PRUComm

POLICY RESEARCH UNIT IN COMMISSIONING AND THE HEALTHCARE SYSTEM

Eighth National GP Worklife Survey

Jonathan Gibson[1], Kath Checkland[2], Anna Coleman[2], Mark Hann[3], Robbie McCall[1], Sharon Spooner[2] and Matt Sutton[1]

1 Manchester Centre for Health Economics, Institute of Population Health, University of Manchester

2 Health Policy, Politics & Organisation (HiPPO) research group, Centre for Primary Care, Institute of Population Health, University of Manchester

3 Centre for Biostatistics, Institute of Population Health, University of Manchester

Acknowledgements

This report is independent research commissioned by the Department of Health and carried out by the Manchester Centre for Health Economics at the University of Manchester on behalf of the Policy Research Unit in Commissioning and the Healthcare System (PRUComm). PRUComm is funded by the Department of Health Policy Research Programme. The views expressed in this publication are those of the authors and not necessarily those of the Department of Health.

We wish to thank Katie Shaw for all her hard work organising the distribution of the GP Worklife Survey for 2015. We also thank Thomas Allen for his suggestions and comments on the draft questionnaire.

The distribution of the questionnaire was also aided by several of our colleagues: Christos Grigoroglou, Ben Buckeldee, Yiu-Shing Lau, Sean Gavan, Philip Britteon, Sean Urwin, Luke Munford, Julius Ohrnberger, Anna Jelonek, Rachel Meacock, Alex Turner and Tina Wulff.

Finally we would like to thank the many GPs who took the time to participate in this research.

Correspondence

Correspondence about this report should be addressed to Professor Kath Checkland at the Health Policy, Politics and Organisations Research Group, Centre for Primary Care, Institute of Population Health, 5th Floor, Williamson Building, Oxford Road, Manchester M13 9PL.

Email: Katherine.H.Checkland@manchester.ac.uk

Contents

Executive Summary 4

1. Background 5

2. Methods 6

2.1 Target Sample 6

2.2 Response Rate 6

2.3 Samples Analysed 7

2.4 Questionnaire Content 8

3. Job Stressors and Job Attributes 9

3.1 Job Stressors 9

3.1.1 Levels of Job Stressors in 2015 9

3.1.2 Changes in Job Stressors Since 2012 10

3.2 Job Attributes 12

3.2.1 Levels of Job Attributes in 2015 12

3.2.2 Changes in Job Attributes Since 2012 14

4. Hours of Work 16

4.1 Sessions worked per week in 2015 16

4.2 Average hours worked per week in 2015 18

4.3 Trends in average hours worked per week 18

4.4 Extended opening hours 19

4.5 Percentage of time spent on various activities 20

5. Job Satisfaction 22

5.1 Job satisfaction levels in 2015 22

5.2 Changes in satisfaction ratings from 2012 23

6. Intentions to Quit 25

6.1 Likelihood of Leaving Direct Patient Care 25

6.2 Likelihood of changing working hours 28

7. Concluding Remarks 29

8. References 30

Executive Summary

National surveys of General Practitioner (GP) working conditions and attitudes to primary care reforms have been undertaken by the University of Manchester in 1998, 2001, 2004, 2005, 2008, 2010 and 2012. We undertook the eighth survey in this series in the spring and summer of 2015.

The surveys provide a consistent series over a long period on GP job satisfaction, stressors, hours of work and intentions to quit. Each survey has a nationally-representative, cross-sectional element and a longitudinal element. In 2015, there were 1,172 respondents in the cross-sectional element and 1,576 respondents in the longitudinal element. This report highlights key findings from the survey and makes comparisons with previous surveys.

Job satisfaction
The level of overall job satisfaction reported by GPs in 2015 was lower than in all surveys undertaken since 2001. On a seven-point scale ('extremely dissatisfied' (=1) to 'extremely satisfied' (=7)), average satisfaction had declined from 4.5 points in 2012 to 4.1 points in 2015 in the cross-sectional samples and by a similar magnitude in the longitudinal sample. The largest decreases in job satisfaction between 2012 and 2015 were in the domains relating to 'hours of work' and 'remuneration'. Satisfaction with colleagues and fellow workers had improved relative to 2012.

Hours of work
Respondents to the 2015 survey reported working an average of 41.4 hours per week. This is a small (0.3 hours) decrease compared to the 2012 survey. Fewer GPs reported that their practice offered extended hours access at the weekend (31% versus 32%) and on weekdays (72% versus 76%) than in 2012. The reported proportion of time (62%) devoted to direct patient care was the same as in 2012.

Stressors and job attributes
In 2015, GPs reported most stress due to 'increasing workloads' and 'changes to meet requirements of external bodies' and least stress due to 'finding a locum' and 'interruptions from emergency calls during surgery'. Reported levels of stress increased between 2012 and 2015 on all 14 stressors. The increases were generally in the range 0.2 to 0.5 points on a five-point scale. Reported levels of stress are now at their highest since the beginning of the National GP Worklife Survey series in 1998.

Many attributes of GPs' jobs had changed very little between 2012 and 2015. In 2015, the proportion of respondents reporting that they 'have to work very intensively' was 95%. Eight-nine percent of respondents reported that they 'have to work very fast'. Fewer than 10% of respondents thought that 'recent changes to their job had led to better patient care'.

Intentions to quit
The proportion of GPs expecting to quit direct patient care in the next five years had increased from 8.9% in 2012 to 13.1% in 2015 amongst GPs under 50 years-old and from 54.1% in 2012 to 60.9% in 2015 amongst GPs aged 50 years and over.

Conclusions
The 2015 results continue the trends observed in recent waves of the National GP Worklife Survey. The 2015 respondents reported the lowest levels of job satisfaction amongst GPs since before the introduction of their new contract in 2004, the highest levels of stress since the start of the survey series, and an increase since three years ago in the proportion of GPs intending to quit direct patient care within the next five years.

1. Background

The University of Manchester undertook 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), 2008 (Hann et al., 2009), 2010 (Hann et al., 2011) and 2012 (Hann et al, 2013). The eighth in this series was undertaken in 2015.

This series of questionnaires spans seventeen years 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 2015 survey performed a number of important functions:

- to contribute to the ongoing tracking of GPs' satisfaction and pressures at work through a series of primary care reforms; and
- to provide further evidence on trends in GPs' hours, activities and intentions to quit general practice.

2. Methods

The data were collected using two methods of administration: paper questionnaires posted to the GP at their practice; and an online version of the questionnaire. This was the first wave of the GP Worklife Survey in which GPs were given the option to complete the questionnaire online. The questionnaires were distributed between March and May 2015.

2.1 Target Sample

The target sample consisted of GP providers, salaried GPs and GP retainers practising in England. The data from which the sample was drawn is the publicly available General Medical Practitioners Prescribing Database for England and Wales (egpcur)[1,2].

Following the methodology employed in previous surveys, two samples of GPs were drawn from the database:

1. A cross-sectional sample – a random sample of 4,000 GPs[3], excluding GP registrars, representing approximately 1/10th of the GP population;
2. A longitudinal sample of 3,022 GPs who responded to the previous wave of the GP worklife survey.

502 sampled records from the random sample contained missing fields, which precluded postage of the questionnaire, and so were dropped from the final sample. **The final cross-sectional sample was thus 3,498 GPs.** Likewise, from the longitudinal element, 531 records were listed as closed, were from Wales, had a date of leaving prior to 1/3/2015, or were missing identifying fields. **The final longitudinal element of the sample was thus 2,489**. Finally there was 223 GPs who appeared in both the random sample and the longitudinal element. After removing duplicated records, **the final total target sample was 5,764 GPs[4].**

2.2 Response Rate

The first round of questionnaires was posted second-class to GPs on 26th March 2015. If the questionnaire had not been returned within 3 weeks, the GPs were sent a reminder and further questionnaire on the 16th of April 2015. If the GPs did not want to participate they were asked to return the questionnaire back uncompleted, to avoid being sent reminders. A third and final reminder and questionnaire was posted on the 28th of May 2015. 3% of questionnaires were returned in March, 59% in April, 22% in May, 13% in June and 3% in July.

[1] The most recent database is available at: http://systems.hscic.gov.uk/data/ods/datadownloads/gppractice The database used for the 2015 GP Worklife Survey sample was from 2015.
[2] In previous years, the General Medical Services (GMS) census was used for drawing a sample.
[3] In previous years, 3,000 GPs were sampled for the cross sectional element. Over sampling was conducted due to issues with the prescribers' database. For instance, doctors' names were missing from some records and other records were for retired GPs.
[4] This compares with 5,973 GPs in 2012.

Along with completed questionnaires, we also received 57 returned questionnaires which stated that the named GP had either died, retired or left the practice and a further 48 which were returned undelivered by the postal service due to incomplete postal addresses or a practice having moved address. Taking this into consideration the adjusted **total response rate is 46.13%** (2,611 out of 5,659). The cross-sectional response rate was 34.27% (1,172 out of 3,420) and the longitudinal response rate was 63.75% (1,576 out of 2,472). This compares with 40% and 62% for the cross-sectional and longitudinal samples, respectively, in 2012.

The age, gender and contract type breakdowns of the 1,172 respondents from the cross sectional sample of GPs are presented in Table 1. These are presented alongside headcount data for GPs in England from 2014[5].The table indicates that the cross sectional respondents are broadly representative apart from a few areas. GPs who have indicated that they are contracted as Providers and GPs in their 50s are over represented, whereas GPs in the youngest age group (<35 years old) are underrepresented, compared to the breakdown of the 2014 English headcount data.

Table 1. Representativeness of the cross-sectional sample

	All GPs (England - 2014)	2015 GP Worklife Survey Respondents
N	36,068	1,172
Age (years)		
<35	4,594 (12.77%)	101 (8.79%)
35-39	5,970 (16.59%)	148 (12.88%)
40-44	5,738 (15.95%)	177 (15.4%)
45-49	5,599 (15.56%)	187 (16.28%)
50-54	6,223 (17.30%)	240 (20.89%)
55-59	4,519 (12.56%)	216 (18.8%)
60+	3,335 (9.27%)	80 (6.96%)
Gender		
Male	17,997 (49.9%)	573 (49.65%)
Female	18,071 (50.1%)	581 (50.35%)
Contract type		
Provider	26,183 (72.59%)	984 (82.38%)
Other	9,885 (27.41%)	204 (17.17%)

Note: There was 23 records with missing age responses, 18 records with missing gender responses and 12 records with missing contract details. In addition 21 records indicated that they had multiple contract types. These have been excluded separately from the analysis above.

2.3 Samples Analysed

We present data from different samples as in the 2012 GP Worklife Survey report. The two samples from 2015 that we utilise in this report are: (i) the cross-section sample only; and (ii) the longitudinal sample only. The sample used for each table is indicated in the table notes.

[5] Data provided by the Health and Social Care Information Centre.

In general, where a question has been asked in previous surveys, and the primary purpose is to compare a representative sample of GPs in 2015 with a representative sample in earlier years, we focus only on the 1,172 respondents in the cross-sectional sample in 2015. Where possible we complement this analysis with analysis of the same individuals over time, using the samples of GPs who responded in both 2012 and 2015. This assesses the robustness of the findings from the comparison of two repeated cross-sections. It also facilitates more detailed consideration of how the distributions of specific variables have changed over time.

2.4 Questionnaire Content

To permit tracking of long-term trends, many of the questions used in the 2015 survey were the same as those used in previous surveys. The questionnaire contained sub-sections covering: personal, practice, job and area characteristics; job stressors; job attributes; job satisfaction; and intentions to quit or retire.

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 five-point response scales.

Job attributes

GPs were asked to indicate the extent to which they agreed or disagreed (on a five-point scale) with 15 statements relating to their job control, workload, job design and work pressures.

Intentions to quit or retire and other changes in work participation

GPs were asked about the likelihood (rated on a five-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 that has been used in previous surveys. This asks about nine individual domains of job satisfaction as well as satisfaction overall. Each item in the measure is rated on a seven-point scale, ranging from 'extremely dissatisfied' (score=1) to 'extremely satisfied' (score=7).

3. Job Stressors and Job Attributes

3.1 Job Stressors

3.1.1 Levels of Job Stressors in 2015

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 2.

Table 2. Levels of job stress in 2015.

Job Stressor	Cross-sectional sample	
	Mean rating	% reporting considerable/ high pressure
Increasing workloads	4.59	91.85
Changes to meet requirements of external bodies	4.46	87.33
Having insufficient time to do the job justice	4.40	84.85
Paperwork	4.38	85.55
Increased demand from patients	4.31	85.55
Long working hours	4.06	73.77
Dealing with problem patients	3.93	69.04
Adverse publicity by the media	3.92	67.73
Dealing with earlier discharges from hospital	3.88	68.27
Unrealistically high expectation of role by others	3.83	66.29
Insufficient resources within the practice	3.62	55.58
Worrying about patient complaints/ litigation	3.58	53.62
Finding a locum	3.25	47.49
Interruptions by emergency calls during surgery	3.22	40.76

Note: sample = % considerable/high pressure = % rating 4 or 5. N for cross-sectional sample: 1,135 – 1,166.

The stressors are ranked in descending order of the mean score. GPs reported most stress with increasing workloads, imposed job changes, having insufficient time to do the job justice, paperwork and increased demand from patients. They reported least stress with interruptions by emergency calls during surgery and finding a locum. More than nine out of 10 GPs reported experiencing considerable or high pressure from increasing workloads.

3.1.2 Changes in Job Stressors Since 2012

The changes in mean stress ratings between 2012 and 2015 in the cross-sectional sample are shown in Table 3. The stressors are ranked from the largest increase in rating to the smallest increase in rating. Average stress ratings reported on the same questions in the seven previous surveys are also shown.

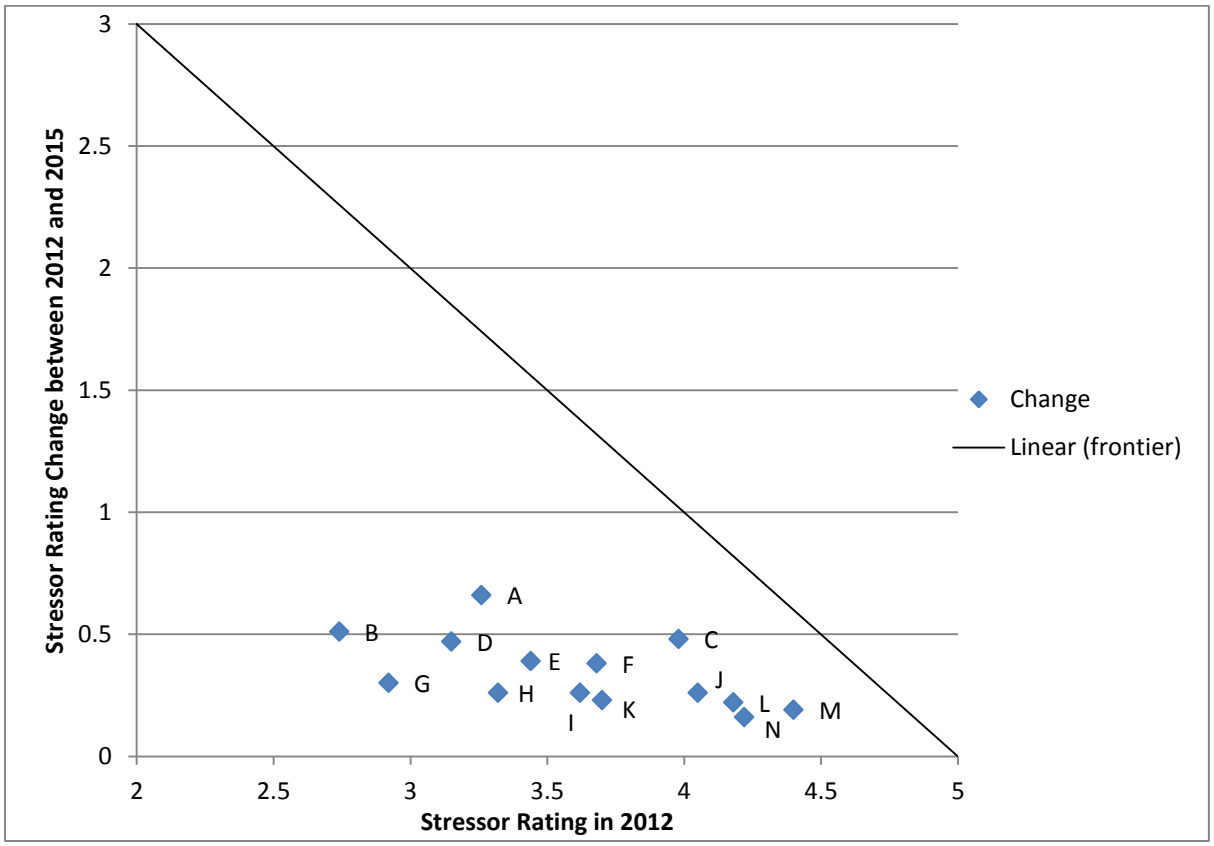
Table 3. Changes in mean job stressor ratings: cross-sectional samples

Job Stressor	Mean Stress Rating								Change
	1998	2001	2004	2005	2008	2010	2012	2015	'12 – '15
Adverse publicity by the media	2.66	3.57	3.09	2.86	3.65	3.20	3.26	3.92	+0.66
Finding a locum	2.71	3.19	3.64	3.24	2.45	2.61	2.74	3.25	+0.51
Changes to meet requirements from external bodies e.g. CQC, NHS England, CCG*	3.44	4.00	3.82	3.76	4.01	3.74	3.98	4.46	+0.48
Insufficient resources within the practice	2.42	3.19	3.13	2.86	2.98	2.94	3.15	3.62	+0.47
Unrealistically high expectation of role by others	3.17	3.53	3.20	2.70	3.14	3.11	3.44	3.83	+0.39
Long working hours	3.13	3.60	3.43	2.90	3.41	3.44	3.68	4.06	+0.38
Interruptions by emergency calls during surgery	2.87	2.94	3.00	2.73	2.75	2.72	2.92	3.22	+0.30
Worrying about patient complaints/ litigation	3.26	3.57	3.20	3.07	3.06	3.08	3.32	3.58	+0.26
Dealing with earlier discharges from hospital	2.93	3.21	3.25	3.14	3.23	3.27	3.62	3.88	+0.26
Increased demand from patients	3.77	4.09	3.74	3.62	3.70	3.81	4.05	4.31	+0.26
Dealing with problem patients	3.50	3.42	3.28	3.13	3.37	3.48	3.70	3.93	+0.23
Having insufficient time to do the job justice	3.41	4.14	3.99	3.61	3.88	3.88	4.18	4.40	+0.22
Increasing workloads	3.78	4.24	4.08	3.79	4.04	4.02	4.40	4.59	+0.19
Paperwork	3.47	4.18	4.15	3.86	3.97	3.96	4.22	4.38	+0.16

Note: Stressors ranked from largest increase to smallest increase between 2012 and 2015.
*Please note that the wording of this stressor, prior to 2015, was "Changes imposed from the PCO".

Some of the stressors with the highest recorded increase since 2012 are those which are low or middling in the ranking of overall stressors for 2015. For instance, finding a locum is ranked second from bottom in the overall list, whereas it is the stress factor with the second largest increase since 2012. This feasibly indicates that many of the key stress factors, such as workloads and paperwork requirements, are already scored very high (over 4 i.e. considerable pressure) on the rating scale and there is very little room for further increases relative to previous years. This is shown graphically in Figure 1, where the frontier represents the frontier of maximum change, i.e. if a stressor achieved an average score of 5 in 2012, then there is zero upwards change possible between 2012 and 2015. Likewise if the stressor received an average score of zero in 2012, the maximum increase possible is five. For instance, at point M in Figure 1, "Increasing workloads", there is little vertical distance between the x-axis and the frontier, revealing little potential for increases.

Figure 1. Changes in Job Stressor Ratings since 2012 and the Maximum Change Frontier



Note: **A** - Adverse publicity by the media, **B** - Finding a locum, **C** - Changes imposed from the PCO, **D** - Insufficient resources within the practice, **E** - Unrealistically high expectation of role by others, **F** - Long working hours, **G** - Interruptions by emergency calls during surgery, **H** - Worrying about patient complaints/ litigation, **I** - Dealing with earlier discharges from hospital, **J** - Increased demand from patients, **K** - Dealing with problem patients, **L** - Having insufficient time to do the job justice, **M** - Increasing workloads, **N** – Paperwork.

3.2 Job Attributes

Respondents were asked to indicate the extent to which they agreed or disagreed with a set of 15 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, neutral, agree, and strongly agree. These statements were either positive or negative. The tables shown below are separated between the positive and the negative statements.

3.2.1 Levels of Job Attributes in 2015

Table 4 shows that respondents were most likely to agree to some extent with the statements that they had to work very intensively (95.18%), that they had to work very fast (88.70%) and that their job provided a variety of interesting things (78.81%).

In addition, approximately eight out of 10 GPs agreed to some extent that they did not have time to carry out all their work and that they were required to do unimportant tasks, detracting from more important ones.

Respondents were least likely to agree with the statements that changes to the job in the last year had led to better patient care (8.94%), work relationships were strained (21.43%), and that they received clear feedback about their performance (24.46%). Seventy percent of GPs disagreed to some extent with the statement that 'Changes to job in last year have led to better patient care'.

Table 4. Job attributes in 2015

Job Aspect	% disagree / strongly disagree	% agree / strongly agree
Negative Statements		
(W) Have to work very intensively	1.63	95.18
(W) Have to work very fast	2.91	88.7
(P) Do not have time to carry out all work	7.89	79.67
(P) Required to do unimportant tasks, preventing completion of more important ones	9.44	79.66
(P) Relationships at work are strained	57.57	21.43
Positive Statements		
(C) Job provides variety of interesting things	5.08	78.81
(D) Always know what responsibilities are	12.44	69.55
(C) Choice in deciding how to do job	28.71	46.79
(D) Involved in deciding changes that affect work	36.08	41.58
(C) Working time can be flexible	38.19	37.16
(C) Choice in deciding what to do at work	39.16	33.08
(D) Consulted about changes that affect work	41.85	34.56
(C) I can decide on my own how to go about doing my work	31.07	36.57
(D) I get clear feedback about how well I am doing my job	38.07	24.46
(D) Changes to job in last year have led to better patient care	70.25	8.94

Note for Table 4: (C) = Job Control, (W) = Workload, (D) = Job Design, (P) = Work Pressures. Figures are based on the 2015 cross-sectional sample. Range of N = 1,160 – 1,168.

The statements in Table 4 are categorised between the level of job control (C), the level of job design (D) and work pressure (P). Broadly, those statements relating to negative aspects of work pressure and workload received the most agreement. Positive statements related to job design received the most disagreement, apart from the negative statement about strained working relationships.

3.2.2 Changes in Job Attributes Since 2012

The percentage of respondents to the 2015 survey agreeing to some extent with each of the 15 statements are compared to previous surveys in Table 5. The Table shows that the majority of negative statements in the list have seen an increase in the proportion of respondents agreeing with them and the positive comments have seen a reduction in agreement.

The percentage of respondents agreeing with statements regarding work pressures (insufficient time; unimportant tasks; relationships) has shown the greatest increase between 2012 and 2015.A greater percentage of GPs in 2015, compared to 2012, also agreed to some extent that they received clear feedback about how well they were doing.

Table 5. Trends in Job Design and Work Pressures, Workload and Job Control

Job Issue	% agree / strongly agree					Change '12 – '15
	2005	2008	2010	2012	2015	
Negative Statements						
(P) Required to do unimportant tasks, preventing completion of more important ones	69.7	71.7	67.2	71.2	79.7	8.5
(P) Do not have time to carry out all work	66.7	68.7	67.1	73.4	79.7	6.3
(W) Have to work very fast	70.7	77.1	77.9	84.1	88.7	4.6
(W) Have to work very intensively	81.6	91	91.5	95	95.2	0.2
(P) Relationships at work are strained	n/a	n/a	18.7	21.4	21.4	0
Positive Statements						
(D) I get clear feedback about how well I am doing my job	17.6	n/a	18.4	21.4	24.5	3.1
(D) Always know what responsibilities are	57.8	68.3	73.5	70.2	69.6	-0.7
(D) Changes to job in last year have led to better patient care	30.1	13.6	13.2	10	8.9	-1.1
(C) I can decide on my own how to go about doing my work	n/a	n/a	41.3	37.7	36.6	-1.1
(D) Consulted about changes that affect work	34.4	34.6	39.7	37.7	34.6	-3.1
(C) Job provides variety of interesting things	81.5	83.2	84.7	82.5	78.8	-3.7
(C) Working time can be flexible	46.8	44.8	42.6	41.7	37.2	-4.5
(D) Involved in deciding changes that affect work	48.7	48.8	50.5	46.3	41.6	-4.7
(C) Choice in deciding what to do at work	28.3	44.7	44.7	38.7	33.1	-5.6
(C) Choice in deciding how to do job	62.5	58.4	58.6	53.2	46.8	-6.4

Note: Notes: Job attributes are classified into four groups: (C) = Job Control, (W) = Workload, (D) = Job Design, (P) = Work Pressures. n/a indicates that these questions were not included in the survey that year. All figures are based on the respective cross-sectional samples.

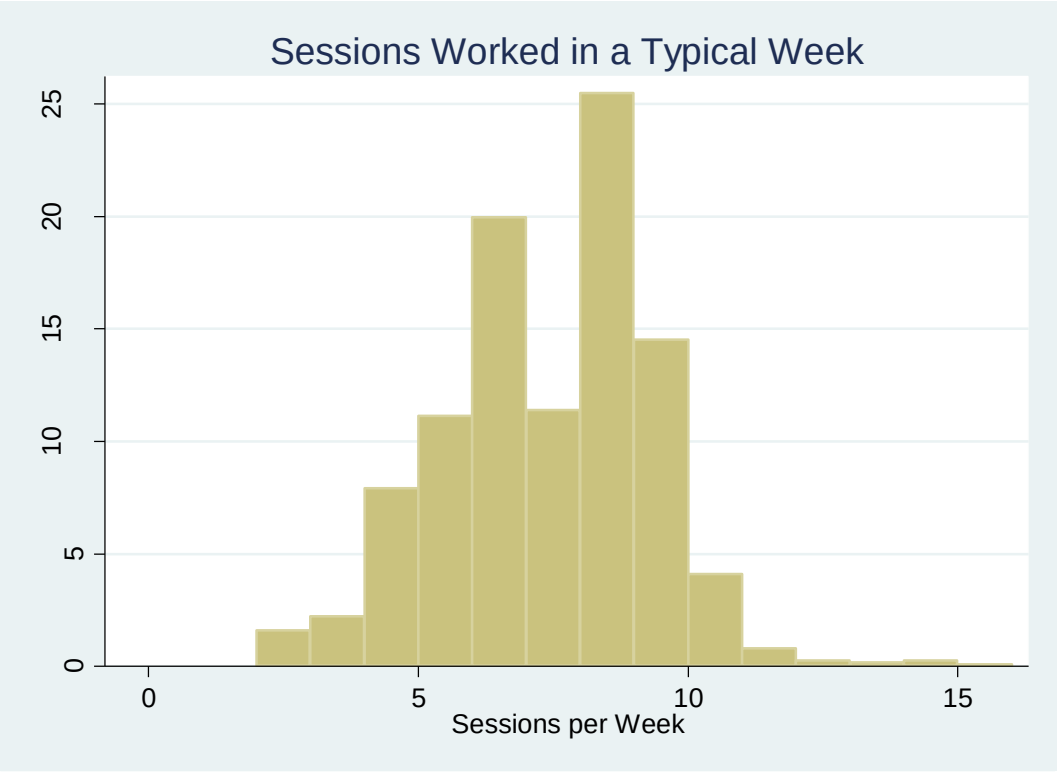
4. Hours of Work

4.1 Sessions worked per week in 2015

Respondents were asked “how many sessions do you work in a typical week”. The responses to this question may thus include out of hours sessions. Figure 2 shows that, in 2015, respondents most frequently reported working either 7 or 8 sessions per week, with a secondary peak at 6 sessions. The median number of sessions worked in a typical week was 7 (inter-quartile range = 6 to 8), whilst the mean number was 7.2 sessions per week (standard deviation = 4.26 sessions). The mean number of sessions worked in 2015 is lower than that observed in the 2012 survey, when it was 7.3 sessions (standard deviation = 2 sessions).

Table 6 reveals that the reason for this decline (approximately 6%) between 2012 and 2015 in the number of GPs working more than 8 sessions per week (in particular, 8.5 or 9 sessions per week), and the corresponding increase in the number of GPs working between 4 and 7 sessions per week (in particular, 5 or 6).

Figure 2. Distribution of sessions worked in a typical week in 2015.



Note: Data from cross-sectional sample in 2015. Four extreme outliers omitted for histogram (97, 81, 40 and 27.5 sessions per week).

Table 6 shows the changes in number of sessions worked between 2010, 2012 and 2015. The proportion of GPs working more than nine sessions has declined between 2012 and 2015, correspondingly the proportion of GPs working fewer than eight sessions has increased. The trends

indicate that although GPs are working fewer sessions on average, the average hours worked for GPs, in the majority of the session bands shown in Table 6, are increasing.

Table 6. Number of Sessions Worked in 2010, 2012 and 2015

Number of sessions (S) worked in a typical week	2010		2012		2015	
	% of GPs	Average Hours Worked	% of GPs	Average Hours Worked	% of GPs	Average Hours Worked
Sessions ≤ 4	9.5	23.7	9.6	26.0	10.9	24.2
4 < Sessions ≤ 5	9.0	30.5	9.9	31.3	11.0	31.8
5 < Sessions ≤ 6	12.9	35.0	16.7	35.4	19.9	36.8
6 < Sessions ≤ 7	9.6	39.4	11.0	41.4	11.1	42.7
7 < Sessions ≤ 8	23.7	46.3	23.4	46.0	24.7	47.0
8 < Sessions ≤ 9	25.0	47.3	20.5	50.1	15.6	50.7
9 < Sessions ≤ 10	6.8	49.6	6.4	50.0	4.6	53.3
Sessions > 10	3.6	55.1	2.6	53.5	2.2	53.1

Note: Figures for '% of GPs' are column percentages based on the respective cross-sectional sample (N = 1,061 in 2010; N = 1,183 in 2012, N=1,127 in 2015). Figures for 'hours worked' are based on the average number for GPs who also report how many sessions they work in a typical week.

In addition to the number of sessions worked, GPs were asked, in a typical week, when these sessions were worked. The question asked them to indicate if typically they worked at a certain time. The results from this question are shown in Table 7.

Table 7. Time of Sessions, 2015.

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Morning	79.95%	72.95%	72.87%	71.84%	73.21%	9.39%	0.77%
Afternoon	65.36%	56.74%	51.19%	50.00%	53.16%	0.94%	0.68%
Evening	30.97%	24.15%	19.28%	18.77%	16.64%	0.51%	0.68%

Note: Percentage of GPs (N= 1,172) who reported working a session in the specified time slot.

The cells in Table 7 display the proportion of cross-sectional respondents who indicated that they typically work at the specified time. The Table shows that mornings during the week and afternoons during the start of the week (Monday and Tuesday) are the most commonly worked session times. Weekend work is worked by less than 1% of respondents, apart from Saturday mornings which was selected by 9.39% of respondents. Evening work is most typically undertaken at the start of the week (Monday and Tuesday).

4.2 Average hours worked per week in 2015

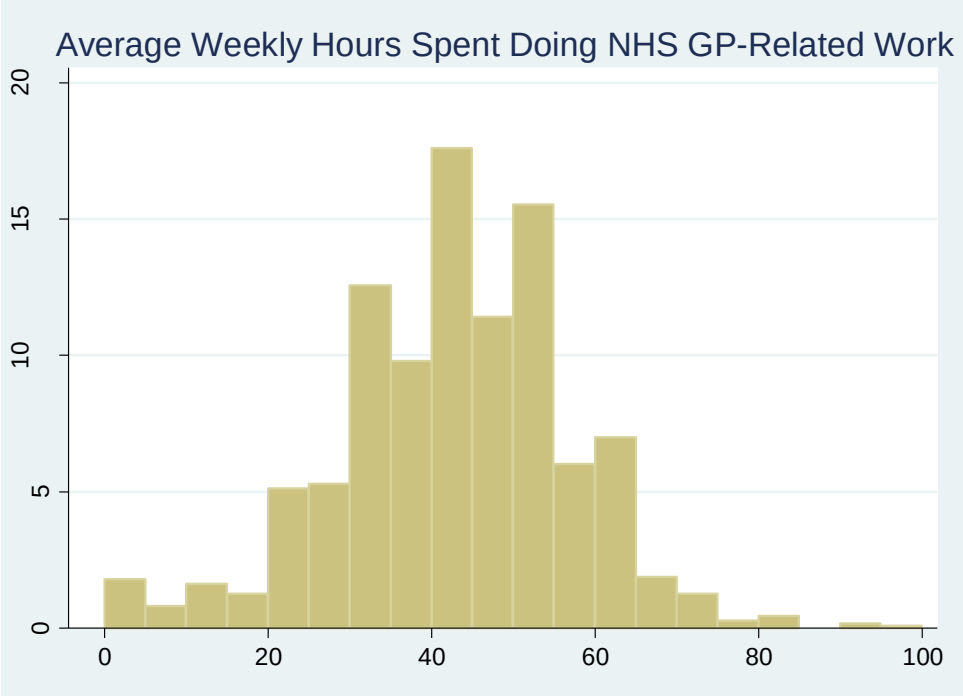
From 2008 onwards, GPs have been asked:

"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)"

In 2015 the mean number of weekly hours that the 1,108 respondents reported working was 41.4 (standard deviation = 14 hours) and the median number was 40 hours (Inter-Quartile Range = 32 to 50). The distribution of average weekly hours worked in 2015 is shown in Figure 3.

29% of respondents reported working between 40 and 50 hours per week, whilst 22.38% reported working either 30 to 40 hours per week (22.38%) or 50 to 60 hours per week (21.48%). 11.19% reported that they worked 60 hours or more per week.

Figure 3. Distribution of 'Average weekly hours worked' in 2015.



Note: Data from 2015 cross-sectional sample

4.3 Trends in average hours worked per week

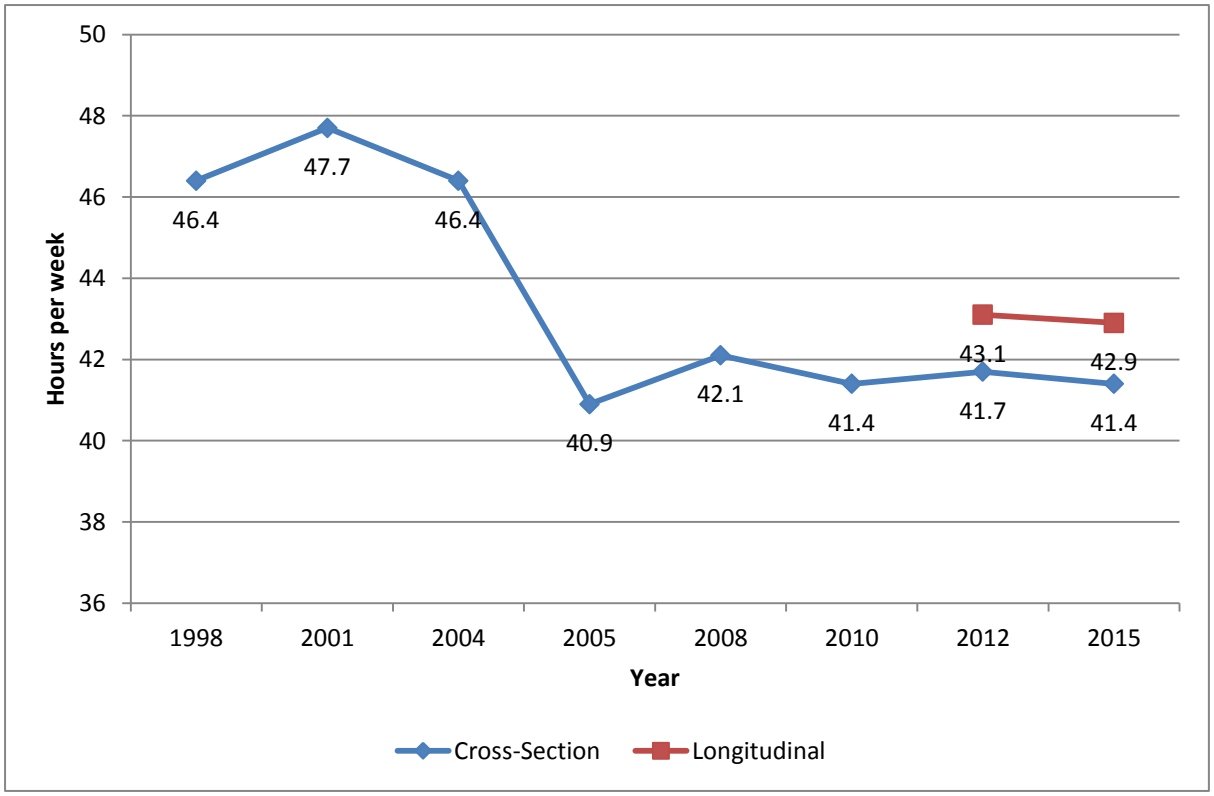
The average number of hours worked per week increased slightly between 2010 and 2012, however the 2015 survey shows a slight decline since 2012 (Table 8), though these changes are not statistically significant (2010 to 2012: p=0.594. 2012 to 2015: p=0.301). A decrease of a similar magnitude was also observed in the longitudinal sample (Figure 4).

Table 8. Summary statistics for average weekly hours worked: 2008 – 2015

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
2012	1,112	41.7	13.0	40.9, 42.5
2015	1,113	41.4	14.1	40.6, 42.2

Note: Figures are based on the cross-sectional samples in the respective years. In 2008, two different phrasings of the hours of work question were asked, with GPs randomly assigned to one or the other.

Figure 4: Trends in average weekly hours worked: 1998 – 2015



Note: The figures for earlier years differ from those presented in previous reports. Prior to 2008, hours of work were elicited using a different phrasing of the question to that in 2010, 2012 and 2015. The question previously used was: *"How many hours per week do you typically work as a GP? (Please exclude any hours on call)"*. In 2008, respondents were randomly presented with one of the two questions. The responses from this year were used to splice the series together.

4.4 Extended opening hours

We asked GPs whether their practice offered extended hours access. Table 9 shows that 30.7% of respondents said that their practice offered access at weekends (356 of 1,160), 71.5% on weekdays (829 of 1,160) and 20.9% on both weekdays and at the weekend (242 of 1,160).

All of these figures have decreased compared to the corresponding data from 2012, which in turn were down from the 2010 numbers. In particular, weekend access has fallen from 39.8% in 2010 to 30.7% in 2015. 18.7% of respondents (217 of 1,160) replied that their practice did not offer any extended hours access; this is an increase compared to the corresponding figure in 2010 (16.1%), which itself was an increase from 2010 (10.2%).

Table 9. Extended Hours Access in 2010, 2012 and 2015

Does your practice have Extended Hours Access	2010 N = 1,054	2012 N = 1,165	2015 N=1,160
On Weekdays	858 (81.4%)	882 (75.7%)	829 (71.5%)
On Weekends	419 (39.8%)	372 (31.9%)	356 (30.7%)
On Weekdays & Weekends	330 (31.3%)	277 (23.8%)	242 (20.9%)
No Extended Hours Access	107 (10.2%)	188 (16.1%)	217 (18.7%)

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

4.5 Percentage of time spent on various activities

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

- Direct patient care (e.g. surgeries; clinics; telephone consultations; home visits)
- Indirect patient care (e.g. referral letters; arranging admissions)
- Administration (e.g. practice management etc)
- Other (e.g. continuing education/ development; research; teaching; etc)

In 2015 we also asked respondents to indicate how much they spend on:

- External Meetings (e.g. CCG meetings)

Table 10 shows the average percentages reported by respondents in the cross-sectional samples in 2005, 2008, 2010, 2012 and 2015 and in the longitudinal sample. In 2015, 62% of a GPs' time was devoted to direct patient care, with 19.7% devoted to indirect patient care. These are approximately the same as the figures reported from 2012. The longitudinal sample indicates a small increase in the proportion of time spent on these activities.

Table 10 also shows that GPs spend 8.4% of their time on administration, 3.5% on external meetings and 6.3% on other activities. The inclusion of the external meetings category in 2015 reduces comparability with previous years for the administration and other categories. Conceivably preparing for and attending meetings may have been components of administration or other categories. This would explain the reduction in these categories between 2012 and 2015.

Table 10. Percentage of time devoted to different activities, 2005-2015

Type of Activity	Cross-sectional Sample					Longitudinal Sample		
	2005	**2008**	**2010**	**2012**	**2015**	**2012**	**2015**	**Difference**
Direct Patient Care	63.3	63	63.1	62.3	62.1	61.1	61.8	+0.7
Indirect Patient Care	18.2	17.5	18.6	19.3	19.7	19.2	19.3	+0.1
Administration	11.3	12	10.7	10.9	8.4	11.6	8.7	-2.9
External Meetings	n/a	n/a	n/a	n/a	3.5	n/a	3.9	n/a
Other	7.1	7.5	7.6	7.5	6.3	8.1	6.4	-1.7

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; 1,015 for the 2010 cross-sectional sample; 1,154 for the 2012 cross-sectional sample and 1,115 for 2015 cross-sectional sample. N = 1,409 for the longitudinal sample.

5. Job Satisfaction

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. Respondents were asked to rate their satisfaction on nine specific domains and for their job 'overall' on a seven-point scale from 'extremely dissatisfied' (=1) to 'extremely satisfied' (=7). For instance the first domain, physical working conditions, appeared in the questionnaire as:

	1=Extremely dissatisfied						7=Extremely satisfied
1. Physical working conditions	☐1	☐2	☐3	☐4	☐5	☐6	☐7

5.1 Job satisfaction levels in 2015

Summary statistics for the cross-sectional sample (Table 11) show that mean overall job satisfaction is 4.14 points. Less than half of the respondents (47.42%) reported being satisfied with their job overall (score = 5 or more). Almost one-third (32.1%) reported being dissatisfied (score = 3 or less).

Table 11. Summary statistics for job satisfaction in 2015

Job Domain	Mean	% Dissatisfied	% Satisfied
Colleagues and fellow workers	5.71	5.36	85.39
Physical working conditions	5.20	13.84	75.95
Amount of variety in job	5.16	11.61	73.57
Opportunity to use abilities	4.87	16.51	65.43
Amount of responsibility given	4.85	19.19	64.04
Freedom to choose own method of working	4.58	21.71	57.28
Recognition for good work	4.25	31.61	49.27
Remuneration	4.20	30.78	45.40
Hours of work	3.56	48.45	32.93
Overall Satisfaction	**4.14**	**32.10**	**47.42**

Note: %dissatisfied = % rating 1, 2 or 3; %satisfied = % rating 5, 6 or 7. Figures are based on the 2015 cross-sectional sample. Range of N=1154 - 1163.

The nine individual aspects of the job are ranked in descending order of the mean score in Table 16. Respondents reported most satisfaction with their colleagues and fellow workers, physical working conditions and the amount of variety in the job. These domains had both the highest mean satisfaction scores and the greatest percentage of GPs indicating 'satisfaction': approximately, at least 3 out of every 4 respondents were satisfied with these aspects of the job and dissatisfaction was low. Respondents displayed least satisfaction with their hours of work: only around one-third were satisfied (32.93%) with this aspect of the job, whilst almost one-half (48.45%) were dissatisfied.

5.2 Changes in satisfaction ratings from 2012

The changes in mean satisfaction ratings between 2012 and 2015 in the cross-sectional sample are shown in Table 12, along with mean satisfaction scores from 1998, 2001, 2004, 2005, 2008, 2010 and 2012. The satisfaction domains are ranked from the largest change in ratings between 2012 and 2015 to the smallest change.

The mean level of overall satisfaction of 4.14 in the cross-sectional sample in this survey is 0.4 points lower than the mean level reported in 2012. Mean levels of satisfaction have also decreased, to varying degrees, on eight of the nine individual domains with the only increase being in the domain 'satisfaction with colleagues'. The most prominent declines are in satisfaction with hours of work (-0.53 points) and remuneration (-0.36 points).

Overall job satisfaction is at its lowest level since 2001. In terms of the overall series, satisfaction with particular aspects of the job such as remuneration, hours of work and amount of responsibility given are now lower than in the surveys undertaken before the introduction of the new GP contract in 2004. Average satisfaction with hours of work has now fallen below the mid-point of the scale (neutral) for the first time since 2004.

Table 12. Average satisfaction ratings over time

Satisfaction domain	Mean Satisfaction Rating								Change
	1998	2001	2004	2005	2008	2010	2012	2015	'12 – '15
Hours of work	3.70	3.32	3.94	4.86	4.21	4.39	4.09	3.56	-0.53
Remuneration	3.48	3.51	4.38	5.30	4.73	4.87	4.56	4.20	-0.36
Amount of responsibility given	4.99	4.59	5.05	5.43	5.20	5.33	5.16	4.85	-0.31
Recognition for good work	4.21	3.57	4.28	4.80	4.46	4.65	4.52	4.25	-0.27
Opportunity to use abilities	4.64	4.27	4.85	5.19	5.01	5.11	5.08	4.87	-0.21
Freedom to choose own method of working	4.87	4.35	4.66	5.00	4.65	4.91	4.78	4.58	-0.20
Amount of variety in job	4.94	4.76	5.06	5.26	5.23	5.38	5.28	5.16	-0.12
Physical working conditions	4.99	4.86	4.91	5.08	5.07	5.23	5.30	5.20	-0.10
Colleagues and fellow workers	5.31	5.37	5.60	5.65	5.49	5.54	5.56	5.71	+0.15
Overall Satisfaction	**4.65**	**3.96**	**4.62**	**5.21**	**4.68**	**4.87**	**4.54**	**4.14**	**-0.40**

Note: Domains ranked by greatest change from 2012 to least change. Figures are based on respective cross-sectional samples. Range of N for 2005 = 882 to 887; for 2008 = 1,275 to 1,289; for 2010 = 1,048 to 1,061; for 2012 = 1,171 to 1,181; for 2015 = 1,154-1,163. Respondents were asked to rate their satisfaction the nine specific domains and 'overall' job satisfaction on a seven-point scale from 'extremely dissatisfied' (=1) to 'extremely satisfied' (=7).

A corresponding decrease of 0.59 points in overall satisfaction was observed in the sample of 1,547 GPs who participated in both the 2012 and 2015 surveys (Table 13). Mean levels of satisfaction declined on eight individual domains, with satisfaction with colleagues showing the only increase; hours of work and remuneration exhibit the greatest negative changes, mirroring the findings of the cross-sectional sample.

Table 13. Change in satisfaction ratings from 2012 – longitudinal sample

Job Aspect	Mean Satisfaction Rating		Change '12-'15
	2012	2015	
Hours of work	4	3.39	-0.61
Remuneration	4.57	4.2	-0.37
Recognition for good work	4.52	4.18	-0.34
Amount of responsibility you are given	5.17	4.83	-0.34
Freedom to choose your own method of working	4.8	4.48	-0.32
Opportunity to use abilities	5.13	4.88	-0.25
Amount of variety in job	5.35	5.22	-0.13
Physical working conditions	5.29	5.19	-0.1
Colleagues and fellow workers	5.59	5.68	+0.09
Overall satisfaction	**4.62**	**4.03**	**-0.59**

Note: Domains ranked by greatest negative change from 2012 to most positive change. Range of N for 2012 = 1,541 to 1,552; for 2015 = 1,547 to 1,559.

6. Intentions to Quit

6.1 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 (Hann, Reeves & Sibbald, 2011). For older GPs, intentions to leave direct patient care may be dominated by retirement plans, early or otherwise. Respondents were, therefore, asked at what age they planned to retire and how likely this was to happen. Using this information we can distinguish planned retirements from other reasons for leaving direct patient care.

Table 14 shows the likelihood of leaving direct patient care stratified by whether or not the GP was currently aged less than 50 years. 35.34% of 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 over the corresponding figure was over 60% (60.9%), with the vast majority of these (44.55%) indicating that the likelihood was high. In contrast, 13.09% of GPs aged under 50 years indicated that there was a considerable or high likelihood of leaving direct patient care within five years: 46.64% stated that there was no likelihood.

Table 14. Likelihood of leaving 'direct patient care' within five years in 2015

Likelihood of leaving 'direct patient care' within five years	All GPs (N=1,143)		GPs aged <50 (N=611)		GPs aged ≥50 (N=532)	
	N	%	N	%	N	%
None	355	31.06	285	46.64	70	13.16
Slight	250	21.87	167	27.33	83	15.6
Moderate	134	11.72	79	12.93	55	10.34
Considerable	131	11.46	44	7.2	87	16.35
High	273	23.88	36	5.89	237	44.55

Note: Cross-sectional sample from 2015.

Of the 532 GPs aged 50 or over from Table 19, 489 reported the age at which they planned to retire. The average reported age of planned retirement was 61 years, with a range of 51 to 75 years. When asked how likely it was that this would happen, 38% stated 'definite', with another 38% 'very likely' and 21% 'quite likely'.

Table 15 shows the responses to the intentions to quit question, broken down by the gender of the respondent. Please note that some respondents chose not to answer the question regarding their gender. This explains the difference in N between Tables 14 and 15. Table 15 shows that males are more likely to select a considerable or high likelihood of leaving direct patient care within 5 years in both the under fifty and the fifty or over age categories.

Table 15. Likelihood of leaving 'direct patient care' within five years in 2015, by gender.

Likelihood of leaving 'direct patient care' within five years	All GPs (N=1,134)		GPs aged <50 (N=606)		GPs aged ≥50 (N=528)	
	Male	Female	Male	Female	Male	Female
None	23.76	38.07	38.98	52.27	11.29	15.14
Slight	19.68	24.21	28.74	26.42	12.26	20.64
Moderate	12.23	11.23	13.39	12.50	11.29	9.17
Considerable	13.48	9.47	10.24	5.11	16.13	16.51
High	30.85	17.02	8.66	3.69	49.03	38.53
N	564	570	254	352	310	218

Note: Cross-sectional sample from 2015.

Table 16 shows that 'intentions to quit' are at their highest levels compared to previous surveys. The percentage of respondents to the 2015 survey expressing considerable or high quitting intentions is considerably greater than in 2012. This increase is seen in GPs under the age of 50, as well as those in the older age group.

Table 16. 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%
2012	31.2%	8.9%	54.1%
2015	35.3%	13.1%	60.9%

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

As well as retirement, respondents were asked to consider other potential changes to their work commitments that they are intending to make in the next five years. The results of these questions are shown in Table 17. Approximately half (50.96%) of GPs were intending to reduce their work hours in the next five years, with 32.68% of GPs under the age of 50 intending to reduce their hours. In contrast, only one in 10 GPs (10.49%) are intending to increase their working hours.

For the questions related to leaving their current GP position, leaving to work abroad was the most likely response for the under 50s (13.61%). For the over 50s, leaving direct patient care was the most likely response (60.9%).

Table 17. Likelihood of changing work commitments within five years

2015: Considerable / high intention to:	All GPs	GPs aged <50	GPs aged ≥50
Increase hours work within five years	10.49%	14.75%	5.5%
Reduce hours work within five years	50.96%	32.68%	72.08%
Continue with medical work but outside the UK within five years	11.43%	13.61%	8.92%
Leave direct patient care within five years	35.35%	13.09%	60.90%
Leave medical work entirely within five years	31.35%	8.20%	57.76%

Note: Figures are based on the 2015 cross-sectional sample. Range of N=1134-1145 for 'All GPs', range of N= 610-612 for 'GPs aged <50 and range of N= 524-535 for 'GPs aged ≥50'

Table 18. Likelihood of changing work commitments within five years by age group

2015: Considerable/high intention to:	All GPs	GPs aged < 50	50 ≤ GP age < 55	55 ≤ GP age < 60	60 ≤ GP age < 65	GPs aged 65+
Increase hours work within five years	10.49%	14.75%	4.68%	4.21%	8.93%	21.05%
Reduce hours work within five years	50.96%	32.68%	59.41%	84.11%	84.48%	57.89%
Continue with medical work but outside the UK within five years	11.43%	13.61%	10.92%	7.51%	6.90%	5.56%
Leave direct patient care within five years	35.35%	13.09%	35.15%	78.14%	93.22%	89.47%
leave medical work entirely within 5 years	31.35%	8.20%	33.33%	75.00%	85.00%	84.21%

Note: Figures are based on the cross-sectional sample. Range of N=1134-1145 for 'All GPs', range of N= 610-612 for 'GPs aged <50', range of N= 235-240 for '50 ≤ GP age < 55', range of N= 213-216 for '55 ≤ GP age < 60', range of N= 56-60 for '60 ≤ GP age < 65', range of N= 18-19 for 'GPs aged 65+'

The final three rows in Table 17 and 18 represent the GPs planning to leave their current work. The questionnaire allows the possibility of selecting multiple rows. In order to examine leaving intentions more clearly, we now focus on the GPs who have indicated a considerable or high intention to either leave the UK, leave direct patient care or leave medical work entirely, within the next five years.

Of those GPs who responded to these questions, 41% stated that there was considerable/high likelihood that they would leave the UK, leave direct patient care or leave medical work entirely, within the next five years. For those GPs under the age of 50, 21% (129 out of 613) selected one of these options with considerable or high intention. For those aged fifty or over, this figure was 63% (353 out of 559).

For those GPs under fifty who did not report a considerable/high intention to leave their current work within the next five years, 25% (123 out of 484) reported a considerable/high intention to reduce their hours of work within the next five years. For those GPs aged fifty or older who did not report a considerable/high intention to leave their current work within the next five years, 44% (90

out of 206) reported a considerable/high intention to reduce their hours of work within the next five years.

6.2 Likelihood of changing working hours

As discussed in the previous section, respondents were also asked to indicate whether the likelihood that they would either increase or (separately) reduce their working hours within the next five years. Possible responses to both questions were: none; slight; moderate; considerable; and high. Tables 17 and 18 presented only the proportions of GPs who selected considerable or high intentions.

Table 19 shows that the majority (69.22%) of all respondents stated that there was no likelihood of them increasing their working hours over the next five years. Approximately 18% 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: in the former group, 25.42% stated that there was a moderate, considerable or high likelihood of working increasing hours, whereas in the latter group this figure was 8.39%.

Only 6.07% of GPs younger than fifty and 2.67% of GPs aged 50 or over indicated a high likelihood of increasing their working hours.

Over half of all respondents (65.5%) reported that there would be a moderate, considerable or high likelihood that they would be reducing their working hours within five years. 20.49% of GPs reported that there would be no likelihood of working reduced hours as a high likelihood. Again, there were differences by age: a greater likelihood of reducing working hours was more prevalent amongst GPs aged fifty and over (82.65% moderate, considerable or high) than GPs aged less than fifty (50.65%). Over half of the former group expressed a high likelihood of so doing.

Table 19. Likelihood of changing working hours within five years in 2015

Likelihood of changing working hours within five years	All GPs		GPs aged <50		GPs aged ≥50	
	Increase	Reduce	Increase	Reduce	Increase	Reduce
	%	%	%	%	%	%
None	69.22%	20.49%	58.03%	29.90%	82.25%	9.62%
Slight	13.23%	14.01%	16.56%	19.44%	9.35%	7.74%
Moderate	7.05%	14.54%	10.66%	17.97%	2.86%	10.57%
Considerable	6.00%	15.67%	8.69%	14.05%	2.86%	17.55%
High	4.50%	35.29%	6.07%	18.63%	2.67%	54.53%

Note: Cross-sectional sample from 2015.

7. Concluding Remarks

Overall job satisfaction has shown a decline between the 2012 and 2015 cross-sectional samples from 4.09 to 3.56 on a seven-point scale. In the longitudinal sample satisfaction has fallen by 0.59 between 2012 and 2015. These changes mean that overall job satisfaction is now at its lowest since 2001, before the new GP contract was introduced.

Satisfaction has also fallen relative to 2012 in eight of the nine domains of job satisfaction. The largest fall in satisfaction rating is for hours of work which has fallen from 4.09 in 2012 to 3.56 in 2015. Average satisfaction for working hours has now fallen below neutral into the 'dissatisfied' portion of the scale, for the first time since 2004. The change in the average satisfaction that GPs report for their working hours has occurred even though the reported hours worked and the reported content of those hours has changed little since the previous survey.

The proportion of GPs stating that they intend to quit medical work in the next five years has risen from 31.2% in 2012 to 35.3% in 2015. The proportion of GPs intending to quit medical work has increased both for the over and under 50s.

Average hours worked per week by cross-sectional respondents to the survey have remained largely unchanged between 2012 (41.7 hours) and 2015 (41.4 hours). The proportion of GPs time devoted to patient care has also remained comparable between 2012 (81.6%) and 2015 (81.8%). However, the proportion of GPs who indicate that their practice does not operate extended hours access has increased from 16.1% in 2012 to 18.7% in 2015. This continues the trend that was observed between 2010 and 2012.

8. References

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, Reeves D, Sibbald B. Relationships between job satisfaction, intentions to leave family practice and actually leaving among family physicians in England. *European Journal of Public Health* 2011; 21(4): 499-503.

Hann M, Santos R, Sutton M, Gravelle H, Sibbald B. *Sixth National GP Worklife Survey.* Final Report to the Department of Health. July 2011.

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

Hann M, McDonald J, Checkland K, Coleman A, Gravelle H, Sibbald B, Sutton M. *Seventh National GP Worklife Survey.* Final Report to the Department of Health. August 2013. http://www.population-health.manchester.ac.uk/healtheconomics/research/reports/FinalReportofthe7thNationalGPWorklifeSurvey.pdf

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.

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.