in commissioning. Nearly ninety per cent of respondents (89.5%) reported that their practice was currently participating in Practice Based Commissioning (PBC) as part of a group or consortium: a further 3.6% said that their practice was participating as a stand-alone practice. However, only one in five GPs stated that they personally had a formal role relating to PBC in their local area. These GPs reported spending a median of 2.5 hours per week on this role.

Coverage of commissioning

GPs were asked about the current coverage of PBC and what they thought their consortium should be responsible for commissioning. Respondents would most like to see their prospective consortium responsible for commissioning 'outpatient care', 'community health services' and 'GP prescribing'. These are the services with the highest rate of current coverage (Table 3). Of the currently commissioned services, only 30% of respondents thought prospective consortia should commission emergency inpatient care. Only 14% and 15% of GPs respectively thought that consortia should commission primary dental services and regional specialist services in the future.

Table 3: GP Commissioning of Services

Service	Current coverage of PBC arrangements	Would like to see covered in the future
Outpatient care	58%	68%
GP Prescribing	49%	63%
Community health services	41%	63%
Elective inpatient care	34%	55%
Primary medical services	-	54%
Out-of-hours services	-	52 %
Mental health services	-	51%
Maternity services	-	33%
Emergency inpatient care	25%	30%
Community pharmacy	-	24%
Primary ophthalmic services	-	22%
Regional specialist services	-	15%
Primary dental services	-	14%

Note: Percentages are based on responses from the 2010 combined cross-sectional and longitudinal samples. Range of N = 2,527 - 2,533. "-" indicates that this service was not included in the current coverage question.

Views on future commissioning arrangements

The majority of respondents (62%) thought that the most important factor in determining how consortia should be formed was geographical proximity, not 'like-mindedness'. The median desired consortium size stated by respondents was 100,000 patients [Inter-Quartile range (100,000, 250,000); Range (4,500 to 2,000,000)]. The majority (65%) thought that practice income should not be related to consortia performance, whilst 25% thought that up to 10% of practice income should be related to consortia performance and the remaining 10% of GPs thought that in excess of 10% of practice income (and up to 100%) was an appropriate figure.

Table 4 shows the impact that GPs think the introduction of commissioning consortia will have on their job, patients and the local health service. Eighty-five per cent of GPs indicated that they thought the introduction of commissioning consortia would increase their workload. Fifty-three percent thought that it would reduce the time that they were able to spend on direct patient care and only 13% thought it would increase their time for direct patient care. More GPs believed that the introduction of commissioning consortia would increase efficiency, equity and quality than thought it would decrease them.

Table 4: GPs views on the introduction of commissioning consortia

How will it affect	decrease a lot	decrease a little	no change	increase a little	increase a lot	don't know
Your workload	0	0	7	29	56	8
Time spent on direct patient care	13	40	26	8	5	9
Efficiency of the local health service	8	11	20	34	12	16
Equity of service provision for patients	11	14	26	25	7	16
Quality of care for patients in the health care system as a whole	8	11	24	30	9	18

Note: Cell figures represent within-row percentages. Percentages are based on responses from the 2010 combined cross-sectional and longitudinal samples. Range of N = 2,389 - 2,398.

Table 5 shows the extent to which GPs would like to be involved in commissioning in the future and the expertise they believe would be required. Nearly seven in ten respondents (69%) reported that they would not like a formal role in their local consortium and more than half (55%) thought that the expertise required for GP commissioning did not exist within local practices. If it came to buying in commissioning expertise, GPs favoured staff who currently worked in the local PCT (63% agreed) over private sector providers (35% agreed).

Table 5: GPs views on the personnel required for commissioning consortia

To what extent do you agree	completely disagree	somewhat disagree	somewhat agree	completely agree	don't know
I would like to have a formal role in my local GP Commissioning consortia	49	20	16	11	4
The expertise required already exists within local practices	24	31	31	8	6
My consortium should buy in expertise from staff in the local PCT	10	15	47	16	11
My consortium should buy in expertise from the private sector	24	26	31	4	15

Note: Cell figures represent within-row percentages. Percentages are based on responses from the 2010 combined cross-sectional and longitudinal samples. Range of N = 2,411 - 2,425.

Views on future commissioning by formal role in PBC

One in five GPs (N = 460) reported having a formal role in PBC in their area: their views on future commissioning arrangements were compared with GPs who did not currently have a formal role in PBC (N = 1,953).

Table 6 shows that respondents currently with a formal PBC role were significantly more likely to want to see their prospective consortium responsible for commissioning 11 of the 13 listed services; the exceptions being primary dental services and regional specialist services (the two least 'popular' services overall).

Table 6: Future GP Commissioning of Services by Formal PBC Role

Service	Formal Role	No Formal Role	All GPs
Outpatient care	84%	66%	68%
GP Prescribing	80%	60%	63%
Community health services	77%	60%	63%
Elective inpatient care	75%	51%	55%
Primary medical services	60%	54%	54%
Out-of-hours services	67%	50%	52%
Mental health services	65%	48%	51%
Maternity services	45%	31%	33%
Emergency inpatient care	53%	25%	30%
Community pharmacy	31%	22%	24%
Primary ophthalmic services	28%	21%	22%
Regional specialist services	15%	15%	15%
Primary dental services	17%	14%	14%

Note: Percentages are based on responses from the 2010 combined cross-sectional and longitudinal samples.

The majority of respondents overall (62%) thought that consortia should be formed on the basis of geography: this was still true regardless of whether or not the GP had a formal PBC role. However, a significantly smaller percentage of GPs with a formal PBC role reported that consortia should be formed in this way (56% vs. 63%; $X^2_{(1)} = 5.93$; p = 0.015). GPs with a formal PBC role also thought that the desired size of their consortium should be larger than GPs with no such role (median desired consortium size of 150,000 patients vs. 100,000 patients; z = 4.04; p < 0.001). A greater percentage of GPs with a formal PBC role thought that practice income should be related to consortia performance (45% vs. 32%; $X^2_{(1)} = 5.25$; p < 0.001). Amongst GPs who held this view (irrespective of whether they had a formal PBC role or not), roughly three-quarters thought that the appropriate amount was up to 10% of their practice's income.

Table 7 shows that GPs with a formal PBC role were more likely to think that the introduction of commissioning consortia would increase their workload a lot (68% vs. 53%), whilst decreasing the time they were able to spend on direct patient care (63% vs. 49%). More GPs with a formal PBC role believed that the introduction of commissioning consortia would increase efficiency, equity and quality than GPs who did not have a formal PBC role. Generally, this latter group of GPs were more likely to report that there would be no change to their working habits or the health care system or that they didn't know how the introduction of consortia would affect them.

Table 7: GPs views on the introduction of commissioning consortia by formal PBC role

How will it affect	Formal role	decrease a lot	decrease a little	no change	increase a little	increase a lot	don't know
Vous workload	Yes	0	0	3	25	68	3
Your workload	No	0	0	7	31	53	9
Time spent on	Yes	18	45	21	6	6	4
direct patient care	No	11	38	27	8	5	10
Efficiency of the	Yes	6	8	15	38	22	11
local health service	No	9	12	21	33	8	17
Equity of service	Yes	6	14	29	30	11	11
provision	No	12	14	26	24	6	18
Quality of care for	Yes	6	7	20	38	18	12
patients as a whole	No	9	12	26	28	6	19

Note: Cell figures represent within-row percentages. Percentages are based on responses from the 2010 combined cross-sectional and longitudinal samples. Range of N = 458 - 459 for formal PBC role; N = 1,856 - 1,863 for no formal PBC role.

Table 8 shows the extent to which GPs would like to be involved in commissioning in the future and the expertise they believe would be required by whether they had a formal role in PBC. Seventy percent of respondents with such a role reported that they would like a formal role in their local consortium in the future, compared to just 15% of respondents who currently did not have such a role. GPs currently with a formal PBC role were more likely to agree that the expertise required for GP commissioning already existed within local practices: however, differences were not nearly as pronounced when it came to deciding whether to buy in commissioning expertise from either local PCT staff or private sector providers (although both groups still preferred local PCT staff over the private sector).

Table 8: GPs views on the personnel required for commissioning consortia by formal PBC role

To what extent do you agree	Formal role	completely disagree	somewhat disagree	somewhat agree	completely agree	don't know
I would like to have a formal role in my local consortia	Yes No	14 59	15 21	28 12	42 3	2 5
The expertise required already exists within local practices	Yes No	20 26	27 32	39 29	12 7	2 7
My consortium should buy in expertise from staff in the local PCT	Yes No	9 10	18 15	44 48	24 14	5 13
My consortium should buy in expertise from the private sector	Yes No	24 25	25 26	36 29	6	9 16

Note: Cell figures represent within-row percentages. Percentages are based on responses from the 2010 combined cross-sectional and longitudinal samples. Range of N = 458 - 460 for formal PBC role; N = 1,874 - 1,888 for no formal PBC role.

Job Stressors, Job Attributes and Intentions to Quit

Job stressors

Levels of job stressors in 2010

Respondents were asked to rate 14 factors according to how much pressure they experienced from each in their job on a five-point scale from 'no pressure' (=1) to 'high pressure' (=5). Summary statistics for the cross-sectional sample are provided for each stressor in Table 9. The stressors are ranked in descending order of the mean score. GPs reported most stress with increasing workloads and paperwork and least stress with having insufficient resources within the practice, interruptions by emergency calls during surgery and finding a locum.

The ranking of stressors by mean scores and the percentages reporting high pressure (4 or more) is very similar (particularly for the items generating the greatest stress levels) and we therefore use mean scores throughout the remainder of this section.

Table 9: Levels of job stress in 2010

_	Cross-se	ectional sample
Job Stressor	Mean rating	% reporting considerable/ high pressure
Increasing workloads	4.02	73.40
Paperwork	3.96	71.07
Having insufficient time to do the job justice	3.88	67.30
Increased demand from patients	3.81	65.41
Changes imposed from the PCT	3.74	61.27
Dealing with problem patients	3.48	48.96
Long working hours	3.44	51.46
Dealing with earlier discharges from hospital	3.27	40.98
Adverse publicity by the media	3.20	43.42
Unrealistically high expectation of role by others	3.11	37.45
Worrying about patient complaints/ litigation	3.08	35.69
Insufficient resources within the practice	2.94	31.07
Interruptions by emergency calls during surgery	2.72	22.26
Finding a locum	2.61	27.21

Note: % considerable/high pressure = % rating 4 or 5. Range of N for cross-sectional sample = 1,029 - 1,061.

Changes in job stressors from 2008

The changes in mean stress ratings between 2008 and 2010 in the cross-sectional sample are shown in Table 10. The stressors are ranked from the largest increase in rating to the largest decrease in rating. Average stress ratings for 1998, 2001, 2004 and 2005 are also shown. Generally, average stress ratings have changed very little between 2008 and 2010. The largest increase in mean stress ratings is for finding a locum, which has increased from 2.45 to 2.61. This item had the largest decrease in mean stress ratings between 2005 and 2008. Large decreases between 2008 and 2010 are seen for stress caused by adverse

publicity from the media and changes imposed by the PCT, both of which (and in particular the former) generated an increase in mean stress ratings between 2005 and 2008. Mean stress ratings are higher in 2010, compared with 2005, for 11 of the 14 items and, in general, are most comparable with the levels of stress observed in 2004.

Table 10: Changes in mean job stressor ratings - cross-sectional samples

Job Stressor		M	ean Str	ess Rati	ng		Change
	1998	2001	2004	2005	2008	2010	'08 - '10
Finding a locum	2.71	3.19	3.64	3.24	2.45	2.61	0.16
Increased demand from patients	3.77	4.09	3.74	3.62	3.70	3.81	0.11
Dealing with problem patients	3.50	3.42	3.28	3.13	3.37	3.48	0.11
Dealing with earlier discharges from hospital	2.93	3.21	3.25	3.14	3.23	3.27	0.04
Long working hours	3.13	3.60	3.43	2.90	3.41	3.44	0.03
Worrying about patient complaints/ litigation	3.26	3.57	3.20	3.07	3.06	3.08	0.02
Having insufficient time to do the job justice	3.41	4.14	3.99	3.61	3.88	3.88	0.00
Paperwork	3.47	4.18	4.15	3.86	3.97	3.96	-0.01
Increasing workloads	3.78	4.24	4.08	3.79	4.04	4.02	-0.02
Unrealistically high expectation of role by others	3.17	3.53	3.20	2.70	3.14	3.11	-0.03
Interruptions by emergency calls during surgery	2.87	2.94	3.00	2.73	2.75	2.72	-0.03
Insufficient resources within the practice	2.42	3.19	3.13	2.86	2.98	2.94	-0.04
Changes imposed from the PCT	3.44	4.00	3.82	3.76	4.01	3.74	-0.27
Adverse publicity by the media	2.66	3.57	3.09	2.86	3.65	3.20	-0.45

Note: Stressors ranked from greatest positive change to greatest negative change between 2008 and 2010.

Job attributes

Respondents were asked to indicate the extent to which they agreed or disagreed with a set of statements designed to measure the extent of job control, the nature of job design and work pressure. Responses were recorded on a five-point scale: strongly disagree, disagree, neither, agree, strongly agree.

Levels of job attributes in 2010

Table 11 shows that respondents were most likely to agree with the statements that they had to work very intensively (91.5%) and that their job provided a variety of interesting things (84.7%) and were least likely to agree with the statements that work relationships were strained (18.7%), clear feedback about their performance was received (18.4%) and that changes to the job in the last year had led to better patient care (13.2%).

Changes in job attributes since 2008

These figures are compared to previous surveys in Table 12. In 2010, respondents reported increased agreement (compared to 2008) with three of the four job design statements. Notable increases were reported in relation to knowledge of responsibilities and being consulted about changes that affect work. Respondents also felt more involved in decisions about changes that affected their work. There is a decline in agreement on the two statements about work pressures, in particular that the requirement to do unimportant tasks prevented the completion of more important ones. There are mixed changes on the job control measures, with an increase in agreement regarding job variety, but a decrease with respect to job flexibility. Job attributes relating to workload are relatively unchanged from 2008.

Table 11: Job attributes in 2010

	% disagree/	% agree/
Job Aspect	strongly disagree	strongly agree
(W) Have to work very intensively	1.43	91.54
(C) Job provides variety of interesting things	3.03	84.74
(W) Have to work very fast	3.23	77.89
(D) Always know what responsibilities are	8.18	73.55
(P) Required to do unimportant tasks, preventing completion of more important ones	14.08	67.23
(P) Do not have time to carry out all work	13.01	67.14
(C) Choice in deciding how to do job	20.49	58.63
(D) Involved in deciding changes that affect work	27.99	50.47
(C) Choice in deciding what to do at work	27.51	44.69
(C) Working time can be flexible	30.81	42.56
(C) I can decide on my own how to go about doing my work	26.12	41.28
(D) Consulted about changes that affect work	38.92	39.68
(P) Relationships at work are strained	62.01	18.71
(D) I get clear feedback about how well I am doing my job	40.17	18.42
(D) Changes to job in last year have led to better patient care	55.52	13.24

Note: (C) = Job Control, (W) = Workload, (D) = Job Design, (P) = Work Pressures. Figures are based on the 2010 cross-sectional sample; range of N = 1,048 - 1,055.

Table 12: Trends in Job Design and Work Pressures, Workload and Job Control

	%	agree/s	trongly a	agree
Job Issue	2005	2000	2040	Change
	2005	2008	2010	'08 - '10
(D) Always know what responsibilities are	57.8	68.3	73.5	+5.2%
(D) Consulted about changes that affect work	34.4	34.6	39.7	+5.1%
(D) Involved in deciding changes that affect work	48.7	48.8	50.5	+1.7%
(C) Job provides variety of interesting things	81.5	83.2	84.7	+1.5%
(W) Have to work very fast	70.7	77.1	77.9	+0.8%
(W) Have to work very intensively	81.6	91.0	91.5	+0.5%
(C) Choice in deciding how to do job	62.5	58.4	58.6	+0.2%
(C) Choice in deciding what to do at work	28.3	44.7	44.7	-0.0%
(D) Changes to job in last year have led to better patient care	30.1	13.6	13.2	-0.4%
(P) Do not have time to carry out all work	66.7	68.7	67.1	-1.6%
(C) Working time can be flexible	46.8	44.8	42.6	-2.2%
(P) Required to do unimportant tasks, preventing completion of more important ones	69.7	71.7	67.2	-4.5%
(C) I can decide on my own how to go about doing my work	n/a	n/a	41.3	
(P) Relationships at work are strained	n/a	n/a	18.7	
(D) I get clear feedback about how well I am doing my job	17.6	n/a	18.4	

Notes: (C) = Job Control, (W) = Workload, (D) = Job Design, (P) = Work Pressures. n/a indicates that these questions were not included in the 2005 and/ or 2008 survey. All figures are based on the respective cross-sectional samples.

Intentions to quit

Likelihood of leaving direct patient care

Respondents were asked how likely they were to leave direct patient care within the next five years. This has been shown to be a valid predictor of intentions to quit and actual quitting behaviour.

For older GPs, intentions to leave direct patient care may be dominated by early retirement plans. Table 13 therefore shows the distribution of responses stratified by whether or not the GP was currently aged less than 50 years. More than 1-in-5 (22%) of all respondents indicated that there was a considerable or high likelihood that they would quit direct patient care within five years. Amongst those aged 50 years or more this figure was almost 42%, whilst for GPs aged under 50 years, just over 6%.

Table 13: Likelihood of leaving 'direct patient care' within five years in 2010

Likelihood of leaving 'direct patient care'	All GPs (N = 1,033)		GPs aged <50 (N = 580)		GPs aged ≥50 (N = 453)	
within five years (2010)	N	% N %		%	N	%
None	451	43.7	339	58.5	112	24.7
Slight	227	22.0	139	24.0	88	19.4
Moderate	129	12.5	65	11.2	64	14.1
Considerable	72	7.0	24	4.1	48	10.6
High	154	14.9	13	2.2	141	31.1

Note: Figures are column percentages based on the cross-sectional sample in 2010. The GPs' age was missing in 20 cases: these are excluded from the analysis.

Table 14 shows how these figures on intentions to quit compare with previous surveys. Considerable or high quitting intentions are less prevalent in 2010 than in 2008 and below the figures reported in the 2001 and 2004 surveys.

Table 14: Trends in Intentions to Quit

Considerable/high intention to leave direct patient care within five years	All GPs	GPs aged <50	GPs aged ≥50
1998	15.3%	5.6%	n/a
2001	23.8%	11.4%	n/a
2004	23.7%	13.1%	n/a
2005	19.4%	6.1%	41.2%
2008	21.9%	7.1%	43.2%
2010	21.9%	6.4%	41.7%

Notes: n/a indicates that these figures were not presented in the corresponding reports/articles. All figures are based on the cross-sectional samples in the respective years.

Likelihood of changing working hours

Respondents were also asked to indicate whether they were likely to either increase or (separately) reduce their working hours within the next five years.

Table 15 shows that over half (56%) of all respondents stated that there was no likelihood of them increasing their working hours over the next five years: a further 21% reported that there was only a slight likelihood, whilst the remaining 23% reported that there was a moderate, considerable or high likelihood. As with intentions to quit, there were notable differences between GPs aged less than fifty and GPs aged fifty and over: the latter group being much less likely to report that they would be increasing their working hours to any extent. Almost half of all respondents (48%) reported that there would be a moderate, considerable or high likelihood that they would be reducing their working hours over the next five years. Once again, this was more likely amongst GPs aged fifty and over (68%) than GPs aged less than fifty (33%) and, presumably, signals their intentions (maybe to switch to part-time working) as they near retirement age.

Table 15: Likelihood of changing working hours within five years in 2010

	All GPs		GPs ag	ed <50	GPs aged ≥50	
Likelihood of changing working hours within five years (2010)	Increase	Reduce	Increase	Reduce	Increase	Reduce
	%	%	%	%	%	%
None	56.1	28.9	47.3	40.3	67.4	14.2
Slight	20.9	22.9	24.1	26.9	16.9	17.7
Moderate	11.4	15.3	13.3	13.8	8.8	17.3
Considerable	7.7	14.3	9.5	11.4	5.4	18.0
High	3.9	18.6	5.7	7.6	1.6	32.8

Note: Figures are column percentages based on the cross-sectional sample in 2010. N = 1,022 for 'increase hours' (577 <50; 445 \geq 50); N = 1,031 for 'reduce hours' (580 <50; 451 \geq 50). GPs whose age was missing were excluded from the analysis.

Hours of Work

Sessions worked per week

We asked respondents how many sessions (half days) they expected to work in a typical week. Figure 1 shows the distribution of responses: nearly half of respondents reported working either 8 or 9 sessions per week. The median (Inter-Quartile Range) number of sessions was 8 (6, 9), and the mean (standard deviation) was 7.5 (2) sessions per week. These figures are very similar to those observed in the 2008 survey (mean = 7.4 sessions; standard deviation = 2).

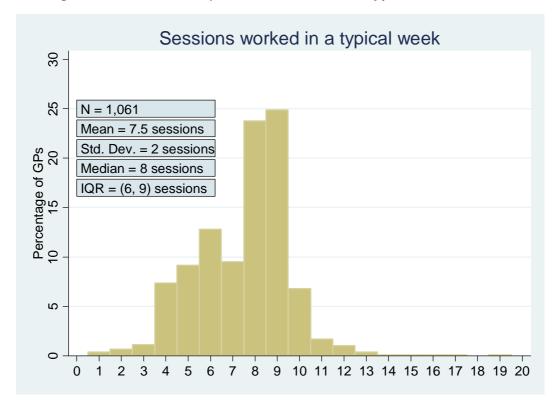


Figure 1: Distribution of sessions worked in a typical week in 2010

Note: Based on the cross-sectional sample in 2010.

We also asked GPs to indicate when they worked these sessions. This was to identify those who were working 'anti-social hours'. Of the 1,061 GPs who reported when they worked their sessions, 607 (57.2%) indicated that they worked at least one weekday evening session in a typical week, a slight decrease from 2008 (59.0%), whilst 160 (15.1%) indicated that they worked at least one weekend session in a typical week, a corresponding increase from 2008 (13.2%).

Average hours worked per week

GPs were asked:

How many hours do you spend, **on average, per week**, doing NHS GP-related work? (Please include **ALL** clinical and non-clinical NHS work but **EXCLUDE OUT-OF-HOURS WORK**)

The mean (standard deviation) response given by the 1,054 respondents was 41.4 (12.9) hours and the median (Inter-Quartile Range) was 42 (32, 50) hours. The distribution is shown in Figure 2.

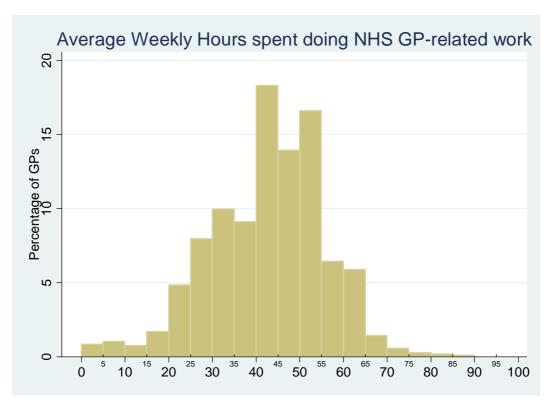


Figure 2: Distribution of 'Average Weekly Hours Worked' in 2010

Note: Based on the cross-sectional sample in 2010.

Trends in average hours worked per week

The average number of hours worked per week decreased between 2008 and 2010, but by less than an hour (Table 16). This change is not statistically significant (t = 1.077; p = 0.282).

A small decrease in the average number of hours spent on NHS-related work is also observed in the longitudinal sample. Average hours worked decreased from 42.6 (sd = 12.1; 95% C.I. (41.6, 43.5)) in 2008 to 42.3 (sd = 13.0; 95% C.I. (41.3, 43.3)) in 2010; this change is not statistically significant (t = 0.648; p = 0.517).

Table 16: Summary statistics for average weekly hours worked: 2008 - 2010

Year	N	Average	Std. Dev.	95% C.I.
2008	634	42.1	13.0	41.1, 43.1
2010	1,054	41.4	12.9	40.6, 42.2

Note: Figures are based on the cross-sectional samples in the respective years.

Prior to 2008, hours of work was elicited using a different phrasing of the question to that in 2010:

How many hours per week do you typically work as a GP? (Please exclude any hours on call)

To enable comparison of the series over time, the two question formats were asked of random halves of the 2008 survey. Figure 3 illustrates these series graphically.

50 Average Weekly Hours Worked 46 45.7 42.6 44.4 44.4 42.3 42 42.1 41.4 40.1 38 38.9 34 1998 2000 2002 2008 2010 1996 2004 2006 Survey Year Cross-Section (New Question Format) —— Cross-Section (Old Question Format) —— Longitudinal

Figure 3: Trends in average weekly hours worked: 1998 - 2010

Note: The figures for the longitudinal sample are based on data from GPs who responded in 2008 and 2010 and received the new format of the hours question in 2008 (N = 661).

Out-of-Hours work

GPs were asked if they undertook any out-of-hours work and, if so, on average, how many hours per week. Twenty-one percent (218/1,053) of respondents in the cross-sectional sample reported undertaking some out-of-hours work, including 185 GP providers (20.4% of all providers who responded to the survey) and 33 non-provider GPs (22.8% of all such GPs in the survey). This represents a significant decline in out-of-hours participation from the 2008 survey when 32.5% (206/634) of respondents in the corresponding cross-sectional sample reported undertaking out-of-hours work (z = 5.319; p < 0.001). This figure consisted of 183 GP providers (32.8% of all such survey respondents) and 23 non-providers (21.1%). Thus, any decline appears to be due to the falling numbers of GP providers participating in out-of-hours activities (although the non-provider numbers are very small).

Of the 218 respondents who reported undertaking out-of-hours work in 2010, 210 reported how many hours they spend on average per week. The median number of hours was 4 [IQR (2, 7)], identical to that in 2008. The majority (over 80%) did so even though their practice had opted-out of out-of-hours working (Table 17).

Table 17: Practice opt-outs and out-of-hours work in 2010

Has your practice opted out of 'out-of-hours' work?	N (%) [of 1,073 GPs]	Median weekly hours spent doing out-of-hours work (N)
Yes	916 (85.4%)	4.0 (170)
No	135 (12.6%)	4.0 (36)
No Response	22 (2.0%)	6.5 (4)

Note: Figures are based on the cross-sectional sample. Median weekly hours data are calculated only for GPs stating that they undertook some out-of-hours work.

Data from the longitudinal sample broadly mirrors that of the cross-sectional sample. Of the 631 GPs who responded to both surveys and received the new format of the hours question in 2008, 219 (34.7%) reported working out-of-hours in 2008 (median = 3 hours); a figure which declined to 127 (20.1%) in 2010 (median = 4 hours). Only 105 GPs in this sample stated that they undertook some out-of-hours work in both years (median = 4 hours in both years).

Extended opening hours

We asked GPs whether their practice offers extended hours access. Table 18 shows that 39.8% of respondents said that their practice offered access at weekends (419 of 1,054), 81.4% on weekdays (858 of 1,054) and 31.3% on both weekdays and at the weekend (330 of 1,054). A little over 10% of respondents (107 of 1,054) replied that their practice did not offer any extended hours access.

Table 18: Extended Hours Access

Does your practice have	A	t Weekends	
Extended Hours Access	Yes	No	Total
On Weekdays			
Yes	330	528	858
No	89	107	196
Total	419	635	1,054

Note: Data are based on 'valid' responses from the cross-sectional sample.

Percentage of time spent on various activities

In addition to asking GPs the number of hours worked on average per week, the questionnaire asked GPs to indicate how much time they spent on different aspects of their work, namely:

- Direct patient care
- Indirect patient care
- Administration
- Other

Table 19 shows the average percentages reported by respondents in the cross-sectional samples in 2005, 2008 and 2010 and in the longitudinal sample. In 2010, almost two-thirds of time (66%) is devoted to direct patient care, with around 19% devoted to indirect patient care and 11% devoted to administration.

The respondents in the 2010 cross-sectional sample reported a higher percentage of time devoted to direct patient care than respondents in either the 2005 or 2008 cross-sectional samples. There was also an increase in the percentage of time devoted to indirect patient care compared to previous surveys. The percentage of time spent on administration was below that reported in both 2005 and 2008, as was the percentage of time devoted to 'other' activities, which halved. Data for the longitudinal sample (in 2010) broadly mirrors that for the cross-sectional sample, except that time spent on administration is marginally increased and the increase (from 2008) in time spent on direct patient care is not as

pronounced. In spite of the changes in the distribution of time across the four different activities being small (between 2008 and 2010), they are statistically significant for both the cross-sectional and longitudinal samples.

Table 19: Percentage of time devoted to different activities in 2005, 2008 & 2010

Type of activity	Cross-sectional sample			Longitudinal sample		
	2005	2008 2010		2008	2010	
Direct patient care	63.3	63.0	65.8	62.9	64.9	
Indirect patient care	18.2	17.5	19.2	17.4	19.1	
Administration	11.3	12.0	11.1	12.5	12.2	
Other	7.1	7.5	3.8	7.2	3.8	
Total	100.0	100.0	100.0	100.0	100.0	

Note: Figures are column percentages. Numbers may not sum to 100% due to rounding errors. N = 868 for the 2005 cross-sectional sample; 1,280 for the 2008 cross-sectional sample; 997 for the 2010 cross-sectional sample. N = 1,339 for the longitudinal sample. Some GPs' percentages were normalized to sum to 100%.

Job Satisfaction

The level of job satisfaction amongst GPs has been a particular focus of previous worklife survey projects at NPCRDC. Questions on job satisfaction have been included in GP surveys since 1987. This section of this report provides summary statistics on these elements of the survey and analysis of recent trends.

Job satisfaction levels in 2010

Table 20 shows summary statistics on the levels of job satisfaction reported by the survey respondents. The mean level of overall satisfaction is 4.87. The nine individual domains are ranked in descending order of the mean reported satisfaction scores. Respondents reported most satisfaction with their colleagues and fellow workers and least satisfaction with their hours of work. This ranking of job domains is almost identical whether we use the mean scores, the percentages reporting dissatisfaction (scores of 3 or less) or the percentages reporting satisfaction (scores of 5 or more). In the remainder of this section we summarise the job satisfaction responses using the mean scores.

Table 20: Summary statistics for job satisfaction in 2010 - cross-sectional sample

Job domain	Mean	%	%
30D domain	maii Meaii		satisfied
Colleagues and fellow workers	5.54	7.18	82.89
Amount of variety in job	5.38	8.59	79.10
Amount of responsibility given	5.33	10.91	76.94
Physical working conditions	5.23	13.13	73.94
Opportunity to use abilities	5.11	14.04	74.18
Freedom to choose own method of working	4.91	15.80	66.70
Remuneration	4.87	18.84	66.00
Recognition for good work	4.65	20.23	57.75
Hours of work	4.39	28.07	52.55
Overall Satisfaction	4.87	16.64	68.05

Notes: % dissatisfied = % rating 1, 2 or 3; % satisfied = % rating 5, 6 or 7. Range of N = 1,048 - 1,061.

Changes in satisfaction ratings from 2008

The mean level of overall satisfaction of 4.87 in the cross-sectional sample in this survey is 0.19 points higher than the mean level reported in 2008 (Table 21). Although small, this change in mean overall satisfaction between 2008 and 2010 is statistically significant (unpaired t-test = 3.276, p = 0.001). Mean levels of satisfaction have also increased, to varying degrees, on each of the nine individual domains. This is in contrast to findings from the previous survey, where satisfaction on all domains, and the overall score, declined between 2005 and 2008. With the exception of physical working conditions and the amount of variety in the job, mean levels of satisfaction in 2010 have not returned to the corresponding levels of 2005. Satisfaction, overall and on individual domains, is, however, higher than at any other point in time since the worklife survey series began.

A corresponding increase of 0.21 points in overall satisfaction was observed in the longitudinal sample (Table 22): this increase is also significant (paired t-test = 5.833, p < 0.001). Mean levels of satisfaction have also increased on eight of the nine individual domains; satisfaction with colleagues and fellow workers being the exception. In this sample, of the 1,403 respondents in both years, 505 (36.0%) reported being more satisfied with their job overall in 2010 than 2008, 571 (40.7%) reported being equally as satisfied and 327 (23.3%) reported being less satisfied in 2010 than 2008.

Table 21: Change in satisfaction ratings from 2008 - cross-sectional sample

Joh Aspost	Mean Satisfaction Rating						Change
Job Aspect	1998	2001	2004	2005	2008	2010	'08 - '10
Freedom to choose own method of working	4.87	4.35	4.66	5.00	4.65	4.91	0.26
Recognition for good work	4.21	3.57	4.28	4.80	4.46	4.65	0.19
Hours of work	3.70	3.32	3.94	4.86	4.21	4.39	0.18
Physical working conditions	4.99	4.86	4.91	5.08	5.07	5.23	0.16
Amount of variety in job	4.94	4.76	5.06	5.26	5.23	5.38	0.15
Remuneration	3.48	3.51	4.38	5.30	4.73	4.87	0.14
Amount of responsibility given	4.99	4.59	5.05	5.43	5.20	5.33	0.13
Opportunity to use abilities	4.64	4.27	4.85	5.19	5.01	5.11	0.10
Colleagues and fellow workers	5.31	5.37	5.60	5.65	5.49	5.54	0.05
Overall Satisfaction	4.65	3.96	4.62	5.21	4.68	4.87	0.19

Notes: Domains ranked by greatest change to least change. Range of N for 2005 = 882-887, for 2008 = 1,275 - 1,289, for 2010 = 1,048 - 1,061.

Table 22: Change in satisfaction ratings from 2008 - longitudinal sample

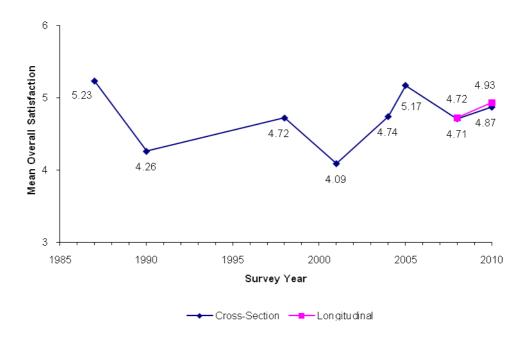
Job Aspect	Mean Satisfaction Rating 2008 2010		
Freedom to choose own method of working	4.62	4.87	0.25
Recognition for good work	4.45	4.66	0.21
Remuneration	4.79	4.98	0.19
Physical working conditions	5.10	5.27	0.17
Opportunity to use abilities	5.08	5.18	0.10
Amount of variety in job	5.33	5.43	0.10
Hours of work	4.20	4.27	0.07
Amount of responsibility given	5.28	5.31	0.03
Colleagues and fellow workers	5.61	5.55	-0.06
Overall Satisfaction	4.72	4.93	0.21

Notes: Domains ranked by greatest change to least change. Range of N for 2008 = 1,411-1,420, for 2010 = 1,421-1,425.

Long-term trends in job satisfaction: 1987 - 2010

Changes in overall job satisfaction may, in part, reflect the changing composition of the GP workforce. In order to control for such potential changes, we directly-standardised the levels of job satisfaction observed in each survey to the age-sex composition of provider and salaried GPs in the 2009 GMS Statistics database. Mean levels of overall job satisfaction between 1987 and 2010 are shown in Figure 4.

Figure 4: Trends in mean overall job satisfaction: 1987 - 2010



Note: Cross-sectional series has been standardised to the age-sex structure of the 2009 GMS Statistics database, with the exception of 1987 and 1990.

Concluding remarks

Overall job satisfaction increased significantly between 2008 and 2010, from 4.7 points in 2008 to 4.9 points in 2010. Although significant, this is a small change in absolute terms. Satisfaction on all nine individual domains of job satisfaction increased, though to varying degrees. This is in stark contrast to the findings of the 5th national worklife survey, where satisfaction overall, and on all individual facets, declined. Quitting intentions were less prevalent in 2010 than in 2008.

Average hours of work in 2010 were unchanged compared to 2008, with respondents reporting working an average of 41.4 hours per week. It is possibly no coincidence therefore, that levels of stress associated with increasing workloads and having to work long hours changed very little from 2008. The proportion of GPs who reported working out-of-hours fell by around one-third, whilst only just over 10% of GPs stated that their practice did not offer any extended hours access.

While over 90% of GPs stated that their practice currently participated in Practice Based Commissioning in one form or another, only one in five reported that they had a formal role. The majority of GPs were concerned that the introduction of GP Commissioning consortia would increase their workload and reduce the amount of time available for direct patient care. They did, however, think it would improve local health service efficiency, the equity of service provision and quality of care for patients across the health care system as a whole. GPs reporting that they currently had a formal PBC role viewed the introduction of consortia differently to GPs who did not currently undertake such a role: they were more likely expect to have formal participation in their local consortium, more likely to want to see their consortium commissioning a wider range of services and more likely to want larger consortia and see practice income related to consortia performance.

References

Cooper CL, Rout U, Faragher B. Mental Health, Job Satisfaction and Job Stress among General Practitioners. *British Medical Journal* 1989; 298: 366-370.

Gravelle H, Hole A, Hussein I. Response bias in job satisfaction surveys: the case of English GPs. Centre for Health Economics Research Paper. July 2008.

Hann M, Goudie R, Sutton M, Gravelle H, Sibbald B. Fifth National GP Worklife Survey. Final Report for the Department of Health. July 2009.

Hann M, Sibbald B. *General Practitioners' attitudes towards patients' health and work*. Final Report for Health Work and Well-being Delivery Unit. March 2011.

Sibbald B, Enzer I, Cooper C, Rout U, Sutherland V. General practitioner job satisfaction in 1987, 1990 and 1998: lessons for the future. *Family Practice* 2000; 17: 364-371.

Sibbald B, Bojke C, Gravelle H. Job satisfaction and retirement among general practitioners in England. *British Medical Journal* 2003; 326: 22-26.

Warr P, Cook J, Wall T. Scales for the measurement of some work attitudes and aspects of psychological well-being. *Journal of Occupational Psychology* 1979; 52: 129-148.

Whalley D, Bojke C, Gravelle H, Sibbald B. 2004 National Survey of General Practitioner Job Satisfaction in England, Spring 2005. Report to the Department of Health.

Whalley D, Bojke C, Gravelle H, Sibbald B. Morale of the GP workforce in the light of reform: a national survey of job satisfaction. *British Journal of General Practice*, 2006(a), 56, 87-92.

Whalley D, Gravelle H, Sibbald B. 2005 National survey of general practitioner job satisfaction. Interim Report for Department of Health. January 2006(b).

Whalley D, Gravelle H, Sibbald B. Impact of the new general medical services contract on general practitioners' job satisfaction and perceptions of quality of care in the UK, *British Journal of General Practice*, 2008, 58, 8-14.