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GP RETENTION IN THE UK: A WORSENING CRISIS? FINDINGS FROM A CROSS-SECTIONAL SURVEY

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Keywords:	General practice, workforce, retirement, retention

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GP RETENTION IN THE UK: A WORSENING CRISIS? FINDINGS FROM A CROSS-SECTIONAL SURVEY

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ABSTRACT

Objective: To investigate the impact of recent national policy-led workforce interventions on General Practitioners' intentions to remain working as a GP.

Design: On-line questionnaire survey with qualitative and quantitative questions

Setting: Wessex region in England, an area for which previous General Practitioners (GP) career intention data from 2014 is available

Participants: Of 1697 GPs listed as working in Wessex, 929 (54.7%) participated

Results: 48.5% of GPs reported an intention to leave working in general practice sooner than they had planned 2 years earlier, with a significant increase in the number of GPs planning retirement in the next 2 years. Age, length of service and reduced job satisfaction were associated with intention to leave.

Work intensity and volume were the commonest reasons given for intention to leave earlier than planned. 51.0% participants reported working more hours than 2 years previously, predominantly due to increased workload.

GPs suggested increased funding, more GPs, better education of the public and greater workforce diversity would be interventions most likely to improve GP retention.

Several workforce initiatives have been introduced in the last 3 years and GPs perceived positively those aligning to their identified priorities for improvement. However, low numbers of GPs had seen evidence of these initiatives.

Conclusion: While recent national initiatives may be having an impact on targeted areas, little effect is being seen by working GPs which may be causing further lowering of morale and increasing intentions to leave General Practice. More urgent action appears to be needed to stem the growing workforce crisis.

Article Summary: Strengths and limitations of this study

- This is the first survey to report GPs' views and experience of national initiatives which have been introduced to address the national workforce crisis in general practice
- The survey was conducted in the same region as a similar survey two years earlier, so allowing some analysis of how views in one region are changing over time, and by the same group as conducted a somewhat similar survey in the West Midlands (REF)
- The response rate was reasonable for this type of survey
- The free text qualitative data added depth to the findings

unknown

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Competing interests statement. None of the authors had any competing interests. The Health Education England Wessex Appraisal Service has an interest in demonstrating that appraisal is not a

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factor in GPs' decision to leave clinical work, but apart from providing the initial funding and the database to send out the survey was not involved in the data analysis or interpretation of findings.

Author's contributions: KO and JD designed the study; TS and TH undertook data analysis, supervised by KO; all authors contributed to the interpretation of findings and the drafting of the paper**.**

Data sharing statement: The data are stored at the Unit of Academic Primary Care, Warwick Medical School, University of Warwick. KO is responsible for the data, which are all anonymised.

Ethics approval: The Biological Sciences Research Ethics Committee of the University of Warwick reviewed and approved the study (REGO-2017-2032).

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GP retention in Wessex: a worsening crisis?

INTRODUCTION

The General Practice (GP) workforce in England has been recognised as being at crisis point for several years [2-4]. Despite a Government commitment in 2015 to create 5000 additional GP posts by 2020[5], recent figures suggest a further deficit of 1,300 full-time equivalent (FTE) GPs has developed [6]. This shortfall reflects a pattern of falling recruitment to GP specialist training [7] and increasing numbers of GPs leaving to work abroad, take career breaks, work part-time or retire early[8-10]. Whilst recruitment to GP training improved in 2017 with the highest ever number of trainees appointed, concerns over retention remain. Factors that are implicated include intensity of workload, administrative burden, lack of recognition of the value of General Practice and fear of litigation[7 9 11-14]. Moving towards an increasingly mixed workforce using allied health professionals has been proposed[15], although it has been suggested that unintended consequences may be reduced continuity of care, substitution rather than supplementation and increased costs [16].

In 2014, a survey of the GP workforce in Wessex (a region in the south of England with a population of 2.1 Million) completed by 1,398 participants found that 14% were planning to retire in the next 2 years, a further 4% were planning a career change and 20% were planning to retire earlier than planned [1] (Figure 1).

Wessex LMC Survey 2014[1]

1398 GPs responded: 77.4% partners, 14.0% salaried, 8.6% locum

Hours worked: 69.3% wanted to stay the same, 2.7% wanted to increase, 21.5% wanted to decrease, 6.5% wanted to take on other work

Intention to retire: 7.2% planned to retire within 1 year, 6.2% in 1-2 years, 18.3% in 2-5 years and 63.9% in more than 5 years. 4.3% planned to leave rather than retire.

Figure 1

This pattern is similar to that reported in other surveys that also found high rates of intention to leave practice in the next 5 years; namely, the West Midlands[9] (41%) and South West of England [17] (37%). Low morale appears to be the primary driver to intention to quit [17] with underlying factors related to workload volume and intensity [9] fear and risk, uncertainty and feeling undervalued [11].

This study was undertaken in Wessex to explore how attitudes and intentions have changed in light of new national policy-led initiatives[5] designed to improve the workforce situation for GPs, and to gain views about what is needed to improve the current workforce situation.

METHODS

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3 A questionnaire including qualitative and free text elements was designed incorporating questions
4 asked in the initial Wessex survey[1] relating to future intentions regarding GP work, intention to retire
5 and reasons for those planning early retirement. Additional questions were used to explore reasons
6 for intended change in hours worked and experience of recent initiatives designed to improve GP
7 retention and workload. The survey was distributed to all GPs in Wessex via the Health Education
8 England appraisal team. This did not include training grade GPs but did include retired GPs who retain
9 a license to practice. A request to participate was sent by email from the appraisal team, with two
10 subsequent reminders.
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14 **Qualitative analysis**
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16 Included in the survey were two open questions; "What is the greatest problem within general
17 practice at the current time" and "What intervention would help general practice the most?". The free
18 text comments were imported into Nvivo11 and analysed with a thematic approach; following a
19 period of familiarisation, TS & TH developed an initial coding framework by coding a subset of the
20 comments independently. This was then formulated and used to describe the themes included in
21 comments. The framework was applied until it was decided that no new information was acquired.
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25 **Quantitative analysis**
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27 Basic descriptive statistics were used to characterise the survey population and compared to Health
28 Education England data provided by NHS Digital[6]. Binary logistic regression analysis was employed to
29 identify predictors of GPs' intentions to retire within 5 years using a range of covariates; gender, age,
30 hours of work, role, length of service, job satisfaction.
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34 **Ethical approval**
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36 Ethical approval was provided by the University of Warwick Biomedical Sciences Research Ethics
37 Committee. Participants were provided with an information sheet outlining the study and were
38 informed that completion of the online questionnaire would be taken as consent to participate.
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41 **RESULTS**
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45 **Participants**
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47 The survey was distributed by email to the 1697 GPs listed by NHS Digital as working in Wessex,
48 leading to 929 respondents, a response rate of 54.7%. 509 (54.8%) respondents were female, the
49 modal age was 45-55 years (n=253, 32.9%), and a large majority trained in the UK (93.0%); a sample
50 that is representative of the NHS Digital data for GPs in Wessex. Most respondents were GP principals
51 (56.7%), followed by practice employed salaried GP (21.7%) and locum GPs (16.0%), this is statistically
52 different from the original survey (p<0.0001) with a smaller proportion of GP principals responding.
53 This may reflect changing patterns of practice with more newly qualified GPs being reluctant to take
54 on partnerships [18]. A small number stated they were retired (n=12) or working abroad (n=4). Nearly
55 two-thirds reported having at least one additional employed role in addition to their GP clinical
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responsibilities. Nearly half of respondents have spent over 20 years in general practice, and a third reported working over 41 hours per week.

The two open questions had high completion rates (n=807, 86.9%; n=819, 88.2% respectively), and between the two questions there were a total of 29,679 free text words; individual responses ranging from 1 to 340 words (mean = 18).

Changes in work volume, intensity and morale

Respondents reported working an average of 29.6 hours a week (range 1-66) of which an average of 20.1 hours (range 2-59) were in direct contact with patients. Comparing current workload with two years previously, 51.0% (470) reported working longer hours (of these, 94.4% (423) gave increased workload as the predominant reason for this); 26.6% had reduced their hours of work (of these, 72.3% (172) stated this was due to increasing intensity of workload and for 29.8% (71) reasons related to stress and mental health). This contrasts starkly with the stated intentions from the original survey where 21.5% of GPs wished to reduce their hours worked and only 2.7% wished to increase. Morale was reported as having reduced over the past two years for 59.4% (510) and increased for 14.1% (121) of respondents, with 28.9% (247) now reporting a positive morale and 42.7% (365) negative morale.

Intention to leave

When asked to think about their career plans compared to two years ago, 409 (48.5%) said they planned to leave general practice sooner, with just 47 (5.6%) planning to remain longer. Intention to retire in the next 2 years has increased from 14% to 19% ($p=0.017$; OR 0.756)

Binary logistic regression of GPs planning to retire or leave general practice identified age, length of time in general practice, and reduced job satisfaction as significant predictors of intention to leave. GPs aged between 55-59 years and 60-64 years were significantly more likely to express a desire to leave general practice (OR 7.98; 95 % CI 2.6 to 24.1; $p<0.001$, OR 7.1; 95 % CI 1.7 to 30.0; $p<0.01$ respectively). GPs who have served 20-29 years in general practice were more likely to express an intention to leave (OR 3.3; CI 1.3 to 8.3; $p<0.05$). Reduced job satisfaction over the past two years was also shown to be a significant predictor (OR 4.2; CI 2.3 to 7.6; $p<0.001$).

Respondents were asked to rate a number of factors contributing to their intention to leave general practice on a Likert scale (1=not important, 5=very important) (Table1). Intensity of workload had the greatest influence (mean = 4.4) followed closely by volume of workload (mean = 4.3) and too much time spent on unimportant tasks (mean=4.0). Lack of patient contact, potential introduction of a 7-day working week, and reduced job satisfaction also scored a mean >3. Personal factors of note were age (mean=3.5), medical indemnity payments (3.4), and increased risk of litigation (3.0). They were also asked to rate factors that might help retain them in general practice (Table1), again confirming the importance of addressing the volume and intensity of workload.

Table 1

Factors influencing intention to leave or remain working in General Practice

Factors influencing decision to leave general practice (1 = not important to 5 = very important)	N	Mean	sd	Factors that might retain GPs in practice (1 = not important to 5 = very important)	N	Mean	sd
Intensity of workload	113	4.4	1.0	Reduced intensity of workload	109	4.1	1.4
Volume of workload	114	4.3	1.0	Longer appointment times/more time to spend with patients	109	4.0	1.4
Too much time spent on unimportant tasks	113	4.0	1.2	Reduced volume of workload	110	3.9	1.4
Lack of time for patient contact	113	3.8	1.2	Less administration	108	3.9	1.4
Potential introduction of 7 day a week working	113	3.8	1.4	No out of hours commitments	109	3.6	1.6
Reduced job satisfaction	110	3.6	1.3	Incentive payment	108	3.5	1.5
Poor flexibility of hours	108	2.8	1.4	Protected time for education and training	107	3.3	1.4
Revalidation	112	2.6	1.5	More flexible working conditions	106	3.2	1.5
				Greater clinical autonomy	107	3.0	1.5
Age	113	3.5	1.3	Increased pay	107	2.9	1.4
Medical indemnity payments	113	3.4	1.4	Improved skill-mix in the practice	106	2.8	1.4
Increased risk of litigation	111	3.0	1.5	Additional annual leave	107	2.8	1.5
Changes to pension taxation	112	2.7	1.5	Shorter practice opening times	108	2.7	1.5
Family commitments	111	2.6	1.2	Opportunity for a sabbatical	107	2.6	1.5
Ill health	109	1.8	1.2	Introduction of 'Twenty Plus'	106	2.3	1.3
Embarking on career outside general practice	109	1.6	0.98	Expansion of GP retainer scheme	105	2.1	1.4
Planned career break	107	1.4	0.89	Extended interests e.g. CCG role	106	2.0	1.3
				Reintroduction of the flexible careers scheme	105	2.0	1.2

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Option to work term time only	105	1.6	1.1

Current challenges to general practice

Analysis of the responses to "What is the greatest challenge currently facing General Practice" yielded 5 key themes: increasing demands, expectations and complexity of patients; workload; GP recruitment and retention; inadequate funding; and bureaucratic and administrative burden.

Increasing demands, expectations and complexity of patients

40.7% (n=333) expressed a view that the increasing, demands and complexity of patients is one of the greatest problems facing general practice. Participants highlighted how there are insufficient numbers of GPs or sufficient health service resources to meet this rise in expectations and demands. Several felt that the increase in demands and expectations has been driven by the media and government.

"Patients have unreasonable expectations of what a single GP can do within a single consultation" (ID 357)

"Increasing patient demands with limited time & resources to manage this" (ID 403)

"Unrealistic patient expectations fuelled by politicians and media" (ID 814)

Demands and expectations are rising at the same time as life expectancy, chronic health conditions and multi-morbidity. Therefore many patients require more input from their GP

"Patients demands are more difficult and complex due to people living longer with more chronic diseases e.g. Diabetes, COPD, CHD, Renal failure, Dementia, Mental health problems, hypertension and many more" (ID 510)

Too many patients with too complex needs for a GP to manage well within the context of a 10 minute consultation and a 3 week wait for appointments (ID507)

Workload

The high volume and intensity of work was highlighted by many (32.0%, n = 262), and described as "ever-increasing" and "unsustainable" leading to stress and exhaustion.

"the volume of work, and the long hours of it. It's exhausting even when I'm feeling good about it" (ID 433).

"working overtime regularly for 12+ hours per day which makes this job very unattractive" (ID 539)

"Hugely stressed and exhausted workforce working at or above maximum capacity both individually and as workplace units" (ID 556)

GP recruitment and retention

30.2% (n = 247) highlighted about difficulties that included recruiting experienced GPs to fill vacant posts, attracting doctors into GP training, and encouraging GPs to become partners. These workforce

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3 issues have been compounded by GPs retiring, reducing their hours or taking on alternative duties
4 such as working with CCGs.
5
6 *"Reduced workforce and difficulty attracting partners or retaining salaried GPs"* (ID 341)
7
8 *"awful recruitment , most GPs can't see a good future for their practice - it should be one of the best*
9 *jobs there is"* (ID 415)
10
11 *"Numbers ....Lack of GPs working full time which leads to lack of continuity and pressure on those that*
12 *remain. A lot of GPs leaving general practice to retire. Men not wanting to do general practice, women*
13 *going on maternity leave?? Like me! general practice being stressful so doing it part time and taking up*
14 *other roles like CCG work"* (ID 605)
15
16
17 Inadequate funding
18
19 Inadequate funding was highlighted by 19.66% (n = 161). Participants described not being able to
20 properly fund the services and staff to meet patient's needs. Several also stated that the financial
21 rewards involved in general practice were not keeping up with the increasing complexity, workload
22 and risk involved with the job.
23
24 *"I feel that there is not enough money available to provide the services that patient require and*
25 *deserve"* (ID 511)
26
27 *"The lack of adequate funding"* (ID 460)
28
29 *"At the same time as the complexity, intensity and perceived risk of continuing to work is increasing*
30 *there is little or financial or other reward to offset it"* (ID 819)
31
32
33 Bureaucratic and administrative burden
34
35 Participants described how additional bureaucratic and administrative tasks take time away from
36 looking after patients and performing their clinical role, further adding to their workload. This
37 includes time meeting the requirements imposed on them by regulatory and commissioning
38 organisations, as well as the duties and paperwork that need to be completed for quality payments,
39 appraisals and hospital colleagues.
40
41 *"Excessive bureaucracy i.e. CQC, CCG, NHS England, appraisal. We are grossly over managed, this*
42 *prevents us seeing patients or developing services for our patients and employs an army of managers*
43 *(some clinical)" (*ID 902)
44
45 *"The admin has become crazy. Too little protected time for the paperwork*" (ID 321)
46
47 *"Too much admin and computer work and too little time to properly listen and use acquired knowledge*
48 *skills and wisdom and help patient come to best plan" (*ID 775)
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54 **Suggestions for improving general practice**
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Answers to the question *what intervention would help General Practice the most* highlighted eight themes. The number of respondents with answers that included each of these measures is shown in Table 2.

Table 2

Interventions that were suggested by respondents as being most relevant to improving general practice

Improvement Measure	No. of respondents	Percentage of total respondents
Greater funding	225	27.9%
More GPs	184	22.8%
Educate patients and the public	107	13.3%
Increase clinical and support staff	92	11.4%
Reduce bureaucracy and administration	91	11.3%
More time per patient	65	8.2%
Reduced workload	56	6.9%
Protection from financial risk	48	6.0%
Enhanced reputation	44	5.5%

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Greater funding

Increasing funding for General Practice was viewed as the most important requirement. Many participants felt that other problems, such as the lack of GPs and meeting patients' expectations, could only be tackled with greater funding.

"A greater budget for GP practices to provide the best services for their own patient populations" (ID 715)

"It's all money. More money to pay extra GPs and pay GPs more to attract good doctors and retain the drs once trained" (ID 220)

"Providing enough money to provide all patients with the care that is needed" (ID 354)

More GPs

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Increasing the number of GPs would lead to both better patient care and an improved work-life balance. The current imbalance was seen as creating a self-perpetuating cycle where fewer GP means more work for each GP making the profession less popular for new entrants.

"More GPs!" (ID 21)

"1 young GP would stabilise my practice and reduce the risk of closure" (ID 461)

"Anything that will really increase the number of GPs by a substantial and permanent number" (ID 411)

Educate patients and the public

To reduce excessive demands and expectations, patients should be made aware of the costs and limitations of primary care. There should also be increased health education for patients so that they can better self-manage their own health. However, it was not clear how such interventions should be delivered.

"Simple recognition and education about the limitations of primary care. It is a wonderful service, free at the point of access but is not limitless and was never designed to be instant". (ID 550)

"Patient education for self limiting illness Patient education to reduce expectation Patient education to reduce chronic disease". (ID 81)

"Educate patients to take greater responsibility for their own health as well as rationalising their use of resources" (ID 920)

Increase clinical and support staff

As well as more GPs, an increase in non-medical clinical and support staff was highlighted as essential. Several participants expressed the view that an expanded role for these staff would allow GPs to focus on more complex medical issues which they are trained to deal with.

"Funding for ancillary staff to see more of the routine stuff enable GPs to do chronic disease management, EOL [end of life] and complexity that they deal with best" (ID 444)

"more support to recruit alternative health professionals (ANPs, pharmacist, paramedics, nurses, admin support)" (ID 381)

"Give more time for patients by increasing support from new doctors or ancillary staff such as physios, paramedics, physicians assistants". (ID 828)

Reduce bureaucracy and administration

Spending less time on administrative tasks and more time on their clinical role would allow patient care and job satisfaction to improve. It was felt that this could also be achieved quickly compared to the time need to train and recruit new GPs.

"Reduction in administration - we can't do anything about patient demand, other than train more GPs, which takes a great deal of time. A third of my time is spent on administration, a lot of which is reading through unnecessarily duplicated reports and results, extraneous information from hospitals, or acting as a secretary with a prescribing licence for hospital colleagues". (ID 669)

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"Reducing bureaucracy, simplification of paperwork, simplifications of referral processes; improvement on the frontline" (ID 929)

More time per patient

Longer appointments are needed to address the complex needs of patients, but it was recognised that this might have the perverse consequence of increasing hours of work and/or reducing salary.

"ability to have longer appointments to provide proper holistic care" (ID 384).

"Increase consultation length without increasing working hours or reduced remuneration" (ID 106).

Protection from financial risk

Many participants felt that a big detraction from working as a GP was the financial risk involved and the cost of covering that risk in indemnity fees. It was felt that this affected the extent to which doctors choose to work in general practice, and forces others to retire or reduce their hours. This was seen as something that the NHS should address.

"Protecting partner from risk - i.e. If we can't recruit we may need to close our practice which would mean redundancy payments, inability to pay mortgage for premises and potentially losing my home" (ID 794)

"Government or CCG paying our indemnity. This would then allow GPs to work more sessions without a negative financial return. Salaried GPs could also be better paid as a result. If our indemnity is not covered by some outside body in the next few years general practice will completely collapse as, even in its current state, it is unaffordable. Year on year rises of 15-20% are not sustainable" (ID 193)

Enhanced reputation of general practice

Several participants mentioned that improving the image of general practice was vital to address the problems that it faced.

"Improved public image thereby improving recruitment" (ID802)

"Substantial boost to go finance and boost to perception of GP's at medical school" (ID225).

"For GPs and primary healthcare organisations in the UK to be made to feel valued and supported by their patients, politicians and media. This requires a complete shift in the way that the mass media portrays healthcare in the UK. Rather than it being - "It is your right to always get what you want (regardless of the cost to the system)" to something more along the lines of "The healthcare provision you get in the UK is world-class and should be valued and not taken for granted"..." (ID200)

Positivity towards, awareness and involvement in national workforce initiatives

Respondents were asked to rate whether they thought about the nationally-led initiatives that had been recently introduced to address workforce issues in General Practice, specifically whether the initiatives would have a positive, negative or no impact. A net rating was calculated by subtracting the

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percentage who rated the initiative as negative from the percentage who rated it as a positive. As shown in Table 3, investment in practice nursing, improved access to specialist advice, investment in technology and expansion of the GP workforce were all viewed favourably, with greater than 75% net rating scores. Conversely, the wider use of physician associates, local sustainability and transformation plans (STPs), and video and e-consultations were rated negatively. There were mixed levels of awareness about the various national workforce initiatives being implemented, and with few exceptions (closing working with specialists, increased use of pharmacists, involvement in GP federations) the majority of respondents lacked direct experience of them (Table 3).

Table 3

Net rating (positivity), awareness of and experience of initiatives intended to address workforce issues in general practice

Initiative	Net rating of initiative	Awareness of initiative	Experience of initiative
Investment in practice nursing	+91.3%	39.7% (288)	19.2% (104)
Closer working with specialists eg phone and email advice lines	+85.3%	73.3% (537)	55.1% (343)
Investment in technology	+85.3%	52.2% (375)	30.9% (170)
Expansion of GP workforce	+76.1%	81.7% (612)	15.0% (94)
Streamlining CQC, reduced inspection for good and outstanding practices	+73.1%	51.4% (375)	17.6% (98)
Investment in primary care infrastructure	+70.3%	45.0% (318)	20.0% (105)
Releasing time for patients	+60.6%	26.4% (193)	13.1% (62)
Increased use of pharmacists	+56.2%	96.9% (738)	56.1% (404)
Paramedics in primary care	+44.5%	86.4% (652)	34.9% (239)
Practice resilience programme	+41.2%	57.3% (415)	27.8% (153)
Multi-specialty community provider projects	+25.3%	53.5% (382)	27.0% (143)
Federation of GP practices	+19.3%	92.7% (707)	53.7% (369)

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Better Care Fund	+13.2%	37.6% (278)	26.8% (130)
Physicians associates	-0.2%%	78.5% (589)	8.1% (54)
Local sustainability and transformation plans (STPs)	-21.3%	80.7% (606)	42.2% (268)
Video and e-consultations	-26.6%	80.4% (597)	33.4% (233)

Age emerged as having a small, but statistically significant correlation with attitude towards several individual initiatives (Table 4). Younger GPs were more likely to be positive about federations, increased use of pharmacists and paramedics in primary care, and multispecialty community provider projects. Attitudes were similar towards video and e-consultations and investment in technology across all age ranges. Likewise, there were no age differences in attitudes towards increased investment, expansion of the GP and nursing workforce and reduced CQC bureaucracy.

Table 4

Statistically significant correlations between age and positivity towards workforce initiatives

Initiative	r	p value
Federation of GP practices	-0.151	<0.001*
Increased use of pharmacists	-0.088	0.02*
Physicians associates	0.136	0.001*
Paramedics in primary care	-0.089	0.03*
Releasing time for patients	-0.108	0.03*
Multi-specialty community provider projects	-0.095	0.04*

*p<0.05, r: Spearman's rank correlation coefficient

Previous experience of an initiative was associated with a more positive attitude score. The differences in mean score were modest, but for seven of the initiatives the difference was statistically significant (Table 5).

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Table 5

Comparison between experience of initiative and attitude: statistically significant differences

Initiative	Experience of initiative	Mean attitude score (1 = negative, 3 = positive)	t	P value
Federation of GP practices	Yes	2.34	5.27	<0.01*
	No	2.01		
Local sustainability and transformation plans (STPs)	Yes	1.87	2.30	0.02*
	No	1.73		
Paramedics in primary care	Yes	2.71	7.48	<0.01*
	No	2.30		
Video and e-consultations	Yes	2.06	7.35	<0.01*
	No	1.56		
Releasing time for patients	Yes	2.79	3.19	<0.01*
	No	2.57		
Closer working with specialists e.g. phone and email advice lines	Yes	2.90	2.79	<0.01*
	No	2.80		
Investment in technology	Yes	2.80	2.86	<0.01*
	No	2.65		

190 GPs gave free-text comments to explain their views. The strongest theme was that there were too many initiatives, of which little or no benefit was being seen on the ground.

"There are too many initiatives. GPs just need to be left alone to get on with the job with adequate funding. These initiatives cost money which comes out of GP budgets" ID 925

"Many of these ideas are great on paper but little evidence of impact at the coalface" ID 826

There was a significant subtheme that this was to distract from investing further in General Practice and tackling issues of workforce.

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"The only thing that will make any real improvement in care is investment in proper well-trained GPs continuing to be the centre of patient care in primary care alongside practice nurses with a proper career structure and practice pharmacists. All the other initiatives are just tinkering at the edges - smokescreens to try to take the heat off the central issue of lack of investment in General Practitioners" ID 688

An additional theme suggested that some initiatives could be further undermining GP morale

"I object to the term 'resilience' and any resources invested into it. We should be focusing all our intentions on making the job better rather than coaching GPs to be more robust against the stress. The very term makes it sound to me like it is somehow the GPs fault in the first place for not coping with the stains and demands of the job." ID 569

DISCUSSION

A worsening situation

This survey describes a picture of increasing workload, falling morale and an accelerating workforce crisis. Since the initial survey in 2014[1], GPs' stated intention to retire in the next two years has increased significantly with 48.5% of respondents to the current survey stating that they planned to leave working in general practice sooner than they had expected two years ago. A majority reported an increased in hours of work since the previous survey, reflecting increasing workload, despite only 2.7% having expressed a wish to increase hours in the previous survey. Almost all (97.5%) were experiencing increasing appointment numbers to meet patient demand and 69.0% to manage patient complexity. The number of GPs planning a reduction in clinical hours has also increased. Many GPs are working over 40 hours a week and some up to 70. A reduction in morale and job satisfaction over the last two years was stated, which have been shown to increase the likelihood of actually leaving [19] and to have a negative impact on medical student interest in choosing the profession [20]. These findings are in line with national findings of increasing consultation rates, length and clinical workload [21].

Analysis of reasons for intending to leave in this group remain unchanged from previous, earlier surveys [9 11-14 17], suggesting that there are no areas in which an impact has yet been made. Workload remains the dominant driver to leave. When examining reasons why doctors choose careers in General Practice, a better work-life balance is a key factor in decision making[22]; this may result in disillusionment and plans to leave for some GPs, or contribute to the increasing number of GPs choosing to work fewer sessions from early in their careers [10].

The survey was commissioned in part to discover whether the findings in Dale et al.[18] about the negative impact of appraisal and revalidation on the retention of GPs in the West Midlands was replicated in Wessex. The Appraisal Service is unique in NHS England in being directly commissioned from an educationally-based provider and has a conscious ethos of trying to facilitate appraisals with a strong emphasis on the support of the individual doctor. Although revalidation was reported as a minor factor in the intention to leave clinical work, appraisal itself did not emerge as a demonstrable factor.

The study identified that GPs vary in their awareness of, and experience of, national initiatives that are aimed at addressing workforce issues. This suggests that there may be significant delays in such programmes becoming of benefit to individual practices. GPs expressed the view that there were too many initiatives and that these were often complex to access; they would prefer for the investment to go directly to practices to decide how best to support their working practices. Despite this, the

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response to individual initiatives is mostly positive, with the exception of physician associates (PAs), video and e-consultations and STPs. GPs who had experience of an initiative tended to view the initiative more positively than others, suggesting that familiarity may lead to GPs becoming more aware of, and perhaps less sceptical, of their potential benefits.

The negative response to PAs in somewhat surprising in the context of positive responses to increased numbers of pharmacists, paramedics and nurses working in primary care. PA training programmes are becoming increasing in number across the NHS, and hence there may be a need to manage expectations for this workforce, as previously described [23] despite evidence to suggest they are well received by patients[24 25]. The Roland report[15] viewed multi-disciplinarity as one of the key solutions to sustaining primary care, though concerns have been raised about loss of continuity of care [16] and resultant reduction in patient satisfaction [26]. Future GP roles within increasingly diverse teams may need redefining and there has been interest in alternative models of care[27], such as the NUKA system in Alaska[28].

The strongest negative response was to Sustainability and Transformation Plans. Considering these are the main vehicle by which the 5-year forward plan for General Practice is being driven and support closer working between health and social care,[29] that so many GPs believe they may make things worse is of concern. Further research in this area would be beneficial to understanding why many GPs lack confidence in this area, and what may be needed to promote greater positivity.

Whilst investment in technology was positively received, e-consulting and video consulting were perceived negatively. Pilot studies have suggested that e-consulting may increase workload and costs as well as reducing patient satisfaction.[30-32]

Expansion of the GP workforce remains a high priority to GPs, many of whom are working longer hours and offering more appointments to meet increasing patient demand. This has been recognised as an issue at governmental level, however the response of increasing medical student numbers will not start to impact until 2028 at the earliest[33]. An International GP recruitment programme has been set up[34], initially targeting GPs from the European Economic Area, however there are concerns that uncertainties surrounding Brexit have impact on its success, and may result in EEA GPs currently working in the UK returning home.[35]

Perhaps the most interesting aspect of the survey was GPs' views on what would improve general practice. More funding was the strongest theme, and should be viewed in the context of UK health expenditure being reported as 13th out of 15 European Countries[36]. Increasing the workforce, both of GPs and other health professionals was closely linked with increased funding to be able to achieve this, also the increasing consulting rates of patients and increasingly complex needs requiring longer appointments. Longer appointments were widely supported and have been shown to reduce burnout in primary care physicians[37]. Increasing financial demands including rising indemnity payments were also of concern, and there was enthusiasm for a national indemnity scheme. Reducing bureaucracy was identified, but less strongly than in previous surveys[9], possibly reflecting the reduction in incentive-related workstreams, the clinical value of which is now questioned[38]. It is possible that the negative response to STPs relates to increased perceived bureaucracy. A number of innovative, more strategic suggestions emerged which may be worthy of further consideration.

Strengths and Limitations

This study provides further evidence of the unfolding general practice workforce crisis in England. A particular strength is that it demonstrates how attitudes have changed over the last 2 years. Its focus on how the crisis might be addressed is another strength, with the study providing evidence of the

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impact that national initiatives are felt to be having. The response rate was good for this type of survey; the questionnaire was quite lengthy and there was no incentive to support participation. However, the extent to which participants wrote free text comments reflects the importance placed on this topic by GPs and added significant depth to the findings. While the findings are limited to a single region in England, they are reflective of views that have been expressed in other surveys and so are likely to be generalisable to other parts of the UK.

Conclusion

The role of the GP has changed significantly and rapidly over the past 20 years and initiatives to manage these changes have often been short-lived and reactive in approach, without sufficient evidence to support them or engagement with grassroots GPs. Perhaps now is the time to reflect more broadly on what the practice of future GPs will encompass and how a new generation of GPs can be trained to prepare for this. New models of care and the relationships and roles of different health care professionals need to be considered. The debate needs to include the public; what do they want from a primary care system and what can we afford to provide. Funding is low compared with similarly economically developed countries and primary care remains excellent value for money. Increased funding needs to be directed to ensure the effects can be seen at ground level and are not tied up in additional organisations and bureaucracy. Without fundamental change it is hard to foresee the current decline reversing.

GLOSSARY

CCG **Clinical commissioning group:** An NHS organisation responsible for implementing the commissioning roles as set out in the Health and Social Care Act 2012.

CQC **Care Quality Commission:** The independent regulator of health and social care in England

GP Federation: A group of GPs working together across a local area

PAs **Physicians Associates:** Healthcare professionals with a generalist medical education, who work alongside doctors, physicians, GPs and surgeons providing medical care as an integral part of the multidisciplinary team.

STPs **Sustainability & Transformation Partnerships:** Areas in England where local NHS organisations and councils have drawn up proposals to improve health and care in the areas they serve

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GP RETENTION IN THE UK: A WORSENING CRISIS? FINDINGS FROM A CROSS-SECTIONAL SURVEY

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ABSTRACT

Objective: To investigate how recent national policy-led workforce interventions on General Practitioners' (GPs') are affecting intentions to remain working in general practice.

Design: On-line questionnaire survey with qualitative and quantitative questions

Setting and participants: All GPs (1697) in Wessex region, an area in England for which previous GP career intention data from 2014 is available

Results: 929 (54.7%) participated. 59.4% reported that morale had reduced over the past two years, and 48.5% said they had brought forward their plans to leave general practice. Intention to leave/retire in the next 2 years increased from 13% in the 2014 survey to 18% in October/November 2017 ($p=0.02$), while intention to continue working for at least the next 5 years dropped from 63.9% to 48.5% ($p<0.0001$). Age, length of service and lower job satisfaction were associated with intention to leave.

Work intensity and volume were the commonest reasons given for intention to leave sooner than previously planned; 51.0% participants reported working more hours than 2 years previously, predominantly due to increased workload.

GPs suggested increased funding, more GPs, better education of the public and expanding non-clinical and support staff as interventions to improve GP retention.

National initiatives that aligned with these priorities, such as funding to expand practice nursing were viewed positively, but low numbers of GPs had seen evidence of their rollout. Conversely, national initiatives that did not align, such as video consulting, were viewed negatively.

Conclusion: While recent initiatives may be having an impact on targeted areas, most GPs are experiencing little effect. This may be contributing to further lowering of morale and bringing forward intentions to leave. More urgent action appears to be needed to stem the growing workforce crisis.

Article Summary: Strengths and limitations of this study

- This is the first survey to report GPs' views and experience of national initiatives which have been introduced in England to address the workforce crisis in general practice
- The survey was conducted in the same region as a similar survey in 2014, so allowing some analysis of how views are changing over time
- The response rate was reasonable for this type of survey
- The free text qualitative data added depth to the findings

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Author's contributions: KO and JD designed the study; TS and TH undertook data analysis, supervised by KO; all authors contributed to the interpretation of findings and the drafting of the paper.

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Data sharing statement: The data are stored at the Unit of Academic Primary Care, Warwick Medical School, University of Warwick. KO is responsible for the data, which are all anonymised.

Ethics approval: The Biological Sciences Research Ethics Committee of the University of Warwick reviewed and approved the study (REGO-2017-2032).

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INTRODUCTION

The General Practice (GP) workforce in England has been recognised as being at crisis point for several years.[1-3] Despite a Government commitment in 2015 to create 5000 additional GP posts by 2020[4], recent figures suggest a further deficit of 1,300 full-time equivalent (FTE) GPs has developed.[5] This shortfall reflects a pattern of falling recruitment to GP specialist training[6] and increasing numbers of GPs leaving to work abroad, take career breaks, work part-time or retire early.[7-9] Whilst recruitment to GP training improved in 2017 with the highest ever number of trainees appointed, concerns over retention remain. Factors that are implicated include intensity of workload, administrative burden, lack of recognition of the value of General Practice and fear of litigation.[6 8 10-13] Moving towards an increasingly mixed workforce using allied health professionals has been proposed[14], although it has been suggested that unintended consequences may be reduced continuity of care, substitution rather than supplementation and increased costs.[15]

In 2014, a survey of the GP workforce in Wessex (a region in the south of England with a population of 2.1 million) completed by 1,398 participants found that 14% were planning to retire in the next 2 years, a further 4% were planning a career change and 20% were planning to retire earlier than planned[16] (Box 1).

Box 1: Wessex LMC Survey 2014: key findings[16]

1398 GPs responded: 77.4% practice partners, 14.0% salaried GPs, 8.6% locum GPs

Intention to retire: 31.8% planned to retire/leave general practice within 5 years.

Intention to change hours worked: 69.3% wanted to stay the same, 2.7% wanted to increase, 21.5% wanted to decrease, 6.5% wanted to take on other work

This pattern is similar to that reported in other surveys that also found high rates of intention to leave practice in the next 5 years; namely, the West Midlands (41%)[8] and South West of England(37%)[17]. Low morale appears to be the primary driver to intention to quit[17] with underlying factors related to workload volume and intensity[9] fear and risk, uncertainty and feeling undervalued[10].

This study was undertaken in Wessex to explore how attitudes and intentions have changed in light of new national policy-led initiatives[4] to improve the workforce situation for GPs, and to gain views about what is needed to improve the current workforce situation.

METHODS

A questionnaire including qualitative and free text elements was designed incorporating questions asked in the initial Wessex survey[16] relating to future intentions regarding GP work, intention to retire and reasons for those planning early retirement. It included demographic questions relating to the age, sex, and employment and training history, with questions were added to explore reasons for intended change in hours worked, job satisfaction and morale, and experience of recent local and national initiatives designed to improve GP retention and workload. Most questions had tick box answers for ease of completion. In addition, there were some open questions to encourage free text

expression of views. The survey (see Supplementary File 1) was piloted for comprehensibility with GPs working outside the area.

As the Health Education England regional appraisal team has the most complete list of GPs who are registered to practise in the area, they agreed to use their database to send an invitation to participate to all GPs listed as working in the area. This did not include training grade GPs, but included retired GPs who have chosen to retain a license to practice. The invitations were sent by email and included an online link to the questionnaire which was held on Survey Monkey. Two reminders were sent at 2-3 weekly intervals in October and November 2017.

Due to privacy restrictions, we were unable to access the original data from the 2014 survey and so were limited to using publicly information[16] for making comparisons with data from the current survey.

Qualitative analysis

Included in the survey were two open questions; "What is the greatest problem within general practice at the current time" and "What intervention would help general practice the most?". The free text comments were imported into NVivo11 and analysed with a thematic approach.[18] Following a period of familiarisation, TS and TH developed an initial coding framework by coding a subset of 100 of the comments independently. This was reviewed by the full research team, and the agreed coding framework was then applied to the free test data. The higher order categories were linked to the quantitative analysis in order to supplement and expand the interpretation of the data, and illustrative quotes were selected.

Quantitative analysis

Basic descriptive statistics were used to characterise the survey population and compare it to Health Education England data[5]. Binary logistic regression analysis was employed to identify predictors of GPs' intentions to retire within 5 years using a range of covariates, which were entered into the model simultaneously; gender, age, hours of work, role, length of service, job satisfaction.

Ethical approval

Ethical approval was provided by the University of Warwick Biomedical Sciences Research Ethics Committee. Participants were provided with an information sheet outlining the study and were informed that completion of the online questionnaire would be taken as consent to participate.

Patient and public involvement

Patient and public involvement was not included in this study. The research question, although important to patients and the public, was focused on professional and health service priorities and experiences.

RESULTS

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Participants

The survey was distributed by email to the 1697 GPs listed as working in Wessex, leading to 929 (54.7%) respondents. Of these, 509 (54.8%) were female, the modal age was 45-55 years (n=253, 32.9%), and most had been trained in the UK (93.0%). When compared to NHS demographic data for all GPs in Wessex, there was no difference in gender balance, but there was a difference in age distribution, with our survey having an over-representation of older GPs (28.4% aged greater than 55 years compared to 20.1% in the NHS data; x^2=20.6, p<0.001).

When compared to the 2014 survey respondents, the current survey included more older GPs (28.4% aged greater than 55 years, compared to 23.7% previously) and more who were working in non-principal roles (41.5% compare to 22.6% previously), see Table 1.

Nearly half of respondents had spent over 20 years in general practice, and a third reported working over 41 hours per week. Nearly two-thirds of respondents reported having at least one additional employed role in addition to their NHS GP clinical responsibilities.

Table 1

Demographics of 2017 survey compared to 2014 survey

Age	**2017 (%)**	**2014 (%)**
25 to 34	64 (8.3)	117 (8.5)
35 to 44	233 (30.3)	398 (29.0)
45 to 54	253 (32.9)	533 (38.8)
55 to 64	204 (26.6)	313 (22.8)
65+	14 (1.8)	13 (0.9)
Missing	161	24
x^2 = 11.9, p<0.02		
Role		
GP Principal	531 (58.5)	1082 (77.4)
Salaried GP	218 (24.0)	196 (14.0)
Locum	141 (15.6)	120 (8.6)
Out of Hours	17 (1.9)	-
Missing	22	-
x^2=82.3, p<0.0001		

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3 The two open questions had high completion rates (n=807, 86.9%; n=819, 88.2% respectively), and the
4 answers together provided a dataset of 29,679 free text words; individual responses ranging from 1 to
5 340 words (mean = 18).
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9 **Changes in work volume, intensity and morale**
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11 Respondents reported working an average of 29.6 hours a week (range 1-66) of which an average of
12 20.1 hours (range 2-59) were in direct contact with patients.
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14 Comparing current workload with two years previously, 51.0% (470) reported working longer hours
15 with almost all (94.4%; 423) giving increased workload as the predominant reason; 26.6% had reduced
16 their hours of work, with most (72.3%; 172) stating this was due to increasing intensity of workload
17 and for many (29.8%; 71) it was related to stress and mental health. This contrasts with the intentions
18 stated in the previous survey where 21.5% of GPs wished to reduce their hours worked and only 2.7%
19 wished to increase.
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21 Morale was reported as having reduced over the past two years for 59.4% (510) of respondents and
22 increased for 14.1% (121). In total, 28.9% (247) now reported having positive morale and 42.7% (365)
23 negative morale.
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28 **Intention to leave general practice**
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30 When asked to think about their career plans compared to two years ago, 409 (48.5%) said they had
31 brought forward their plans to leave general practice, with just 47 (5.6%) planning to remain longer.
32 Intention to leave/retire in the next 2 years has increased from 13% in 2014 to 18% (p=0.02), while
33 63.9% reported an intention to continue working for at least the next 5 years in 2014 compared to
34 only 48.5% in 2017 (p<0.0001) (see Table 2).
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38 **Table 2**
39 **Length of time to when GP intended leave/retire from general practice**
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	2014	**2017**
Less than 1 year	93 (6.7)	72 (8.4)
1-2 years	92 (6.7)	84 (9.8)
2-5 years	254 (18.4)	205 (23.9)
5+ years	883 (63.9)	416 (48.5)
Unsure/other	59 (4.3)	81 (9.4)
x^2=37.2, p<0.0001		

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51 Binary logistic regression of GPs planning to retire or leave general practice (see Supplementary File 2)
52 identified those aged between 55-59 years and 60-64 years were much more likely to express an
53 intention to leave, when compared to those aged 25-34 (OR 7.98; 95 % CI 2.6 to 24.1; p<0.001, OR 7.1;
54 95 % CI 1.7 to 30.0; p<0.01 respectively). Likewise, those who have served 20-29 years in general
55 practice were more likely to express an intention to leave when compared to those with less than 5
56 years of service (OR 3.3; CI 1.3 to 8.3; p<0.05). Lower job satisfaction over the past two years was also
57 significantly associated with intention to leave (OR 4.2; CI 2.3 to 7.6; p<0.001).
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A further regression, controlling for age and gender (see Supplementary File 2), showed that there was a modest association between having reduced working hours over the past two years and an intention to leave general practice completely (OR 1.595; 95 % CI 1.062 to 2.397, $p<0.05$).

Respondents were asked to rate on a Likert scale (1=not important, 5=very important) factors that might be contributing to their intention to leave general practice (Table 2). Intensity of workload had the greatest influence (mean = 4.4) followed closely by volume of workload (mean = 4.3) and too much time spent on unimportant tasks (mean=4.0). Lack of patient contact, potential introduction of a 7-day working week, and reduced job satisfaction also scored a mean >3. Personal factors of note were age (mean=3.5), medical indemnity payments (3.4), and increased risk of litigation (3.0). They were also asked to rate factors that might help retain them in general practice (Table 3), again confirming the importance of addressing the volume and intensity of workload.

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Table 3

Factors influencing intention to leave or remain working in General Practice

Factors influencing decision to leave general practice (1 = not important to 5 = very important)				Factors that might retain GPs in practice (1 = not important to 5 = very important)			
	N	Mean	sd		N	Mean	sd
Intensity of workload	113	4.4	1.0	Reduced intensity of workload	109	4.1	1.4
Volume of workload	114	4.3	1.0	Longer appointment times/more time to spend with patients	109	4.0	1.4
Too much time spent on unimportant tasks	113	4.0	1.2	Reduced volume of workload	110	3.9	1.4
Lack of time for patient contact	113	3.8	1.2	Less administration	108	3.9	1.4
Potential introduction of 7 day a week working	113	3.8	1.4	No out of hours commitments	109	3.6	1.6
Reduced job satisfaction	110	3.6	1.3	Incentive payment	108	3.5	1.5
Poor flexibility of hours	108	2.8	1.4	Protected time for education and training	107	3.3	1.4
Revalidation	112	2.6	1.5	More flexible working conditions	106	3.2	1.5
				Greater clinical autonomy	107	3.0	1.5
Age	113	3.5	1.3	Increased pay	107	2.9	1.4
Medical indemnity payments	113	3.4	1.4	Improved skill-mix in the practice	106	2.8	1.4
Increased risk of litigation	111	3.0	1.5	Additional annual leave	107	2.8	1.5

Changes to pension taxation	112	2.7	1.5	Shorter practice opening times	108	2.7	1.5
Family commitments	111	2.6	1.2	Opportunity for a sabbatical	107	2.6	1.5
Ill health	109	1.8	1.2	Introduction of 'Twenty Plus'	106	2.3	1.3
Embarking on career outside general practice	109	1.6	0.98	Expansion of GP retainer scheme	105	2.1	1.4
Planned career break	107	1.4	0.89	Extended interests e.g. CCG role	106	2.0	1.3
				Reintroduction of the flexible careers scheme	105	2.0	1.2
				Option to work term time only	105	1.6	1.1

Current challenges to general practice

Analysis of the responses to the open question "What is the greatest problem within general practice at the current time?" yielded five key themes: increasing demands, expectations and complexity of patients; workload; GP recruitment and retention; inadequate funding; and bureaucratic and administrative burden.

Increasing demands, expectations and complexity of patients

40.7% (n=333) expressed a view that the increasing demands and complexity of patients is one of the greatest problems facing general practice. Participants highlighted how there are insufficient numbers of GPs or sufficient health service resources to meet this rise in expectations and demands. Several felt that the increase in demands and expectations has been driven by the media and government.

"Increasing patient demands with limited time & resources to manage this" (ID 403)

"Unrealistic patient expectations fuelled by politicians and media" (ID 814)

Demands and expectations are rising at the same time as life expectancy, chronic health conditions and multi-morbidity. Therefore many patients require more input from their GP

"Patients demands are more difficult and complex due to people living longer with more chronic diseases e.g. Diabetes, COPD, CHD, Renal failure, Dementia, Mental health problems, hypertension and many more" (ID 510)

Workload

The high volume and intensity of work was highlighted by many (32.0%, n = 262), and described as "ever-increasing" and "unsustainable" leading to stress and exhaustion.

"Hugely stressed and exhausted workforce working at or above maximum capacity both individually and as workplace units" (ID 556)

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GP recruitment and retention

30.2% (n = 247) highlighted about difficulties that included recruiting experienced GPs to fill vacant posts, attracting doctors into GP training, and encouraging GPs to become partners. These workforce issues have been compounded by GPs retiring, reducing their hours or taking on alternative duties such as working with CCGs.

"…awful recruitment. Most GPs can't see a good future for their practice - it should be one of the best jobs there is" (ID 415)

Inadequate funding

Inadequate funding was highlighted by 19.7% (n = 161). Participants described not being able to properly fund the services and staff to meet patient's needs. Several also stated that the financial rewards involved in general practice were not keeping up with the increasing complexity, workload and risk involved with the job.

"I feel that there is not enough money available to provide the services that patient require and deserve" (ID 511)

"At the same time as the complexity, intensity and perceived risk of continuing to work is increasing there is little or financial or other reward to offset it" (ID 819)

Bureaucratic and administrative burden

Participants described how additional bureaucratic and administrative tasks take time away from looking after patients and performing their clinical role, further adding to their workload. This includes time meeting the requirements imposed on them by regulatory and commissioning organisations, as well as the duties and paperwork that need to be completed for quality payments, appraisals and hospital colleagues.

*"Excessive bureaucracy i.e. CQC, CCG, NHS England, appraisal. We are grossly over managed, this prevents us seeing patients or developing services for our patients and employs an army of managers (some clinical)" (*ID 902)

Suggestions for improving general practice

Responses to the open question "What intervention would help General Practice the most?" revealed eight themes. The number of respondents with answers that included each theme is shown in Table 4.

Table 4

Interventions that were suggested by respondents as being most relevant to improving general practice

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Improvement Measure	No. of respondents	Percentage of respondents
Greater funding	225	27.9%
More GPs	184	22.8%
Educate patients and the public	107	13.3%
Increase clinical and support staff	92	11.4%
Reduce bureaucracy and administration	91	11.3%
More time per patient	65	8.2%
Reduced workload	56	6.9%
Protection from financial risk	48	6.0%
Enhanced reputation	44	5.5%

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Greater funding

Increasing funding for General Practice was viewed as the most important requirement. Many participants felt that other problems, such as the lack of GPs and meeting patients' expectations, could only be tackled with greater funding.

"It's all money. More money to pay extra GPs and pay GPs more to attract good doctors and retain the drs once trained" (ID 220)

More GPs

Increasing the number of GPs would lead to both better patient care and an improved work-life balance. The current imbalance was seen as creating a self-perpetuating cycle where fewer GP means more work for each GP making the profession less popular for new entrants.

"One young GP would stabilise my practice and reduce the risk of closure" (ID 461)

Educate patients and the public

To reduce excessive demands and expectations, patients should be made aware of the costs and limitations of primary care. There should also be increased health education for patients so that they can better self-manage their own health. However, it was not clear how such interventions should be delivered.

"Patient education for self limiting illness Patient education to reduce expectation Patient education to reduce chronic disease". (ID 81)

Increase clinical and support staff

As well as more GPs, an increase in non-medical clinical and support staff was highlighted as essential. Several participants expressed the view that an expanded role for these staff would allow GPs to focus on more complex medical issues which they are trained to deal with.

"Funding for ancillary staff to see more of the routine stuff enable GPs to do chronic disease management, EOL [end of life] and complexity that they deal with best" (ID 444)

Reduce bureaucracy and administration

Spending less time on administrative tasks and more time on their clinical role would allow patient care and job satisfaction to improve. It was felt that this could also be achieved quickly compared to the time needed to train and recruit new GPs.

"Reduction in administration - we can't do anything about patient demand, other than train more GPs, which takes a great deal of time. A third of my time is spent on administration, a lot of which is reading through unnecessarily duplicated reports and results, extraneous information from hospitals, or acting as a secretary with a prescribing licence for hospital colleagues". (ID 669)

More time per patient

Longer appointments are needed to address the complex needs of patients, but it was recognised that this might have the perverse consequence of increasing hours of work and/or reducing salary.

"….ability to have longer appointments to provide proper holistic care" (ID 384).

"…Increase consultation length without increasing working hours or reduced remuneration" (ID 106).

Protection from financial risk

Many participants felt that a big detraction from working as a GP was the financial risk involved and the cost of covering that risk in indemnity fees. It was felt that this affected the extent to which doctors choose to work in general practice, and forces others to retire or reduce their hours. This was seen as something that the NHS should address.

"Government or CCG paying our indemnity. This would then allow GPs to work more sessions without a negative financial return. Salaried GPs could also be better paid as a result. If our indemnity is not covered by some outside body in the next few years general practice will completely collapse as, even in its current state, it is unaffordable. Year on year rises of 15-20% are not sustainable" (ID 193)

Enhanced reputation of general practice

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Several participants mentioned that improving the image of general practice was vital to address the problems that it faced.

"Improved public image thereby improving recruitment" (ID802)

"Substantial boost to go finance and boost to perception of GP's at medical school" (ID225).

Positivity towards, awareness and experience of national workforce initiatives

Respondents were asked to rate whether they thought about the nationally-led initiatives that had been recently introduced to address workforce issues in General Practice, specifically whether the initiatives would have a positive, negative or no impact. A net rating was calculated by subtracting the percentage who rated the initiative as negative from the percentage who rated it as a positive. As shown in Table 4, investment in practice nursing, improved access to specialist advice, investment in technology and expansion of the GP workforce were viewed most favourably, with greater than 75% net rating scores. Conversely, the wider use of physician associates, local sustainability and transformation plans (STPs), and video and e-consultations were rated negatively. There were mixed levels of awareness about the various national workforce initiatives being implemented, and with few exceptions (closing working with specialists, increased use of pharmacists, involvement in GP federations) the majority of respondents lacked direct experience of them (Table 5).

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Table 5

Net rating (positivity), awareness of and experience of initiatives intended to address workforce issues in general practice

Initiative	Net rating of initiative	Awareness of initiative	Experience of initiative
Investment in practice nursing	+91.3%	39.7% (288)	19.2% (104)
Closer working with specialists eg phone and email advice lines	+85.3%	73.3% (537)	55.1% (343)
Investment in technology	+85.3%	52.2% (375)	30.9% (170)
Expansion of GP workforce	+76.1%	81.7% (612)	15.0% (94)
Streamlining CQC, reduced inspection for good and outstanding practices	+73.1%	51.4% (375)	17.6% (98)
Investment in primary care infrastructure	+70.3%	45.0% (318)	20.0% (105)
Releasing time for patients	+60.6%	26.4% (193)	13.1% (62)
Increased use of pharmacists	+56.2%	96.9% (738)	56.1% (404)

Paramedics in primary care	+44.5%	86.4% (652)	34.9% (239)
Practice resilience programme	+41.2%	57.3% (415)	27.8% (153)
Multi-specialty community provider projects	+25.3%	53.5% (382)	27.0% (143)
Federation of GP practices	+19.3%	92.7% (707)	53.7% (369)
Better Care Fund	+13.2%	37.6% (278)	26.8% (130)
Physician associates	-0.2%%	78.5% (589)	8.1% (54)
Local sustainability and transformation plans (STPs)	-21.3%	80.7% (606)	42.2% (268)
Video and e-consultations	-26.6%	80.4% (597)	33.4% (233)

Age emerged as having a small, but statistically significant correlation with attitude towards several individual initiatives (Table 6). For example, younger GPs were more likely to be positive about federations, but were less positive in their views of physician associate. However, the attitudes towards most of the initiatives were very similar across all age groups.

Table 6

Correlation between age and positivity towards scheme

Initiative	r	p value
Federation of GP practices	-0.151	<0.001*
Local sustainability and transformation plans (STPs)	-0.060	0.151
Increased use of pharmacists	-0.088	0.024*
Physicians associates	0.136	0.001*
Paramedics in primary care	-0.089	0.029*
Better Care Fund	0.007	0.884
Expansion of GP workforce	-0.012	0.782
Video and e-consultations	0.071	0.087

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Releasing time for patients	-0.108	0.032*
Practice resilience programme	-0.070	0.129
Streamlining CQC, reduced inspection for good and outstanding practices	0.000	0.992
Investment in practice nursing	-0.006	0.899
Closer working with specialists eg phone and email advice lines	-0.072	0.084
Investment in technology	-0.079	0.082
Investment in primary care infrastructure	-0.024	0.599
Multi-specialty community provider projects	-0.095	0.040*

*p<0.05, r: Spearman's rank correlation coefficient.
+r value denotes positivity increasing with age, -r value denotes positivity increasing with decreasing age.

Having had experience of an initiative was associated with a more positive attitude score towards it. The differences in mean scores were modest, but for seven of the initiatives the difference was statistically significant (Table 7).

Table 7

Comparison between previous experience of initiative and attitude to initiative

Initiative	Previous experience of initiative	Mean score (1 = negative, 3 = positive)	t	P value
Federation of GP practices	Yes	2.34	5.27	<0.01*
	No	2.01		
Local sustainability and transformation plans (STPs)	Yes	1.87	2.30	0.02*
	No	1.73		
Increased use of pharmacists	Yes	2.59	1.11	0.27
	No	2.53		
Physicians associates	Yes	2.16	1.49	0.14
	No	1.98		
Paramedics in primary	Yes	2.71	7.48	<0.01*

care	No	2.30		
Better Care Fund	Yes	2.11	-1.04	0.30
	No	2.19		
Expansion of GP workforce	Yes	2.76	0.08	0.94
	No	2.76		
Video and e-consultations	Yes	2.06	7.35	<0.01*
	No	1.56		
Releasing time for patients	Yes	2.79	3.19	<0.01*
	No	2.57		
Practice resilience programme	Yes	2.43	0.34	0.74
	No	2.41		
Streamlining CQC, reduced inspection for good and outstanding practices	Yes	2.75	0.47	0.64
	No	2.72		
Investment in practice nursing	Yes	2.94	1.07	0.28
	No	2.91		
Closer working with specialists e.g. phone and email advice lines	Yes	2.90	2.79	<0.01*
	No	2.80		
Investment in technology	Yes	2.80	2.86	<0.01*
	No	2.65		
Investment in primary care infrastructure	Yes	2.84	1.19	0.24
	No	2.78		
Multi-specialty community provider projects	Yes	2.36	1.79	0.07
	No	2.22		

190 GPs gave free-text comments to explain their views. The most widely stated theme was that there were too many initiatives, of which little or no benefit was being seen on the ground.

"There are too many initiatives. GPs just need to be left alone to get on with the job with adequate funding. These initiatives cost money which comes out of GP budgets" ID 925

"Many of these ideas are great on paper but little evidence of impact at the coalface" ID 826

There was a significant subtheme that this was to distract from investing further in General Practice and tackling issues of workforce.

"The only thing that will make any real improvement in care is investment in proper well-trained GPs continuing to be the centre of patient care in primary care alongside practice nurses with a proper career structure and practice pharmacists. All the other initiatives are just tinkering at the edges - smokescreens to try to take the heat off the central issue of lack of investment in General Practitioners" ID 688

An additional theme suggested that some initiatives could be further undermining GP morale

"I object to the term 'resilience' and any resources invested into it. We should be focusing all our intentions on making the job better rather than coaching GPs to be more robust against the stress. The very term makes it sound to me like it is somehow the GPs fault in the first place for not coping with the stains and demands of the job." ID 569

DISCUSSION

A worsening situation

This survey describes a picture of increasing workload, falling morale and an accelerating workforce crisis. Since the initial survey in 2014[16], GPs' stated intention to retire in the next two years has increased significantly with 48.5% of respondents to the current survey stating that they planned to leave working in general practice sooner than they had expected two years ago. A majority reported an increased in hours of work since the previous survey, reflecting increasing workload, despite only 2.7% having expressed a wish to increase hours in the previous survey. Almost all (97.5%) were experiencing increasing appointment numbers to meet patient demand and 69.0% to manage patient complexity. The number of GPs planning a reduction in clinical hours has also increased. Many GPs are working over 40 hours a week and some up to 70, and reported experiencing a reduction in morale and job satisfaction. This has been shown to increase the likelihood of actually leaving the profession[19] and to have a negative impact on medical student interest in choosing to train as a GP[20]. These findings are in line with national findings of increasing consultation rates, length and clinical workload[21].

Analysis of reasons for intending to leave remain similar to those described in earlier surveys[9 10-15 17], suggesting that recent initiatives have yet to have an impact. Workload remains the dominant driver to leave. In our survey respondents who described having recently reduced their hours of work were more likely to express an intention to leave than others, suggesting that it is the nature and intensity of the work that is more important in affecting intentions. Given that one of the main reasons why doctors choose careers in General Practice is in order to have a better work-life balance[22], this increasing workload may result in disillusionment, low morale and be contributing to the increasing number of GPs choosing to work as non-principals and working fewer sessions from early in their careers[9].

The survey was commissioned in part to discover whether the findings in Dale et al.[23] about the negative impact of appraisal and revalidation on the retention of GPs in the West Midlands was

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replicated in Wessex. The Appraisal Service is unique in NHS England in being directly commissioned from an educationally-based provider and has a conscious ethos of trying to facilitate appraisals with a strong emphasis on the support of the individual doctor. Although revalidation was reported as a minor factor in the intention to leave clinical work, appraisal itself did not emerge as a demonstrable factor.

The study identified that GPs vary in their enthusiasm, awareness of, and experience of, national initiatives that are aimed at addressing workforce issues. Investment in practice nursing, closer working with specialists (eg phone and email advice lines), investment in technology, and expansion of the GP workforce were the initiatives that were viewed as being likely to have greatest positive impact. However, there was a widespread view that there were too many initiatives and that these were often complex to access; they would prefer for the investment to go directly to practices to decide how best to support their working practices. Despite this, the response to individual initiatives is mostly positive, with the exception of physician associates (PAs), video and e-consultations and STPs. GPs who had experience of an initiative tended to view it more positively than others, suggesting that familiarity may lead to GPs becoming more aware of, and perhaps less sceptical, of their potential benefits.

The negative response to PAs in somewhat surprising in the context of the positive responses to increased numbers of nurses, pharmacists and paramedics working in primary care. PA training programmes are becoming increasing in number across the NHS, and hence there may be a need to manage expectations for this workforce, as previously described[24] despite evidence to suggest they are well received by patients[25 26]. The Roland report[15] viewed multi-disciplinarity as one of the key solutions to sustaining primary care, though concerns have been raised about loss of continuity of care[15] and resultant reduction in patient satisfaction[27]. Future GP roles within increasingly diverse teams may need redefining and there has been interest in alternative models of care[28], such as the NUKA system in Alaska[29].

The strongest negative response was to Sustainability and Transformation Plans. Considering these are the main vehicle by which the 5-year forward plan for General Practice is being driven and support closer working between health and social care,[30] that so many GPs believe they may make things worse is of concern. Further research in this area would be beneficial to understanding why many GPs lack confidence in this area, and what may be needed to promote greater positivity.

Whilst investment in technology was positively received, e-consulting and video consulting were perceived negatively. Pilot studies have suggested that e-consulting may increase workload and costs as well as reducing patient satisfaction.[31-33]

Expansion of the GP workforce remains a high priority to GPs, many of whom are working longer hours and offering more appointments to meet increasing patient demand. This has been recognised as an issue at governmental level, however the response of increasing medical student numbers will not start to impact until 2028 at the earliest[34]. An International GP recruitment programme has been set up[35], initially targeting GPs from the European Economic Area, however there are concerns that uncertainties surrounding Brexit have impact on its success, and may result in EEA GPs currently working in the UK returning home.[36]

Perhaps the most interesting aspect of the survey was GPs' views on what would improve general practice. More funding was the strongest theme, particularly for increasing the size of the workforce, both of GPs and other health professionals. This would enable a more manageable and sustainable workload, including longer appointments, so helping to reduce the risk of burnout.[37] Increasing

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financial demands including rising indemnity payments were also of concern, and there was enthusiasm for a national indemnity scheme. Reducing bureaucracy was identified, but less strongly than in previous surveys[8], possibly reflecting the reduction in incentive-related workstreams, the clinical value of which is now questioned.[38] It is possible that the negative response to STPs relates to increased perceived bureaucracy. A number of innovative, more strategic suggestions emerged which may be worthy of further consideration.

Strengths and Limitations

This study provides further evidence of the unfolding general practice workforce crisis in England. A particular strength is that it demonstrates how attitudes are changing over recent years. Its focus on how the crisis might be addressed is another strength, with the study providing evidence of the impact that national initiatives are felt to be having. The response rate was good for this type of survey; the questionnaire was quite lengthy and there was no incentive to support participation. The extent to which participants wrote free text comments reflects the importance placed on this topic by GPs and added significant depth to the findings. However, it is likely that those who feel most strongly about their workloads either might have selectively responded to the questionnaire, or alternatively felt too busy and stressed to add completing a survey to their workload. Though this is in inevitable with this sort of study, it is a limitation in terms of drawing conclusions from the quantitative findings. While the findings are limited to a single region in England, they are reflective of views that have been expressed in other recent GP surveys and so are likely to have applicability across the NHS.

Conclusion

The role of the GP has changed significantly and rapidly over the past 20 years and initiatives to manage these changes have often been short-lived and reactive in approach, without sufficient evidence to support them or engagement with grassroots GPs. Perhaps now is the time to reflect more broadly on what the practice of future GPs will encompass and how a new generation of GPs can be trained to prepare for this. New models of care and the relationships and roles of different health care professionals need to be considered. The debate needs to include the public; what do they want from a primary care system and what can be afforded without substantially more funding. Given the scale of the crisis, increased funding needs to be directed to ensure the effects are widely experienced across frontline general practice. Without fundamental change it is hard to foresee the current workforce decline reversing.

GLOSSARY

CCG **Clinical commissioning group:** An NHS organisation responsible for implementing the commissioning roles as set out in the Health and Social Care Act 2012.

CQC **Care Quality Commission:** The independent regulator of health and social care in England

GP Federation: A group of GPs working together across a local area

PAs **Physicians Associates:** Healthcare professionals with a generalist medical education, who work alongside doctors, physicians, GPs and surgeons providing medical care as an integral part of the multidisciplinary team.

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STPs **Sustainability & Transformation Partnerships:** Areas in England where local NHS organisations and councils have drawn up proposals to improve health and care in the areas they serve

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Supplementary File 1: Survey questions.

Q1. Which of the following best describes the GP role in which you currently work? (If more than one role select the role in which most hours are worked)

Answer Choices
GP contractor/principal
Practice-employed salaried GP
NHS trust-employed salaried GP
Private sector-employed salaried GP
Freelance GP (locum)
Out-of-hours GP
Other (please specify)

Q2. In which other roles are you currently working, or have previously (within last 5 years) worked in general practice? Please select all that apply.

Answer Choices
CCG role
Federation role
LMC role
Appraiser
GP trainer
Undergraduate student tutor
Postgraduate tutor/other educationalist
Research
Hospital based clinical assistant
Community based clinical assistant
GP with special interest (e.g. sports/family planning)
Other (please specify)

Q3. How long have you been in NHS general practice? (please count all types of service including any time spent as a GP trainee, but exclude any career breaks) Please select

Answer Choices
Less than 5 years
5 - 9 years
10 - 19 years
20 - 29 years
30 or more years

Q4. Please estimate the TOTAL number of hours you work in General Practice in a typical week (excluding out of hours work but including extended hours and administrative work)

Q4.1. Please estimate the number of CLINICAL hours you spend in direct contact with patients per week

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Q5. In the past 2 years have the number of hours you work in General practice

Answer Choices
Increased
Remained the same
Decreased

Q5.1. Which factors have influenced your reduction in hours? Tick all that apply.

Answer Choices
Increased intensity of workload
Personal choice, nothing to do with primary care
Financial advice/ pension planning
Change in role- taking on roles external to GP
Family circumstances e.g. childcare, care for relative
Poor physical health
Stress or mental health issues
Other (please comment)

Q5.2. What factors have resulted in you increasing your hours of work in General Practice?

Answer Choices
Increased workload
Compensate for reduction in income
Personal choice unrelated to primary care
Change in role
Other (please specify)

Q6. Over the past 2 years have the number of GP appointments offered per week in your practice

Answer Choices
Increased
Remained the same
Decreased
Don't know

Q6.1. What factors have influenced the decrease in number of GP appointments? Tick all that apply

Answer Choices
Recruitment problems
Retention problems
Increased skill mix- more nurse/ pharmacist/ physicians associate appointments
Decreased workload
Reduced patient demand
Financial pressures

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Decreased list size
Other (please specify)

Q6.2. What factors have influenced the increase in number of GP appointments? Tick all which apply

Answer Choices
Increased patient demand
Increased list size
Extended hours
Reduced skill mix
Financial pressures
Increased patient complexity
Other (please specify)

Q7. How long are your routine GP appointments?

Q7.1. How long do you think a routine GP appointment should be?

Q8. Taking everything into account, how would you describe your current level of work-related morale?

Low				High
1	2	3	4	5

Q8.1 Over the past two years has your level of work-related morale

Answer Choices
Increased
Remained the same
Decreased
Please comment

Q9. Taking everything into consideration, how satisfied are you in your work as a GP?

Low				High
1	2	3	4	5

Q9.1 Over the last 2 years has your satisfaction in work as a GP

Answer Choices
Increased
Remained the same
Decreased
Please comment

Q10.How many years do you plan to continue working as a GP (whether full-time or part-time). Please select

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Answer Choices
Less than 1 year
1-2 years
2-5 years
5-10 years
More than 10 years
Unsure

Q11. Comparing your current GP career plans to your career plans 2 years ago, do you:

Answer Choices
Plan to remain longer
Plan to leave earlier
No change in plans
Not applicable

Q12.In the next five years do you expect to: Please select all that apply

Answer Choices
Reduce your hours of clinical work
Increase your hours of clinical work
Reduce your management responsibilities
Increase your management responsibilities
Reduce your teaching/training/research responsibilities
Increase your teaching/training/research responsibilities
Retire
Leave general practice for an alternative career
No plans to change
Don't know
Please comment on factors which are contributing to this decision

Q13. If you are intending to retire from NHS general practice within the next 5 years, would you consider continuing to work after retirement? Please select

Answer Choices
Yes – fulltime
Yes - part-time
No
Unsure
Not applicable

Q14. For each of the following factors please indicate how they are contributing to your decision about when to leave or retire.

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	1	2	3	4	5
Volume of workload					
Intensity of workload					
Lack of time for patient contact					
Too much time spent on unimportant tasks					
Poor flexibility of hours					
Potential introduction of 7 day a week working					
Reduced job satisfaction					
Revalidation					
Changes to pension taxation					
Age					
Family commitments					
Ill health					
Embarking on career outside general practice					
Planned career break					
Increased risk of litigation					
Medical indemnity payments					
Other (please specify)					

Q15. Please indicate the extent to which each of the following factors might encourage you to remain in general practice?

	1	2	3	4	5
Reduced volume of workload					
Reduced intensity of workload					
More flexible working conditions					
Longer appointment times/more time to spend with patients					
Improved skill-mix in the practice					
Shorter practice opening times					
Less administration					
No out of hour commitments					
Option to work term time only					
Greater clinical autonomy					
Additional annual leave					
Opportunity for a sabbatical					
Protected time for education and training					
Reintroduction of the flexible careers scheme					
Expansion of GP retainer scheme					
Extended interests e.g. CCG role, emergency care role, specialist interest, teaching?					
Introduction of ‘Twenty Plus’ (an educational network to support senior GPs to complement RCGP ‘First Five’ Scheme)					
Increased pay					

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Incentive payment to encourage continuing to practice (e.g. indemnity fees covered/reintroduction of seniority payments)					
Other (please specify)					

Q16. What is the greatest problem within General Practice at the current time?

Q17. What intervention would help General Practice the most?

Q18. Do you find appraisal helpful for your personal development?

Answer Choices
No
Yes
Please explain why

Q19. In your experience has revalidation changed the nature of your appraisal?

Answer Choices
Yes
No
Please explain why

Q20. Please consider the following initiatives and for each consider your awareness and experience of the initiative and what impact you believe it will have on General Practice.

	Aware of initiative	Have experience initiative in practice	What impact do you believe the initiative will have on General practice?
Federation of GP practices			
Local sustainability and transformation plans (STPs)			
Increased use of pharmacists			
Physicians associates			
Paramedics in primary care			
Better Care Fund			
Expansion of GP workforce			
Video and e-consultations			
Releasing time for patients			

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Practice resilience programme			
Streamlining CQC, reduced inspection for good and outstanding practices			
Investment in practice nursing			
Closer working with specialists eg phone and email advice lines			
Investment in technology			
Investment in primary care infrastructure			
Multi-specialty community provider projects			
Any comments			

Q21. Which CCG do you work in? Please select

Answer Choices
Banes
Dorset
Fareham & Gosport
Hampshire & Isle of Wight
Isle of Wight
Jersey
North Hampshire
NE Hampshire & Farnham
Portsmouth
SE Hampshire
Southampton
Swindon
W Hampshire
Wiltshire

Q22. What is the total list size of the practice that is your main place of employment? Please select

Answer Choices
Less than 4,000
4,000 – 9,999
10,000 – 14,999
15,000 or more
Not applicable

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Q23. Which of these best describes your practice area? Please select

Answer Choices
Inner city
Other urban
Urban/rural mix
Semi-rural
Rural
Isolated rural

Q24. Gender? Please select

Answer Choices
Male
Female
Other
Prefer not to say

Q25. Your age? Please select

Answer Choices
25 – 34
35 – 44
45 – 54
55 – 59
60-64
65– 69
70 or more years

Q26. Country/continent where studied for medical degree? Please select

Answer Choices
UK and Ireland
Rest of Europe
Asia
Australia/New Zealand
North America/ Canada
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Supplementary File 2 – Full Binary Logistic Regression Results

Factors associated with intention to retire/leave general practice

		B	S.E	Wald	df	Sig	Exp(B)	95% CI (Lower)	95% CI (Upper)
Age	25 – 34			32.983	6	0			
	35 – 44	0.429	0.403	1.13	1	0.288	1.535	0.696	3.385
	45 – 54	0.056	0.46	0.015	1	0.903	1.057	0.429	2.605
	55 – 59	2.077	0.565	13.518	1	0.000	7.982	2.638	24.157
	60-64	1.956	0.735	7.088	1	0.008	7.07	1.675	29.839
	65– 69	1.816	1.309	1.923	1	0.166	6.145	0.472	80.009
	70+	0.646	1.341	0.232	1	0.63	1.908	0.138	26.43
Gender	Male			1.212	2	0.546			
	Female	0.381	0.58	0.432	1	0.511	1.464	0.47	4.561
	Prefer not to say	0.168	0.577	0.084	1	0.771	1.183	0.381	3.666
Role	GP contractor/principal			5.043	5	0.411			
	Practice-employed salaried GP	0.155	1.019	0.023	1	0.879	1.167	0.158	8.604
	NHS trust-employed salaried GP	0.382	1.009	0.143	1	0.705	1.465	0.203	10.593
	Private sector-employed salaried GP	-0.027	1.122	0.001	1	0.981	0.973	0.108	8.777
	Freelance GP (locum)	0.109	1.409	0.006	1	0.938	1.115	0.071	17.643
	Out-of-hours GP	0.87	1.001	0.755	1	0.385	2.387	0.335	16.986
Hours	<10			7.957	4	0.093			
	11-20	0.191	0.51	0.141	1	0.707	1.211	0.446	3.287
	21-30	0.355	0.493	0.519	1	0.471	1.427	0.543	3.752
	31-40	0.628	0.507	1.538	1	0.215	1.874	0.694	5.06
	41 or more	1.057	0.524	4.068	1	0.044	2.877	1.03	8.033
Additional Roles	None			0.647	2	0.724			
	1	-0.195	0.243	0.646	1	0.422	0.823	0.511	1.324
	2+	-0.122	0.241	0.253	1	0.615	0.886	0.552	1.421
Length of Service	Less than 5 years			20.817	4	0			
	5 - 9 year4s	-0.356	0.396	0.807	1	0.369	0.7	0.322	1.523
	10 - 19 years	-0.066	0.411	0.026	1	0.873	0.936	0.418	2.095
	20 - 29 years	1.168	0.481	5.906	1	0.015	3.217	1.254	8.254
	30 or more years	0.944	0.618	2.331	1	0.127	2.569	0.765	8.626
Job Satisfaction	Increased			34.538	2	0			
	Remained the same	0.426	0.317	1.808	1	0.179	1.531	0.823	2.848
	Decreased	1.424	0.31	21.112	1	0	4.152	2.262	7.621

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Association of change in work hours with intention to retire/leave general practice

		B	S.E	Wald	df	Sig	Exp(B)	95% CI (Lower)	95% CI (Upper)
Age	25 – 34			118.027	6	.000			
	35 – 44	.486	.397	1.497	1	.221	1.625	.747	3.537
	45 – 54	1.195	.387	9.518	1	.002	3.303	1.546	7.058
	55 – 59	2.791	.412	45.942	1	.000	16.293	7.270	36.514
	60-64	3.196	.538	35.236	1	.000	24.427	8.504	70.165
	65– 69	1.600	.904	3.132	1	.077	4.951	.842	29.104
	70+	1.950	.997	3.821	1	.051	7.026	.995	49.627
Gender	Male			.475	2	.789			
	Female	-.111	.179	.386	1	.534	.895	.630	1.271
	Prefer not to say	-.230	.572	.162	1	.687	.794	.259	2.438
Change in hours worked over past 2 years	Increased			6.760	2	.034			
	Remained the same	-.114	.215	.279	1	.597	.893	.585	1.361
	Decreased	.467	.208	5.055	1	.025	1.595	1.062	2.397

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BMJ Open

GP RETENTION IN THE UK: A WORSENING CRISIS? FINDINGS FROM A CROSS-SECTIONAL SURVEY

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41 **Keywords: General Practice, Workforce, Retention**
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ABSTRACT

Objective: To investigate how recent national policy-led workforce interventions on General Practitioners' (GPs') are affecting intentions to remain working in general practice.

Design: On-line questionnaire survey with qualitative and quantitative questions

Setting and participants: All GPs (1697) in Wessex region, an area in England for which previous GP career intention data from 2014 is available

Results: 929 (54.7%) participated. 59.4% reported that morale had reduced over the past two years, and 48.5% said they had brought forward their plans to leave general practice. Intention to leave/retire in the next 2 years increased from 13% in the 2014 survey to 18% in October/November 2017 (p=0.02), while intention to continue working for at least the next 5 years dropped from 63.9% to 48.5% (p<0.0001). Age, length of service and lower job satisfaction were associated with intention to leave.

Work intensity and amount were the commonest reasons given for intention to leave sooner than previously planned; 51.0% participants reported working more hours than 2 years previously, predominantly due to increased workload.

GPs suggested increased funding, more GPs, better education of the public and expanding non-clinical and support staff as interventions to improve GP retention.

National initiatives that aligned with these priorities, such as funding to expand practice nursing were viewed positively, but low numbers of GPs had seen evidence of their rollout. Conversely, national initiatives that did not align, such as video consulting, were viewed negatively.

Conclusion: While recent initiatives may be having an impact on targeted areas, most GPs are experiencing little effect. This may be contributing to further lowering of morale and bringing forward intentions to leave. More urgent action appears to be needed to stem the growing workforce crisis.

Article Summary: Strengths and limitations of this study

- This is the first survey to report GPs' views and experience of national initiatives which have been introduced in England to address the workforce crisis in general practice
- The survey was conducted in the same region as a similar survey in 2014, so allowing some analysis of how views are changing over time
- The response rate was reasonable for this type of survey
- The free text qualitative data added depth to the findings

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Competing interests statement. None of the authors had any competing interests. The Health Education England Wessex Appraisal Service has an interest in demonstrating that appraisal is not a factor in GPs' decision to leave clinical work, but apart from providing the initial funding and the database to send out the survey was not involved in the data analysis or interpretation of findings.

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Author’s contributions: KO and JD designed the study; TS and TH undertook data analysis, supervised by KO; all authors contributed to the interpretation of findings and the drafting of the paper.

Acknowledgements: We are grateful to Dr Susi Caesar (Associate Dean, Wessex Appraisal Service Lead, Health Education England) for her advice regarding the study design and for commenting on drafts of the manuscript.

Data sharing statement: The data are stored at the Unit of Academic Primary Care, Warwick Medical School, University of Warwick. KO is responsible for the data, which are all anonymised.

Ethics approval: The Biological Sciences Research Ethics Committee of the University of Warwick reviewed and approved the study (REGO-2017-2032).

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INTRODUCTION

The General Practice (GP) workforce in England has been recognised as being at crisis point for several years.[1-3] Despite a Government commitment in 2015 to create 5000 additional GP posts by 2020[4], recent figures suggest a further deficit of 1,300 full-time equivalent (FTE) GPs has developed.[5] This shortfall reflects a pattern of falling recruitment to GP specialist training[6] and increasing numbers of GPs leaving to work abroad, take career breaks, work part-time or retire early.[7-9] Whilst recruitment to GP training improved in 2017 with the highest ever number of trainees appointed, concerns over retention remain. Factors that are implicated include intensity of workload, administrative burden, lack of recognition of the value of General Practice and fear of litigation.[6 8 10-13] Moving towards an increasingly mixed workforce using allied health professionals has been proposed[14], although it has been suggested that unintended consequences may be reduced continuity of care, substitution rather than supplementation and increased costs.[15]

In 2014, a survey of the GP workforce in Wessex (a region in the south of England with a population of 2.1 million) completed by 1,398 participants found that 14% were planning to retire in the next 2 years, a further 4% were planning a career change and 20% were planning to retire earlier than planned[16] (Box 1).

Box 1: Wessex LMC Survey 2014: key findings[16]

1398 GPs responded: 77.4% practice partners, 14.0% salaried GPs, 8.6% locum GPs

Intention to retire: 31.8% planned to retire/leave general practice within 5 years.

Intention to change hours worked: 69.3% wanted to stay the same, 2.7% wanted to increase, 21.5% wanted to decrease, 6.5% wanted to take on other work

This pattern is similar to that reported in other surveys that also found high rates of intention to leave practice in the next 5 years; namely, the West Midlands (41%)[8] and South West of England(37%)[17]. Low morale appears to be the primary driver to intention to quit[17] with underlying factors related to workload volume and intensity[8] fear and risk, uncertainty and feeling undervalued[10].

This study was undertaken in Wessex to explore how attitudes and intentions have changed in light of new national policy-led initiatives[4] to improve the workforce situation for GPs, and to gain views about what is needed to improve the current workforce situation.

METHODS

A questionnaire including qualitative and free text elements was designed incorporating questions asked in the initial Wessex survey[16] relating to future intentions regarding GP work, intention to retire and reasons for those planning early retirement. It included demographic questions relating to the age, sex, and employment and training history, with questions were added to explore reasons for intended change in hours worked, job satisfaction and morale, and experience of recent local and national initiatives designed to improve GP retention and workload. Most questions had tick box answers for ease of completion. In addition, there were some open questions to encourage free text

expression of views. The survey (see Supplementary File 1) was piloted for comprehensibility with GPs working outside the area.

As the Health Education England regional appraisal team has the most complete list of GPs who are registered to practise in the area, they agreed to use their database to send an invitation to participate to all GPs listed as working in the area. This did not include training grade GPs, but included retired GPs who have chosen to retain a license to practice. The invitations were sent by email and included an online link to the questionnaire which was held on Survey Monkey. Two reminders were sent at 2-3 weekly intervals in October and November 2017.

Due to privacy restrictions, we were unable to access the original data from the 2014 survey and so were limited to using publicly information[1] for making comparisons with data from the current survey.

Qualitative analysis

Included in the survey were two open questions; "What is the greatest problem within general practice at the current time" and "What intervention would help general practice the most?". The free text comments were imported into NVivo11 and analysed with a thematic approach.[18] Following a period of familiarisation, TS and TH developed an initial coding framework by coding a subset of 100 of the comments independently. This was reviewed by the full research team, and the agreed coding framework was then applied to the free test data. The higher order categories were linked to the quantitative analysis in order to supplement and expand the interpretation of the data, and illustrative quotes were selected.

Quantitative analysis

Basic descriptive statistics were used to characterise the survey population and compare it to Health Education England data[5]. Binary logistic regression analysis was employed to identify predictors of GPs' intentions to retire within 5 years using a range of covariates, which were entered into the model simultaneously; gender, age, hours of work, role, length of service, job satisfaction.

Ethical approval

Ethical approval was provided by the University of Warwick Biomedical Sciences Research Ethics Committee. Participants were provided with an information sheet outlining the study and were informed that completion of the online questionnaire would be taken as consent to participate.

Patient and public involvement

Patient and public involvement was not included in this study. The research question, although important to patients and the public, was focused on professional and health service priorities and experiences.

RESULTS

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Participants

The survey was distributed by email to the 1697 GPs listed as working in Wessex, leading to 929 (54.7%) respondents. Of these, 509 (54.8%) were female, the modal age was 45-55 years (n=253, 32.9%), and most had been trained in the UK (93.0%). When compared to NHS demographic data for all GPs in Wessex, there was no difference in gender balance, but there was a difference in age distribution, with our survey having an over-representation of older GPs (28.4% aged greater than 55 years compared to 20.1% in the NHS data; x^2=20.6, p<0.001).

When compared to the 2014 survey respondents, the current survey included more older GPs (28.4% aged greater than 55 years, compared to 23.7% previously) and more who were working in non-principal roles (41.5% compare to 22.6% previously), see Table 1.

Nearly half of respondents had spent over 20 years in general practice, and a third reported working over 41 hours per week. Nearly two-thirds of respondents reported having at least one additional employed role in addition to their NHS GP clinical responsibilities.

Table 1

Demographics of 2017 survey compared to 2014 survey[16]

Age	**2017 (%)**	**2014 (%)**
25 to 34	64 (8.3)	117 (8.5)
35 to 44	233 (30.3)	398 (29.0)
45 to 54	253 (32.9)	533 (38.8)
55 to 64	204 (26.6)	313 (22.8)
65+	14 (1.8)	13 (0.9)
Missing	161	24
X^2 = 11.9, p<0.02		
Role		
GP Principal	531 (58.5)	1082 (77.4)
Salaried GP	218 (24.0)	196 (14.0)
Locum	141 (15.6)	120 (8.6)
Out of Hours	17 (1.9)	-
Missing	22	-
X^2=82.3, p<0.0001		

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3 The two open questions had high completion rates (n=807, 86.9%; n=819, 88.2% respectively), and the
4 answers together provided a dataset of 29,679 free text words; individual responses ranging from 1 to
5 340 words (mean = 18).
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10 **Changes in work volume, intensity and morale**

11 Respondents reported working an average of 29.6 hours a week (range 1-66) of which an average of
12 20.1 hours (range 2-59) were in direct contact with patients. As shown in Table 2, the number of
13 hours worked varied by employment status, with almost half of GP principals working 41 hours or
14 more per week, while the most salaried GPs worked fewer than 30 hours per week and the majority of
15 locum GPs worked fewer than 20 hours.
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18 Comparing current workload with two years previously, 51.0% (470) reported working longer hours
19 with almost all (94.4%; 423) giving increased workload as the predominant reason; 26.6% had reduced
20 their hours of work, with most (72.3%; 172) stating this was due to increasing intensity of workload
21 and for many (29.8%; 71) it was related to stress and mental health. This contrasts with the intentions
22 stated in the previous survey where 21.5% of GPs wished to reduce their hours worked and only 2.7%
23 wished to increase.
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26 Morale was reported as having reduced over the past two years for 59.4% (510) of respondents and
27 increased for 14.1% (121). In total, 28.9% (247) now reported having positive morale and 42.7% (365)
28 negative morale.
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31 ## Table 2
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33 **Hours worked in general practice according to employment status**
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Hours worked	GP Principal (%)	Salaried GP (%)	Locum (%)	Out of Hours (%)
Up to 10	3 (0.6)	10 (4.7)	32 (25.8)	4 (57.1)
11-20	12 (2.3)	43 (20.4)	37 (29.8)	3 (42.9)
21-30	82 (15.6)	68 (32.2)	35 (28.2)	0 (0.0)
31-40	179 (34.0)	57 (27.0)	14 (11.3)	0 (0.0)
41 or more	250 (47.5)	33 (15.6)	6 (4.8)	0 (0.0)

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48 **Intention to leave general practice**
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50 When asked to think about their career plans compared to two years ago, 409 (48.5%) said they had
51 brought forward their plans to leave general practice, with just 47 (5.6%) planning to remain longer.
52 Intention to leave/retire in the next 2 years has increased from 13% in 2014 to 18% (p=0.02), while
53 63.9% reported an intention to continue working for at least the next 5 years in 2014 compared to
54 only 48.5% in 2017 (p<0.0001) (see Table 3).
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57 ## Table 3
58 **Length of time to when GP intended leave/retire from general practice**
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	2014	2017
Less than 1 year	93 (6.7)	72 (8.4)
1-2 years	92 (6.7)	84 (9.8)
2-5 years	254 (18.4)	205 (23.9)
5+ years	883 (63.9)	416 (48.5)
Unsure/other	59 (4.3)	81 (9.4)
X^2=37.2, p<0.0001		

Binary logistic regression of GPs planning to retire or leave general practice (see Supplementary File 2) identified those aged between 55-59 years and 60-64 years were much more likely to express an intention to leave, when compared to those aged 25-34 (OR 7.98; 95 % CI 2.6 to 24.1; p<0.001, OR 7.1; 95 % CI 1.7 to 30.0; p<0.01 respectively). Likewise, those who have served 20-29 years in general practice were more likely to express an intention to leave when compared to those with less than 5 years of service (OR 3.3; CI 1.3 to 8.3; p<0.05). Lower job satisfaction over the past two years was also significantly associated with intention to leave (OR 4.2; CI 2.3 to 7.6; p<0.001).

A further regression, controlling for age and gender (see Supplementary File 2), showed that there was a modest association between having reduced working hours over the past two years and an intention to leave general practice completely (OR 1.595; 95 % CI 1.062 to 2.397, p<0.05).

Respondents were asked to rate on a Likert scale (1=not important, 5=very important) factors that might be contributing to their intention to leave general practice (Table 4). Intensity of workload had the greatest influence (mean = 4.4) followed closely by volume of workload (mean = 4.3) and too much time spent on unimportant tasks (mean=4.0). Lack of patient contact, potential introduction of a 7-day working week, and reduced job satisfaction also scored a mean >3. Personal factors of note were age (mean=3.5), medical indemnity payments (3.4), and increased risk of litigation (3.0). They were also asked to rate factors that might help retain them in general practice (Table 4), again confirming the importance of addressing the volume and intensity of workload.

Table 4

Factors influencing intention to leave or remain working in General Practice

Factors influencing decision to leave general practice (1 = not important to 5 = very important)				Factors that might retain GPs in practice (1 = not important to 5 = very important)			
	N	Mean	sd		N	Mean	sd
Intensity of workload	113	4.4	1.0	Reduced intensity of workload	109	4.1	1.4
Volume of workload	114	4.3	1.0	Longer appointment times/more time to spend with patients	109	4.0	1.4
Too much time spent on unimportant tasks	113	4.0	1.2	Reduced volume of workload	110	3.9	1.4
Lack of time for patient contact	113	3.8	1.2	Less administration	108	3.9	1.4
Potential introduction of 7 day a week working	113	3.8	1.4	No out of hours commitments	109	3.6	1.6

Reduced job satisfaction	110	3.6	1.3	Incentive payment	108	3.5	1.5
Poor flexibility of hours	108	2.8	1.4	Protected time for education and training	107	3.3	1.4
Revalidation	112	2.6	1.5	More flexible working conditions	106	3.2	1.5
				Greater clinical autonomy	107	3.0	1.5
Age	113	3.5	1.3	Increased pay	107	2.9	1.4
Medical indemnity payments	113	3.4	1.4	Improved skill-mix in the practice	106	2.8	1.4
Increased risk of litigation	111	3.0	1.5	Additional annual leave	107	2.8	1.5
Changes to pension taxation	112	2.7	1.5	Shorter practice opening times	108	2.7	1.5
Family commitments	111	2.6	1.2	Opportunity for a sabbatical	107	2.6	1.5
Ill health	109	1.8	1.2	Introduction of 'Twenty Plus'	106	2.3	1.3
Embarking on career outside general practice	109	1.6	0.98	Expansion of GP retainer scheme	105	2.1	1.4
Planned career break	107	1.4	0.89	Extended interests e.g. CCG role	106	2.0	1.3
				Reintroduction of the flexible careers scheme	105	2.0	1.2
				Option to work term time only	105	1.6	1.1

Current challenges to general practice

Analysis of the responses to the open question "What is the greatest problem within general practice at the current time?" yielded five key themes: increasing demands, expectations and complexity of patients; workload; GP recruitment and retention; inadequate funding; and bureaucratic and administrative burden.

Increasing demands, expectations and complexity of patients

40.7% (n=333) expressed a view that the increasing demands and complexity of patients is one of the greatest problems facing general practice. Participants highlighted how there are insufficient numbers of GPs or sufficient health service resources to meet this rise in expectations and demands. Several felt that the increase in demands and expectations has been driven by the media and government.

"Increasing patient demands with limited time & resources to manage this" (ID 403)

"Unrealistic patient expectations fuelled by politicians and media" (ID 814)

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Demands and expectations are rising at the same time as life expectancy, chronic health conditions and multi-morbidity. Therefore many patients require more input from their GP

"Patients demands are more difficult and complex due to people living longer with more chronic diseases e.g. Diabetes, COPD, CHD, Renal failure, Dementia, Mental health problems, hypertension and many more" (ID 510)

Workload

The high volume and intensity of work was highlighted by many (32.0%, n = 262), and described as "ever-increasing" and "unsustainable" leading to stress and exhaustion.

"Hugely stressed and exhausted workforce working at or above maximum capacity both individually and as workplace units" (ID 556)

GP recruitment and retention

30.2% (n = 247) highlighted about difficulties that included recruiting experienced GPs to fill vacant posts, attracting doctors into GP training, and encouraging GPs to become partners. These workforce issues have been compounded by GPs retiring, reducing their hours or taking on alternative duties such as working with CCGs.

"...awful recruitment. Most GPs can't see a good future for their practice - it should be one of the best jobs there is" (ID 415)

Inadequate funding

Inadequate funding was highlighted by 19.66% (n = 161). Participants described not being able to properly fund the services and staff to meet patient's needs. Several also stated that the financial rewards involved in general practice were not keeping up with the increasing complexity, workload and risk involved with the job.

"I feel that there is not enough money available to provide the services that patient require and deserve" (ID 511)

"At the same time as the complexity, intensity and perceived risk of continuing to work is increasing there is little or financial or other reward to offset it" (ID 819)

Bureaucratic and administrative burden

Participants described how additional bureaucratic and administrative tasks take time away from looking after patients and performing their clinical role, further adding to their workload. This includes time meeting the requirements imposed on them by regulatory and commissioning organisations, as well as the duties and paperwork that need to be completed for quality payments, appraisals and hospital colleagues.

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3 *"Excessive bureaucracy i.e. CQC, CCG, NHS England, appraisal. We are grossly over managed, this prevents us seeing patients or developing services for our patients and employs an army of managers (some clinical)" (*ID 902)

Suggestions for improving general practice

Responses to the open question "What intervention would help General Practice the most?" revealed eight themes. The number of respondents with answers that included each theme is shown in Table 5.

Table 5

Interventions that were suggested by respondents as being most relevant to improving general practice

Improvement Measure	No. of respondents	Percentage of respondents
Greater funding	225	27.9%
More GPs	184	22.8%
Educate patients and the public	107	13.3%
Increase clinical and support staff	92	11.4%
Reduce bureaucracy and administration	91	11.3%
More time per patient	65	8.2%
Reduced workload	56	6.9%
Protection from financial risk	48	6.0%
Enhanced reputation	44	5.5%

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Greater funding

Increasing funding for General Practice was viewed as the most important requirement. Many participants felt that other problems, such as the lack of GPs and meeting patients' expectations, could only be tackled with greater funding.

"It's all money. More money to pay extra GPs and pay GPs more to attract good doctors and retain the drs once trained" (ID 220)

More GPs

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Increasing the number of GPs would lead to both better patient care and an improved work-life balance. The current imbalance was seen as creating a self-perpetuating cycle where fewer GP means more work for each GP making the profession less popular for new entrants.

"One young GP would stabilise my practice and reduce the risk of closure" (ID 461)

Educate patients and the public

To reduce excessive demands and expectations, patients should be made aware of the costs and limitations of primary care. There should also be increased health education for patients so that they can better self-manage their own health. However, it was not clear how such interventions should be delivered.

"Patient education for self limiting illness Patient education to reduce expectation Patient education to reduce chronic disease". (ID 81)

Increase clinical and support staff

As well as more GPs, an increase in non-medical clinical and support staff was highlighted as essential. Several participants expressed the view that an expanded role for these staff would allow GPs to focus on more complex medical issues which they are trained to deal with.

"Funding for ancillary staff to see more of the routine stuff enable GPs to do chronic disease management, EOL [end of life] and complexity that they deal with best" (ID 444)

Reduce bureaucracy and administration

Spending less time on administrative tasks and more time on their clinical role would allow patient care and job satisfaction to improve. It was felt that this could also be achieved quickly compared to the time needed to train and recruit new GPs.

"Reduction in administration - we can't do anything about patient demand, other than train more GPs, which takes a great deal of time. A third of my time is spent on administration, a lot of which is reading through unnecessarily duplicated reports and results, extraneous information from hospitals, or acting as a secretary with a prescribing licence for hospital colleagues". (ID 669)

More time per patient

Longer appointments are needed to address the complex needs of patients, but it was recognised that this might have the perverse consequence of increasing hours of work and/or reducing salary.

"….ability to have longer appointments to provide proper holistic care" (ID 384).

"…Increase consultation length without increasing working hours or reduced remuneration" (ID 106).

Protection from financial risk

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Many participants felt that a big detraction from working as a GP was the financial risk involved and the cost of covering that risk in indemnity fees. It was felt that this affected the extent to which doctors choose to work in general practice, and forces others to retire or reduce their hours. This was seen as something that the NHS should address.

"Government or CCG paying our indemnity. This would then allow GPs to work more sessions without a negative financial return. Salaried GPs could also be better paid as a result. If our indemnity is not covered by some outside body in the next few years general practice will completely collapse as, even in its current state, it is unaffordable. Year on year rises of 15-20% are not sustainable" (ID 193)

Enhanced reputation of general practice

Several participants mentioned that improving the image of general practice was vital to address the problems that it faced.

"Improved public image thereby improving recruitment" (ID802)

"Substantial boost to go finance and boost to perception of GP's at medical school" (ID225).

Positivity towards, awareness and experience of national workforce initiatives

Respondents were asked to rate whether they thought about the nationally-led initiatives that had been recently introduced to address workforce issues in General Practice, specifically whether the initiatives would have a positive, negative or no impact. A net rating was calculated by subtracting the percentage who rated the initiative as negative from the percentage who rated it as a positive. As shown in Table 6, investment in practice nursing, improved access to specialist advice, investment in technology and expansion of the GP workforce were viewed most favourably, with greater than 75% net rating scores. Conversely, the wider use of physician associates, local sustainability and transformation plans (STPs), and video and e-consultations were rated negatively. There were mixed levels of awareness about the various national workforce initiatives being implemented, and with few exceptions (closing working with specialists, increased use of pharmacists, involvement in GP federations) the majority of respondents lacked direct experience of them (Table 6).

Table 6

Net rating (positivity), awareness of and experience of initiatives intended to address workforce issues in general practice

Initiative	Net rating of initiative	Awareness of initiative	Experience of initiative
Investment in practice nursing	+91.3%	39.7% (288)	19.2% (104)
Closer working with specialists eg phone and email advice lines	+85.3%	73.3% (537)	55.1% (343)
Investment in technology	+85.3%	52.2% (375)	30.9% (170)

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Expansion of GP workforce	+76.1%	81.7% (612)	15.0% (94)
Streamlining CQC, reduced inspection for good and outstanding practices	+73.1%	51.4% (375)	17.6% (98)
Investment in primary care infrastructure	+70.3%	45.0% (318)	20.0% (105)
Releasing time for patients	+60.6%	26.4% (193)	13.1% (62)
Increased use of pharmacists	+56.2%	96.9% (738)	56.1% (404)
Paramedics in primary care	+44.5%	86.4% (652)	34.9% (239)
Practice resilience programme	+41.2%	57.3% (415)	27.8% (153)
Multi-specialty community provider projects	+25.3%	53.5% (382)	27.0% (143)
Federation of GP practices	+19.3%	92.7% (707)	53.7% (369)
Better Care Fund	+13.2%	37.6% (278)	26.8% (130)
Physicians associates	-0.2%%	78.5% (589)	8.1% (54)
Local sustainability and transformation plans (STPs)	-21.3%	80.7% (606)	42.2% (268)
Video and e-consultations	-26.6%	80.4% (597)	33.4% (233)

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Age emerged as having a small, but statistically significant correlation with attitude towards several individual initiatives (Table 7). For example, younger GPs were more likely to be positive about federations, but were less positive in their views of physician associate. However, the attitudes towards most of the initiatives were very similar across all age groups.

Table 7

Correlation between age and positivity towards scheme

Initiative	r	p value
Federation of GP practices	-0.151	<0.001*
Local sustainability and transformation plans (STPs)	-0.060	0.151

Increased use of pharmacists	-0.088	0.024*
Physicians associates	0.136	0.001*
Paramedics in primary care	-0.089	0.029*
Better Care Fund	0.007	0.884
Expansion of GP workforce	-0.012	0.782
Video and e-consultations	0.071	0.087
Releasing time for patients	-0.108	0.032*
Practice resilience programme	-0.070	0.129
Streamlining CQC, reduced inspection for good and outstanding practices	0.000	0.992
Investment in practice nursing	-0.006	0.899
Closer working with specialists eg phone and email advice lines	-0.072	0.084
Investment in technology	-0.079	0.082
Investment in primary care infrastructure	-0.024	0.599
Multi-specialty community provider projects	-0.095	0.040*

*p<0.05, r: Spearman's rank correlation coefficient.
+r value denotes positivity increasing with age, -r value denotes positivity increasing with decreasing age.

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Having had experience of an initiative was associated with a more positive attitude score towards it. The differences in mean scores were modest, but for seven of the initiatives the difference was statistically significant (Table 8).

Table 8

Comparison between previous experience of initiative and attitude to initiative

Initiative	Previous experience of initiative	Mean score (1 = negative, 3 = positive)	t	P value
Federation of GP	Yes	2.34	5.27	<0.01*

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practices	No	2.01		
Local sustainability and transformation plans (STPs)	Yes	1.87	2.30	0.02*
	No	1.73		
Increased use of pharmacists	Yes	2.59	1.11	0.27
	No	2.53		
Physicians associates	Yes	2.16	1.49	0.14
	No	1.98		
Paramedics in primary care	Yes	2.71	7.48	<0.01*
	No	2.30		
Better Care Fund	Yes	2.11	-1.04	0.30
	No	2.19		
Expansion of GP workforce	Yes	2.76	0.08	0.94
	No	2.76		
Video and e-consultations	Yes	2.06	7.35	<0.01*
	No	1.56		
Releasing time for patients	Yes	2.79	3.19	<0.01*
	No	2.57		
Practice resilience programme	Yes	2.43	0.34	0.74
	No	2.41		
Streamlining CQC, reduced inspection for good and outstanding practices	Yes	2.75	0.47	0.64
	No	2.72		
Investment in practice nursing	Yes	2.94	1.07	0.28
	No	2.91		
Closer working with specialists e.g. phone and email advice lines	Yes	2.90	2.79	<0.01*
	No	2.80		
Investment in technology	Yes	2.80	2.86	<0.01*
	No	2.65		

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Investment in primary care infrastructure	Yes	2.84	1.19	0.24
	No	2.78		
Multi-specialty community provider projects	Yes	2.36	1.79	0.07
	No	2.22		

190 GPs gave free-text comments to explain their views. The most widely stated theme was that there were too many initiatives, of which little or no benefit was being seen on the ground.

"There are too many initiatives. GPs just need to be left alone to get on with the job with adequate funding. These initiatives cost money which comes out of GP budgets" ID 925

"Many of these ideas are great on paper but little evidence of impact at the coalface" ID 826

There was a significant subtheme that this was to distract from investing further in General Practice and tackling issues of workforce.

"The only thing that will make any real improvement in care is investment in proper well-trained GPs continuing to be the centre of patient care in primary care alongside practice nurses with a proper career structure and practice pharmacists. All the other initiatives are just tinkering at the edges - smokescreens to try to take the heat off the central issue of lack of investment in General Practitioners" ID 688

An additional theme suggested that some initiatives could be further undermining GP morale

"I object to the term 'resilience' and any resources invested into it. We should be focusing all our intentions on making the job better rather than coaching GPs to be more robust against the stress. The very term makes it sound to me like it is somehow the GPs fault in the first place for not coping with the stains and demands of the job." ID 569

DISCUSSION

A worsening situation

This survey describes a picture of increasing workload, falling morale and an accelerating workforce crisis. Since the initial survey in 2014[16], GPs' stated intention to retire in the next two years has increased significantly with 48.5% of respondents to the current survey stating that they planned to leave working in general practice sooner than they had expected two years ago. A majority reported an increased in hours of work since the previous survey, reflecting increasing workload, despite only 2.7% having expressed a wish to increase hours in the previous survey. Almost all (97.5%) were experiencing increasing appointment numbers to meet patient demand and 69.0% to manage patient complexity. The number of GPs planning a reduction in clinical hours has also increased. Many GPs are working over 40 hours a week and some up to 70, and most reported a reduction in morale and job satisfaction. In general, GP principals reported working substantially longer hours than salaried GPs

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or locums. These findings are in line with national findings of increasing consultation rates, length and clinical workload[19].

The reasons given for intending to leave are similar to those described in earlier surveys[8 10-13 17 20]. Workload remains the dominant driver to leave. Respondents who described having recently reduced their hours of work were more likely to express an intention to leave than others, suggesting intentions are affected by the nature and intensity of the work, together with other factors such as morale and job satisfaction, rather than by number of hours alone. Given that one of the main reasons why doctors choose careers in General Practice is in order to have a better work-life balance[21], this increasing workload may result in disillusionment, low morale and be contributing to the increasing number of GPs choosing to work as non-principals and working fewer sessions from early in their careers[9].

The survey was commissioned in part to discover whether the findings in Dale et al.[22] about the negative impact of appraisal and revalidation on the retention of GPs in the West Midlands was replicated in Wessex. The Appraisal Service is unique in NHS England in being directly commissioned from an educationally-based provider and has a conscious ethos of trying to facilitate appraisals with a strong emphasis on the support of the individual doctor. Although revalidation was reported as a minor factor in the intention to leave clinical work, appraisal itself did not emerge as a demonstrable factor.

The study identified that GPs vary in their enthusiasm for, awareness of, and experience of, national initiatives that are aimed at addressing workforce issues. Investment in practice nursing, closer working with specialists (eg phone and email advice lines), investment in technology, and expansion of the GP workforce were the initiatives that were viewed as being likely to have greatest positive impact. However, there was a widespread view that there were too many initiatives and that these were often complex to access; they would prefer for the investment to go directly to practices to decide how best to support their working practices. Despite this, the response to individual initiatives is mostly positive, with the exception of physician associates (PAs), video and e-consultations and STPs. GPs who had experience of an initiative tended to view it more positively than others, suggesting that familiarity may lead to GPs becoming more aware of, and perhaps less sceptical, of their potential benefits.

The negative response to PAs in somewhat surprising in the context of the positive responses to increased numbers of nurses, pharmacists and paramedics working in primary care. PA training programmes are becoming increasing in number across the NHS, and hence there may be a need to manage expectations for this workforce, as previously described[23] despite evidence to suggest they are well received by patients[24 25]. The Roland report[14] viewed multi-disciplinarity as one of the key solutions to sustaining primary care, though concerns have been raised about loss of continuity of care [16] and resultant reduction in patient satisfaction[26]. Future GP roles within increasingly diverse teams may need redefining and there has been interest in alternative models of care[27], such as the NUKA system in Alaska[28].

The strongest negative response was to Sustainability and Transformation Plans. Considering these are the main vehicle by which the 5-year forward plan for General Practice is being driven and support closer working between health and social care,[29] that so many GPs believe they may make things worse is of concern. Further research in this area would be beneficial to understanding why many GPs lack confidence in this area, and what may be needed to promote greater positivity.

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Whilst investment in technology was positively received, e-consulting and video consulting were perceived negatively. Pilot studies have suggested that e-consulting may increase workload and costs as well as reducing patient satisfaction.[30-32]

Expansion of the GP workforce remains a high priority to GPs. This has been recognised as an issue at governmental level, however the response of increasing medical student numbers will not start to impact until 2028 at the earliest[33]. An International GP recruitment programme has been set up[34], initially targeting GPs from the European Economic Area; however, there are concerns that uncertainties surrounding Brexit have impact on its success, and may result in EEA GPs currently working in the UK returning home.[35]

Perhaps the most interesting aspect of the survey was GPs' views on what would improve general practice. More funding was the strongest theme, particularly for increasing the size of the workforce, both of GPs and other health professionals. This would enable a more manageable and sustainable workload, including longer appointments, so helping to reduce the risk of burnout.[36] Increasing financial demands including rising indemnity payments were also of concern, and there was enthusiasm for a national indemnity scheme. Reducing bureaucracy was identified, but less strongly than in previous surveys[9], possibly reflecting the reduction in incentive-related workstreams, the clinical value of which is now questioned.[37] It is possible that the negative response to STPs relates to increased perceived bureaucracy. A number of innovative, more strategic suggestions emerged which may be worthy of further consideration.

Strengths and Limitations

This study provides further evidence of the unfolding general practice workforce crisis in England. A particular strength is that it demonstrates how attitudes are changing over recent years. However, the extent to which the findings could be compared to the earlier survey was limited due to privacy restrictions. There were some differences in characteristics between the two surveys (for example, respondents to the current survey were slightly older and were less likely to be GP principals) which need to be considered when interpreting comparisons. However, the difference in age profile was insufficient to account for the shift towards seeking earlier retirement.

The survey's focus on how the crisis might be addressed is a strength, with the study providing evidence of the impact that national initiatives are felt to be having. The response rate was good for this type of survey; the questionnaire was quite lengthy and there was no incentive to support participation. The extent to which participants wrote free text comments reflects the importance placed on this topic by GPs and added significant depth to the findings. However, it is likely that those who feel most strongly about their workloads either might have selectively responded to the questionnaire, or alternatively felt too busy and stressed to add completing a survey to their workload. Though this is in inevitable with this sort of study, it is a limitation in terms of drawing conclusions from the quantitative findings. While the findings are limited to a single region in England, they are reflective of views that have been expressed in other recent GP surveys and so are likely to have applicability across the NHS.

Conclusion

The role of the GP has changed significantly and rapidly over the past 20 years and initiatives to manage these changes have often been short-lived and reactive in approach, without sufficient

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evidence to support them or engagement with grassroots GPs. Perhaps now is the time to reflect more broadly on what the practice of future GPs will encompass and how a new generation of GPs can be trained to prepare for this. New models of care and the relationships and roles of different health care professionals need to be considered. The debate needs to include the public; what do they want from a primary care system and what can be afforded without substantially more funding. Given the scale of the crisis, increased funding needs to be directed to ensure the effects are widely experienced across frontline general practice. Without fundamental change it is hard to foresee the current workforce decline reversing.

GLOSSARY

CCG **Clinical commissioning group:** An NHS organisation responsible for implementing the commissioning roles as set out in the Health and Social Care Act 2012.

CQC **Care Quality Commission:** The independent regulator of health and social care in England

GP Federation: A group of GPs working together across a local area

PAs **Physicians Associates:** Healthcare professionals with a generalist medical education, who work alongside doctors, physicians, GPs and surgeons providing medical care as an integral part of the multidisciplinary team.

STPs **Sustainability & Transformation Partnerships:** Areas in England where local NHS organisations and councils have drawn up proposals to improve health and care in the areas they serve

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Supplementary File 1: Survey questions.

Q1. Which of the following best describes the GP role in which you currently work? (If more than one role select the role in which most hours are worked)

Answer Choices
GP contractor/principal
Practice-employed salaried GP
NHS trust-employed salaried GP
Private sector-employed salaried GP
Freelance GP (locum)
Out-of-hours GP
Other (please specify)

Q2. In which other roles are you currently working, or have previously (within last 5 years) worked in general practice? Please select all that apply.

Answer Choices
CCG role
Federation role
LMC role
Appraiser
GP trainer
Undergraduate student tutor
Postgraduate tutor/other educationalist
Research
Hospital based clinical assistant
Community based clinical assistant
GP with special interest (e.g. sports/family planning)
Other (please specify)

Q3. How long have you been in NHS general practice? (please count all types of service including any time spent as a GP trainee, but exclude any career breaks) Please select

Answer Choices
Less than 5 years
5 - 9 years
10 - 19 years
20 - 29 years
30 or more years

Q4. Please estimate the TOTAL number of hours you work in General Practice in a typical week (excluding out of hours work but including extended hours and administrative work)

Q4.1. Please estimate the number of CLINICAL hours you spend in direct contact with patients per week

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Q5. In the past 2 years have the number of hours you work in General practice

Answer Choices
Increased
Remained the same
Decreased

Q5.1. Which factors have influenced your reduction in hours? Tick all that apply.

Answer Choices
Increased intensity of workload
Personal choice, nothing to do with primary care
Financial advice/ pension planning
Change in role- taking on roles external to GP
Family circumstances e.g. childcare, care for relative
Poor physical health
Stress or mental health issues
Other (please comment)

Q5.2. What factors have resulted in you increasing your hours of work in General Practice?

Answer Choices
Increased workload
Compensate for reduction in income
Personal choice unrelated to primary care
Change in role
Other (please specify)

Q6. Over the past 2 years have the number of GP appointments offered per week in your practice

Answer Choices
Increased
Remained the same
Decreased
Don't know

Q6.1. What factors have influenced the decrease in number of GP appointments? Tick all that apply

Answer Choices
Recruitment problems
Retention problems
Increased skill mix- more nurse/ pharmacist/ physicians associate appointments
Decreased workload
Reduced patient demand
Financial pressures

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Decreased list size
Other (please specify)

Q6.2. What factors have influenced the increase in number of GP appointments? Tick all which apply

Answer Choices
Increased patient demand
Increased list size
Extended hours
Reduced skill mix
Financial pressures
Increased patient complexity
Other (please specify)

Q7. How long are your routine GP appointments?

Q7.1. How long do you think a routine GP appointment should be?

Q8. Taking everything into account, how would you describe your current level of work-related morale?

Low				High
1	2	3	4	5

Q8.1 Over the past two years has your level of work-related morale

Answer Choices
Increased
Remained the same
Decreased
Please comment

Q9. Taking everything into consideration, how satisfied are you in your work as a GP?

Low				High
1	2	3	4	5

Q9.1 Over the last 2 years has your satisfaction in work as a GP

Answer Choices
Increased
Remained the same
Decreased
Please comment

Q10.How many years do you plan to continue working as a GP (whether full-time or part-time). Please select

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Answer Choices
Less than 1 year
1-2 years
2-5 years
5-10 years
More than 10 years
Unsure

Q11. Comparing your current GP career plans to your career plans 2 years ago, do you:

Answer Choices
Plan to remain longer
Plan to leave earlier
No change in plans
Not applicable

Q12.In the next five years do you expect to: Please select all that apply

Answer Choices
Reduce your hours of clinical work
Increase your hours of clinical work
Reduce your management responsibilities
Increase your management responsibilities
Reduce your teaching/training/research responsibilities
Increase your teaching/training/research responsibilities
Retire
Leave general practice for an alternative career
No plans to change
Don't know
Please comment on factors which are contributing to this decision

Q13. If you are intending to retire from NHS general practice within the next 5 years, would you consider continuing to work after retirement? Please select

Answer Choices
Yes – fulltime
Yes - part-time
No
Unsure
Not applicable

Q14. For each of the following factors please indicate how they are contributing to your decision about when to leave or retire.

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	1	2	3	4	5
Volume of workload					
Intensity of workload					
Lack of time for patient contact					
Too much time spent on unimportant tasks					
Poor flexibility of hours					
Potential introduction of 7 day a week working					
Reduced job satisfaction					
Revalidation					
Changes to pension taxation					
Age					
Family commitments					
Ill health					
Embarking on career outside general practice					
Planned career break					
Increased risk of litigation					
Medical indemnity payments					
Other (please specify)					

Q15. Please indicate the extent to which each of the following factors might encourage you to remain in general practice?

	1	2	3	4	5
Reduced volume of workload					
Reduced intensity of workload					
More flexible working conditions					
Longer appointment times/more time to spend with patients					
Improved skill-mix in the practice					
Shorter practice opening times					
Less administration					
No out of hour commitments					
Option to work term time only					
Greater clinical autonomy					
Additional annual leave					
Opportunity for a sabbatical					
Protected time for education and training					
Reintroduction of the flexible careers scheme					
Expansion of GP retainer scheme					
Extended interests e.g. CCG role, emergency care role, specialist interest, teaching?					
Introduction of 'Twenty Plus' (an educational network to support senior GPs to complement RCGP 'First Five' Scheme)					
Increased pay					

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Incentive payment to encourage continuing to practice (e.g. indemnity fees covered/reintroduction of seniority payments)					
Other (please specify)					

Q16. What is the greatest problem within General Practice at the current time?

Q17. What intervention would help General Practice the most?

Q18. Do you find appraisal helpful for your personal development?

Answer Choices
No
Yes
Please explain why

Q19. In your experience has revalidation changed the nature of your appraisal?

Answer Choices
Yes
No
Please explain why

Q20. Please consider the following initiatives and for each consider your awareness and experience of the initiative and what impact you believe it will have on General Practice.

	Aware of initiative	Have experience initiative in practice	What impact do you believe the initiative will have on General practice?
Federation of GP practices			
Local sustainability and transformation plans (STPs)			
Increased use of pharmacists			
Physicians associates			
Paramedics in primary care			
Better Care Fund			
Expansion of GP workforce			
Video and e-consultations			
Releasing time for patients			

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Practice resilience programme			
Streamlining CQC, reduced inspection for good and outstanding practices			
Investment in practice nursing			
Closer working with specialists eg phone and email advice lines			
Investment in technology			
Investment in primary care infrastructure			
Multi-specialty community provider projects			
Any comments			

Q21. Which CCG do you work in? Please select

Answer Choices
Banes
Dorset
Fareham & Gosport
Hampshire & Isle of Wight
Isle of Wight
Jersey
North Hampshire
NE Hampshire & Farnham
Portsmouth
SE Hampshire
Southampton
Swindon
W Hampshire
Wiltshire

Q22. What is the total list size of the practice that is your main place of employment? Please select

Answer Choices
Less than 4,000
4,000 – 9,999
10,000 – 14,999
15,000 or more
Not applicable

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Q23. Which of these best describes your practice area? Please select

Answer Choices
Inner city
Other urban
Urban/rural mix
Semi-rural
Rural
Isolated rural

Q24. Gender? Please select

Answer Choices
Male
Female
Other
Prefer not to say

Q25. Your age? Please select

Answer Choices
25 – 34
35 – 44
45 – 54
55 – 59
60-64
65– 69
70 or more years

Q26. Country/continent where studied for medical degree? Please select

Answer Choices
UK and Ireland
Rest of Europe
Asia
Australia/New Zealand
North America/ Canada
South/ Central America
Africa

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Supplementary File 2 – Full Binary Logistic Regression Results

Factors associated with intention to retire/leave general practice

		B	S.E	Wald	df	Sig	Exp(B)	95% CI (Lower)	95% CI (Upper)
Age	25 – 34			32.983	6	0			
	35 – 44	0.429	0.403	1.13	1	0.288	1.535	0.696	3.385
	45 – 54	0.056	0.46	0.015	1	0.903	1.057	0.429	2.605
	55 – 59	2.077	0.565	13.518	1	0.000	7.982	2.638	24.157
	60-64	1.956	0.735	7.088	1	0.008	7.07	1.675	29.839
	65– 69	1.816	1.309	1.923	1	0.166	6.145	0.472	80.009
	70+	0.646	1.341	0.232	1	0.63	1.908	0.138	26.43
Gender	Male			1.212	2	0.546			
	Female	0.381	0.58	0.432	1	0.511	1.464	0.47	4.561
	Prefer not to say	0.168	0.577	0.084	1	0.771	1.183	0.381	3.666
Role	GP contractor/principal			5.043	5	0.411			
	Practice-employed salaried GP	0.155	1.019	0.023	1	0.879	1.167	0.158	8.604
	NHS trust-employed salaried GP	0.382	1.009	0.143	1	0.705	1.465	0.203	10.593
	Private sector-employed salaried GP	-0.027	1.122	0.001	1	0.981	0.973	0.108	8.777
	Freelance GP (locum)	0.109	1.409	0.006	1	0.938	1.115	0.071	17.643
	Out-of-hours GP	0.87	1.001	0.755	1	0.385	2.387	0.335	16.986
Hours	<10			7.957	4	0.093			
	11-20	0.191	0.51	0.141	1	0.707	1.211	0.446	3.287
	21-30	0.355	0.493	0.519	1	0.471	1.427	0.543	3.752
	31-40	0.628	0.507	1.538	1	0.215	1.874	0.694	5.06
	41 or more	1.057	0.524	4.068	1	0.044	2.877	1.03	8.033
Additional Roles	None			0.647	2	0.724			
	1	-0.195	0.243	0.646	1	0.422	0.823	0.511	1.324
	2+	-0.122	0.241	0.253	1	0.615	0.886	0.552	1.421
Length of Service	Less than 5 years			20.817	4	0			
	5 - 9 year4s	-0.356	0.396	0.807	1	0.369	0.7	0.322	1.523
	10 - 19 years	-0.066	0.411	0.026	1	0.873	0.936	0.418	2.095
	20 - 29 years	1.168	0.481	5.906	1	0.015	3.217	1.254	8.254
	30 or more years	0.944	0.618	2.331	1	0.127	2.569	0.765	8.626
Job Satisfaction	Increased			34.538	2	0			
	Remained the same	0.426	0.317	1.808	1	0.179	1.531	0.823	2.848
	Decreased	1.424	0.31	21.112	1	0	4.152	2.262	7.621

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Association of change in work hours with intention to retire/leave general practice

		B	S.E	Wald	df	Sig	Exp(B)	95% CI (Lower)	95% CI (Upper)
Age	25 – 34			118.027	6	.000			
	35 – 44	.486	.397	1.497	1	.221	1.625	.747	3.537
	45 – 54	1.195	.387	9.518	1	.002	3.303	1.546	7.058
	55 – 59	2.791	.412	45.942	1	.000	16.293	7.270	36.514
	60-64	3.196	.538	35.236	1	.000	24.427	8.504	70.165
	65– 69	1.600	.904	3.132	1	.077	4.951	.842	29.104
	70+	1.950	.997	3.821	1	.051	7.026	.995	49.627
Gender	Male			.475	2	.789			
	Female	-.111	.179	.386	1	.534	.895	.630	1.271
	Prefer not to say	-.230	.572	.162	1	.687	.794	.259	2.438
Change in hours worked over past 2 years	Increased			6.760	2	.034			
	Remained the same	-.114	.215	.279	1	.597	.893	.585	1.361
	Decreased	.467	.208	5.055	1	.025	1.595	1.062	2.397

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