

Clinical Genetics Specialty Registrar Workforce Report: December 2022

Produced jointly by the Clinical Genetics Society and the
Clinical Genetics Specialist Advisory Committee

Report date: 6th March 2023

Executive Summary

The Clinical Genetics Society (CGS) and Clinical Genetics Specialist Advisory Committee (SAC) recognise that there are significant issues affecting the Clinical Genetics medical workforce at present. In England alone, there are 23.4 whole time equivalent (WTE) substantive consultant vacancies, and 20.8% of the agreed consultant establishment is expected to retire within the next 5 years.¹ To better understand the current specialty registrar workforce across the UK, CGS and the SAC collaborated to collate data and produce an up-to-date workforce report. This report provides detailed insights into the current UK Clinical Genetics specialty registrar (StR) workforce, including working patterns, time spent in training, and future intentions for consultant posts. It identifies that the current supply of specialty registrars is not likely to meet the urgent workforce requirements according to current consultant vacancies and anticipated retirement plans. It is crucial to consider these insights as part of workforce planning for Clinical Genetics.

A summary of some of our key findings regarding Clinical Genetics specialty registrars (StRs) is presented in Figure 1.

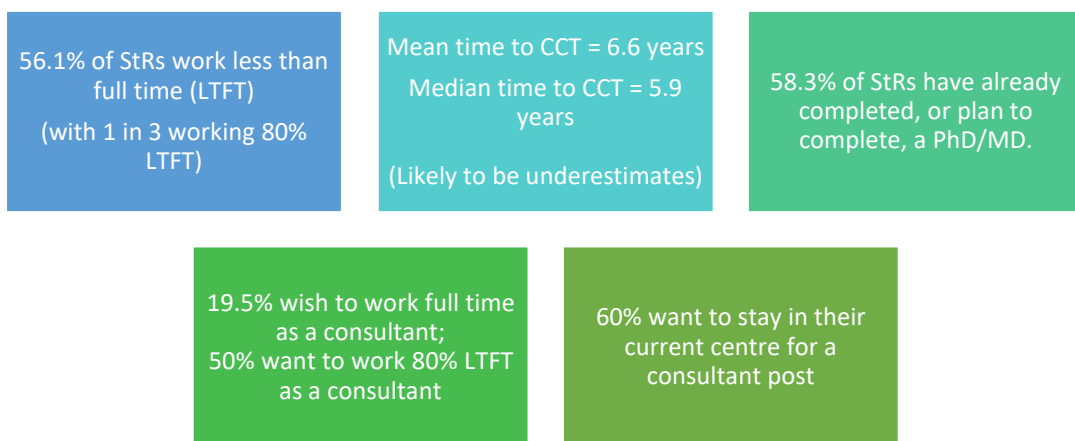


Figure 1 – Key findings regarding Clinical Genetics specialty registrars from December 2022

¹ Clinical Genetics Society. Clinical Genetics Workforce Snapshot (England) from July 2022. 12 Aug 2022.



Background

Over the last few years there have been unprecedented advances in genomic medicine, increasing demands on Clinical Genetics services, and a growing deficit in the Clinical Genetics consultant workforce. A report produced by the Clinical Genetics Society (CGS) in August 2022 demonstrated that in England, there are 23.4 whole time equivalent (WTE) substantive consultant vacancies, and 20.8% of the agreed consultant establishment is expected to retire within the next 5 years.² Clinical leads across England felt that an additional 22.5 WTE Clinical Genetics training posts could be supported,³ though training numbers had not increased prior to this December 2022 survey. To better understand the current specialty registrar workforce across the UK, the Clinical Genetics Society (CGS) and Clinical Genetics Specialist Advisory Committee (SAC) collaborated to collate data and report on the current Clinical Genetics specialty registrar workforce. This report specifically considers Clinical Genetics specialty registrars (StRs) – defined as doctors on a Clinical Genetics specialty training programme.⁴

Methodology

A survey was produced on Google Forms and reviewed by members of the CGS workforce group and the SAC. General Data Protection Regulation principles were considered, and a statement of terms signposted to respondents. The survey was circulated to specialty registrars via the national StR mailing lists and through Training Programme Directors. Clinical fellows or junior doctors who were not appointed to Clinical Genetics specialty training posts at the time of the survey were not invited to take part. The survey was also promoted at national StR teaching and through WhatsApp groups and word of mouth. The survey was open from 1st December 2022-31st December 2022.

Results

Response rate and demographics

Responses were received from 72 individuals over the survey window, with a good spread of respondents across each geographical region (see Table 1). Individuals submitted their response based on their regional Genomic Medicine Service Alliance (GMSA) or devolved nation, rather than individual genomic centre, in order to safeguard anonymity. In July 2022, Clinical Leads reported to the Clinical Genetics Society a headcount of 64 StRs across 16 centres in England in Wales. Data was missing for two centres in England and two of the devolved nations.

Clinical training base	Number of respondents	Percentage of respondents
Northern Ireland	2	2.8%
Scotland	6	8.3%

² Clinical Genetics Society. Clinical Genetics Workforce Snapshot (England) from July 2022. 12 Aug 2022.

³ Ibid

⁴ Joint Royal College of Physicians Training Board. Glossary. Available from: https://www.jrcptb.org.uk/glossary/9#letter_s [accessed 14th February 2023].

Wales	5	6.9%
Central and South Genomic Medicine Service Alliance	11	15.3%
East Genomic Medicine Service Alliance	9	12.5%
North East and Yorkshire Genomic Medicine Service Alliance	9	12.5%
North Thames Genomic Medicine Service Alliance	6	8.3%
North West Genomic Medicine Service Alliance	7	9.7%
South East Genomic Medicine Service Alliance	8	11.1%
South West Genomic Medicine Service Alliance	7	9.7%
Wish not to state	2	2.8%
Grand Total	72	100.0%

Table 1 – Distribution of respondents across geographical areas (n=72)

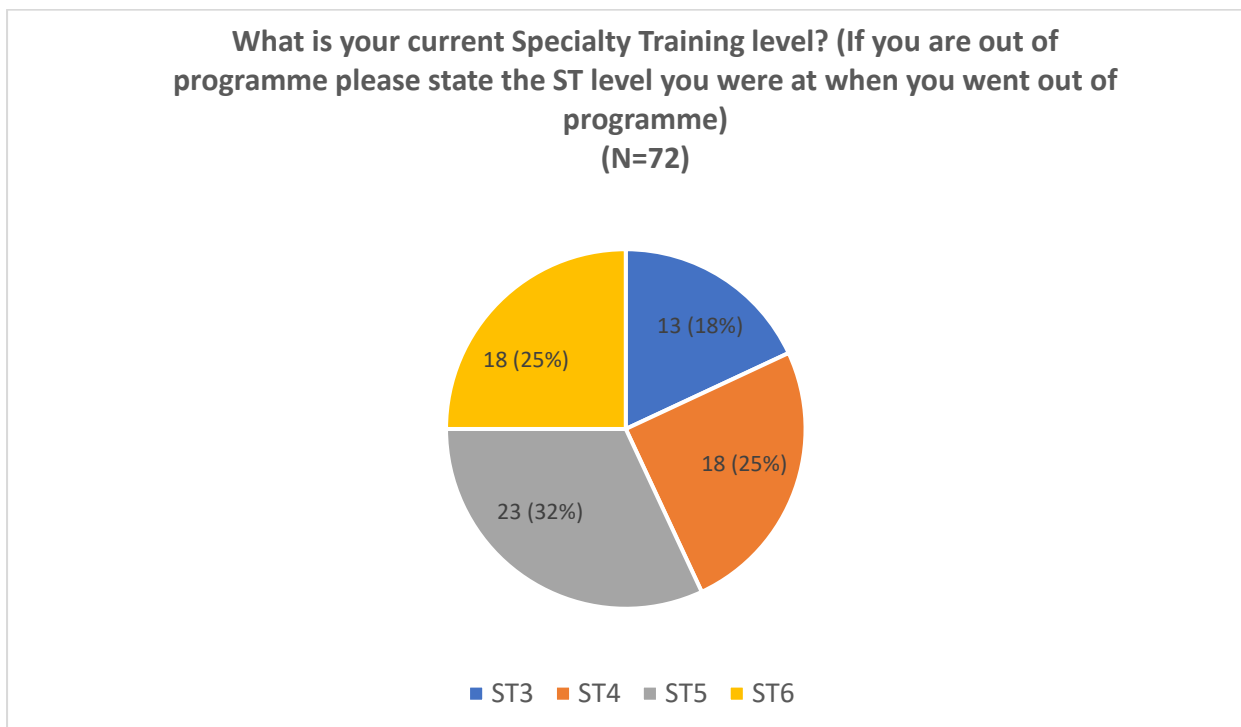


Figure 2 – Specialty training (ST) level of respondents

Respondents were spread across all specialty training levels (ST3-6), as demonstrated in Figure 2. Of those who responded, 9.7% (n=7) reported they occupied an Academic Clinical Fellow post (or devolved nation equivalent), and 5.6% (n=4) reported they occupied an Academic Clinical Lecturer post (or devolved nation equivalent).

Clinical working patterns of StRs

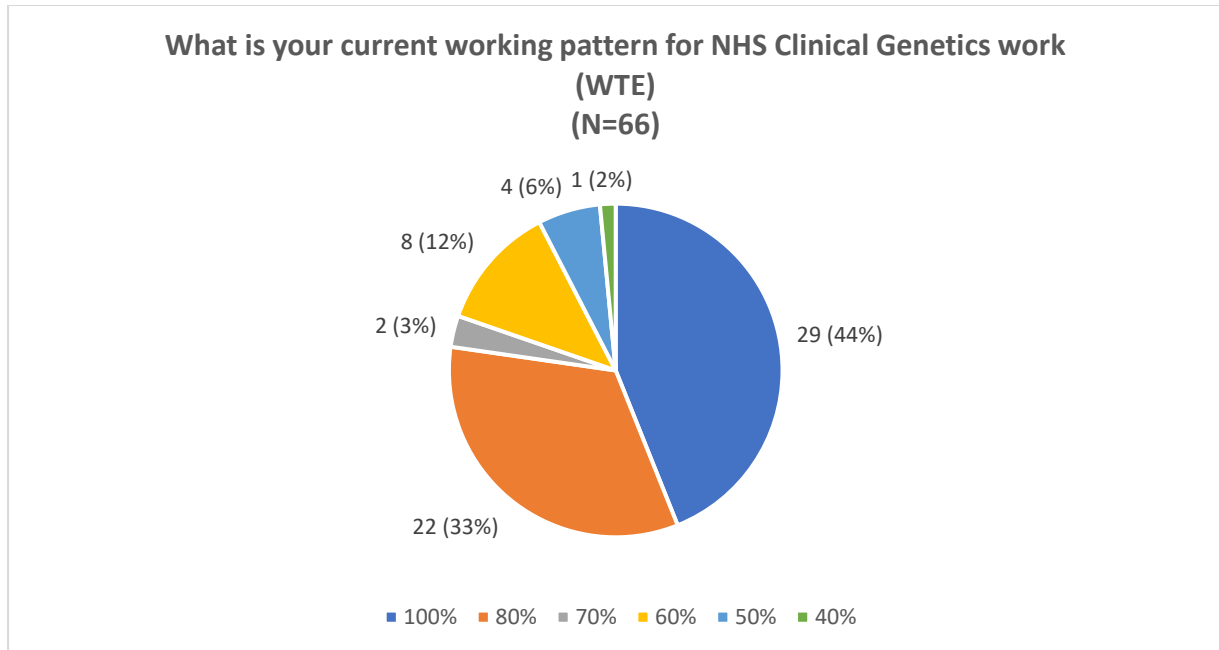


Figure 3 – Clinical working pattern of respondents. 4 respondents indicated they were out of programme and 2 respondents indicated they were on parental leave, hence n=66.

Over half of respondents (56.1%) work less than full time (LTFT) clinically, with 1 in 3 (33.3%) working 80% LTFT (see Figure 3). At the time of the survey, 4 (5.6%) respondents indicated they were out of programme and 2 (2.8%) indicated they were on parental leave.

Time to progress through training

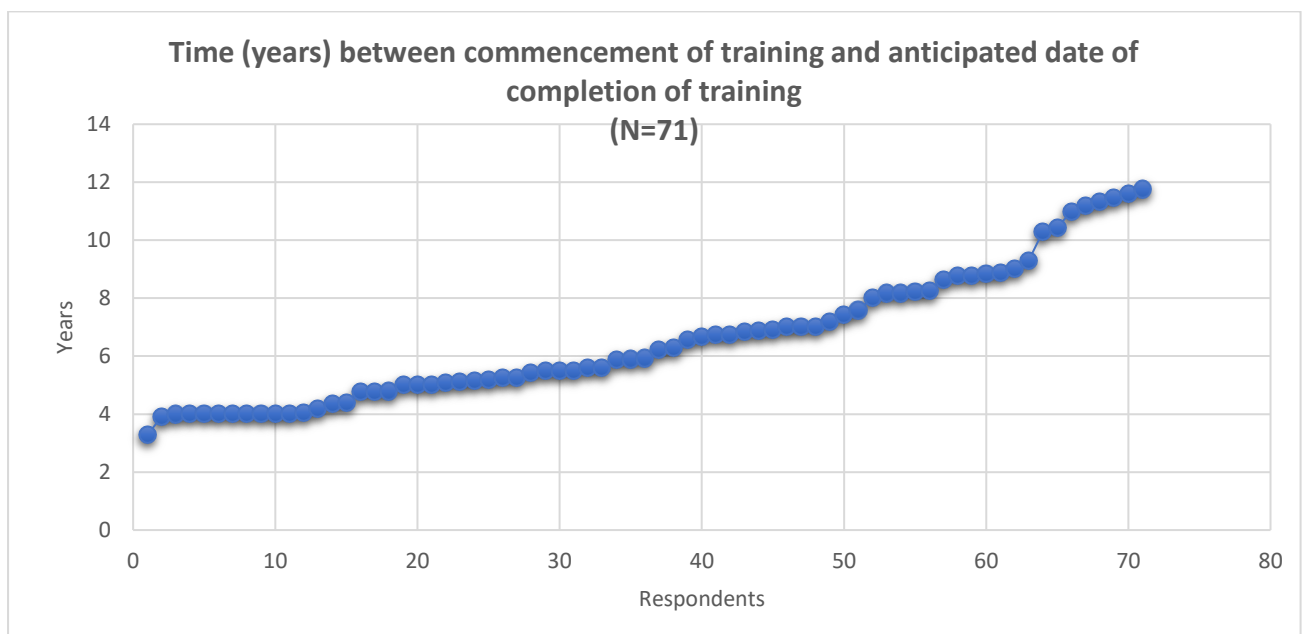


Figure 4 – Time (years) between commencement of training and anticipated date of completion of training

Respondents were asked to provide the date of commencement of Clinical Genetics training, their current date for Certificate of Completion of Training (CCT), and any anticipated extensions. Using these data, mean time to CCT = 6.6 years; median time to CCT = 5.9 years; range = 3.3-11.8 years. Although the required time to complete training would ordinarily be 4 (full time equivalent) years, there were two respondents who anticipate they will complete training in less than 4 years. One explanation for this could be that those two respondents had time recognised from previous employment, such as a locally employed/non-training post in Clinical Genetics, or that they have had other experience which has been recognised.

Thirteen individuals are expected to complete training by the end of 2023, with a further 13 individuals expected to complete training by the end of 2024.

Nine respondents (12.6%) said that they anticipated that their CCT would be extended but were unsure of the length of the extension, whereas 18 respondents (n=25%) said they were unsure if their CCT date would be extended further. Therefore, it is likely that Figure 4 represents an underestimate of training time.

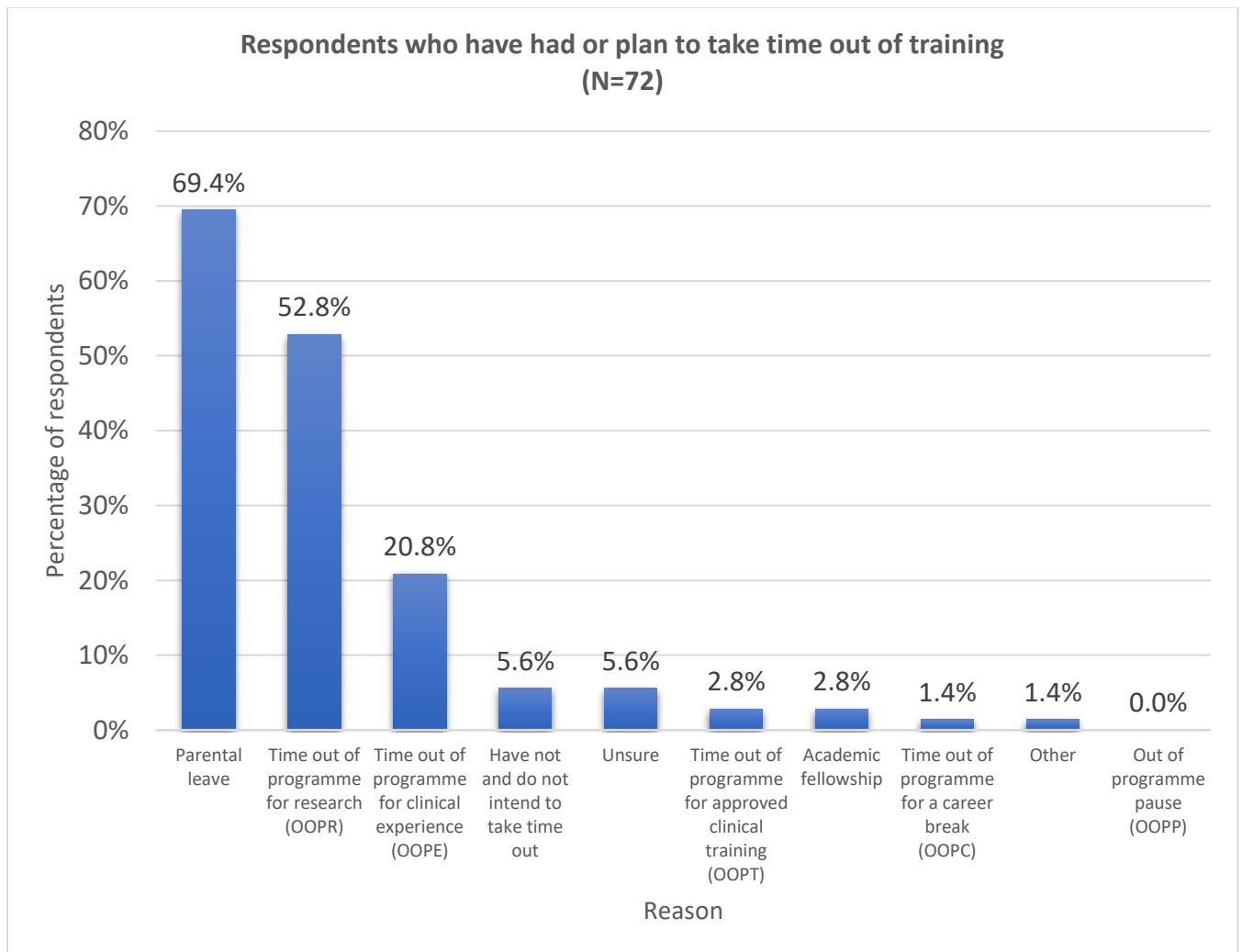


Figure 5 – Percentage of StRs who have had or plan to take time out of training for the reasons described

Respondents provided the reasons for planned or previously taken time out of training, as displayed in Figure 5. Of those who responded, 30.1% (n=22) have had/plan to take time out of programme for research (OOPR) AND parental leave. Whereas 11.1% (n=8) have had/plan to take time out of programme for clinical experience AND parental leave. Another 20.1% (n=15) have had/plan to take parental leave without other forms of leave. Only 5.6% (n=4) have not had and do not intend to take any time out of training.

Academic work

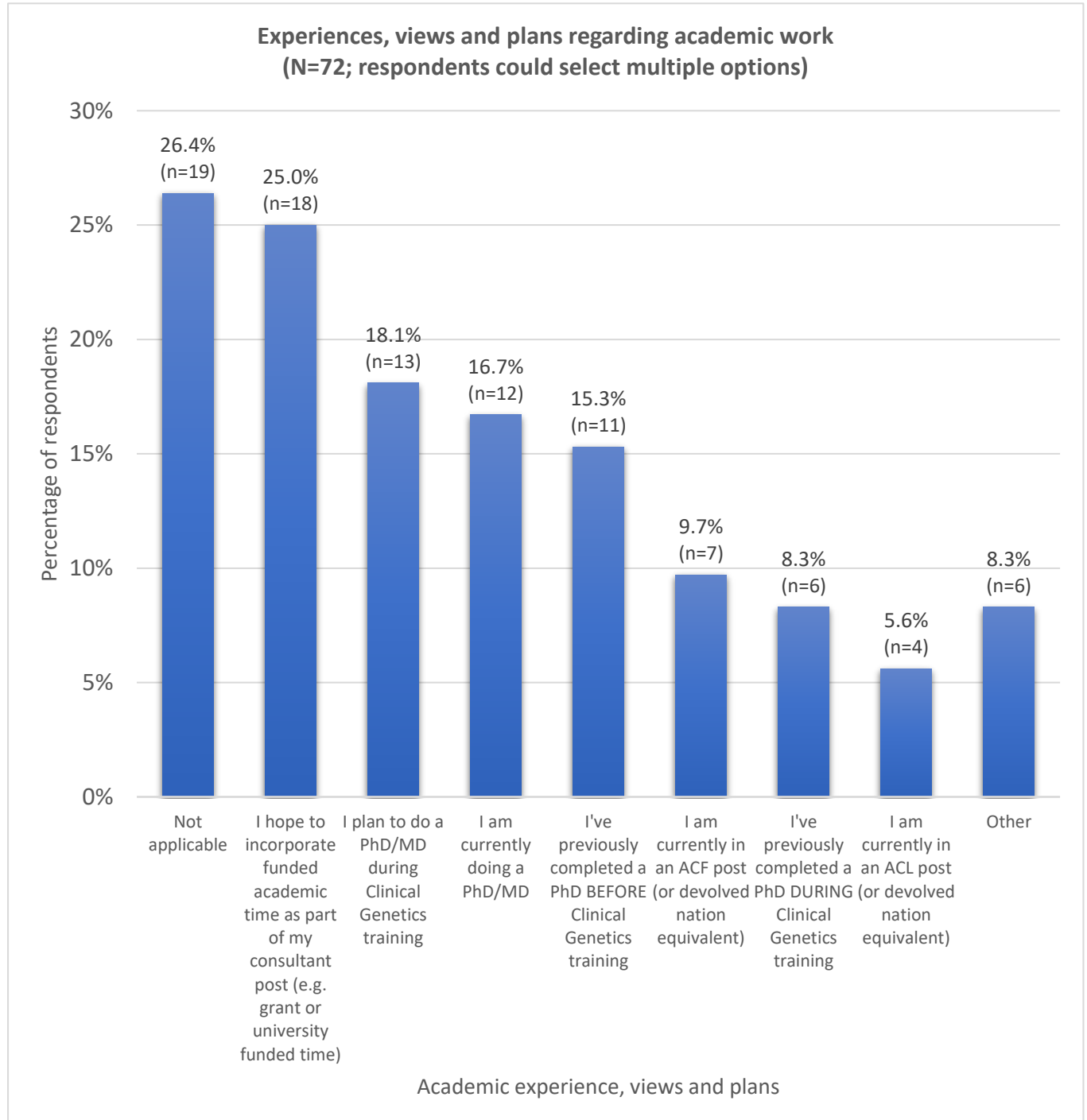


Figure 6 – Respondents experiences, views and plans regarding academic work

As shown in Figure 6, 58.3% (n=42) of respondents have already completed, or plan to complete, a PhD/MD. Of those who responded, 25.0% (n=18) said they hope to incorporate funded academic time as part of their consultant post. In response to a separate question, 68.1% (n=49) of respondents said they would like some part of their week (0.1 WTE-1 WTE) to be academic time (see Figure 7). To add further detail, 23.6% (n=17) said they would like 1 day per week (0.2 WTE) to be academic time, whereas 13.9% (n=10) said they would like half of a week (0.5 WTE) to be academic time.

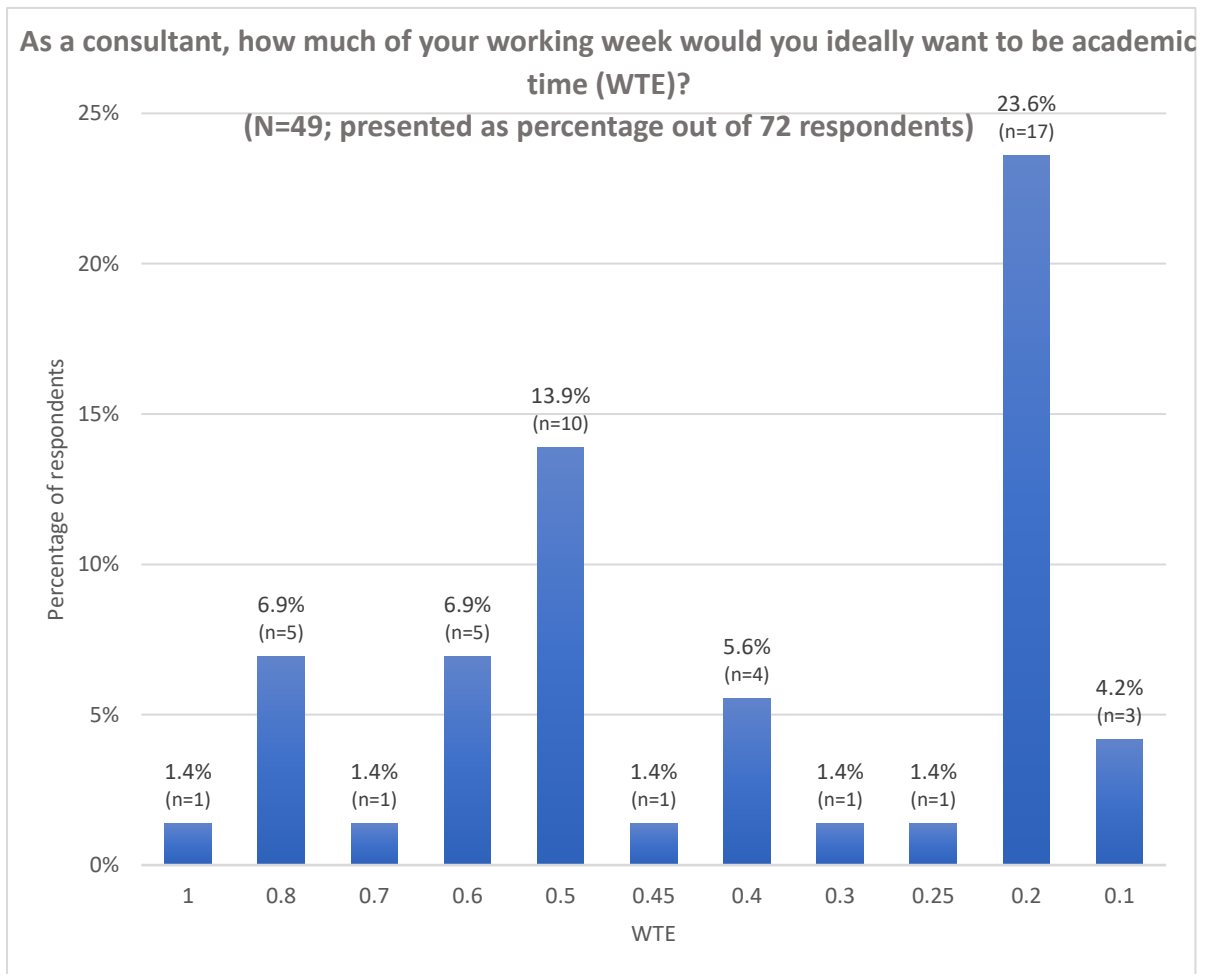


Figure 7 – Respondents’ views on how much of their working week that they would like to be academic time

Planning for consultant posts

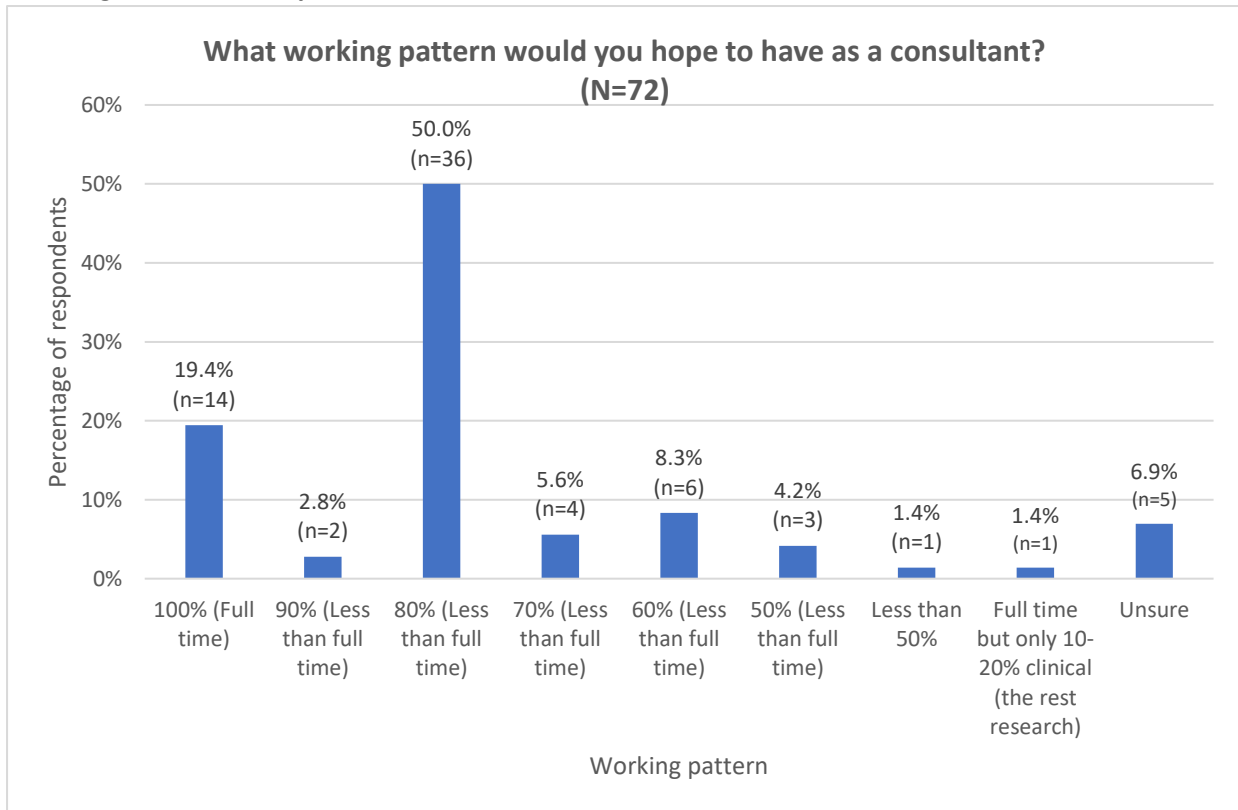


Figure 8 – Respondents’ views on what working pattern they would hope to have as a consultant

As demonstrated in Figure 8, only 19.4% (n=14) of respondents would like to work full time as a consultant. Half of respondents (n=36) would like to work 80% less than full time (LTFT) as a consultant.

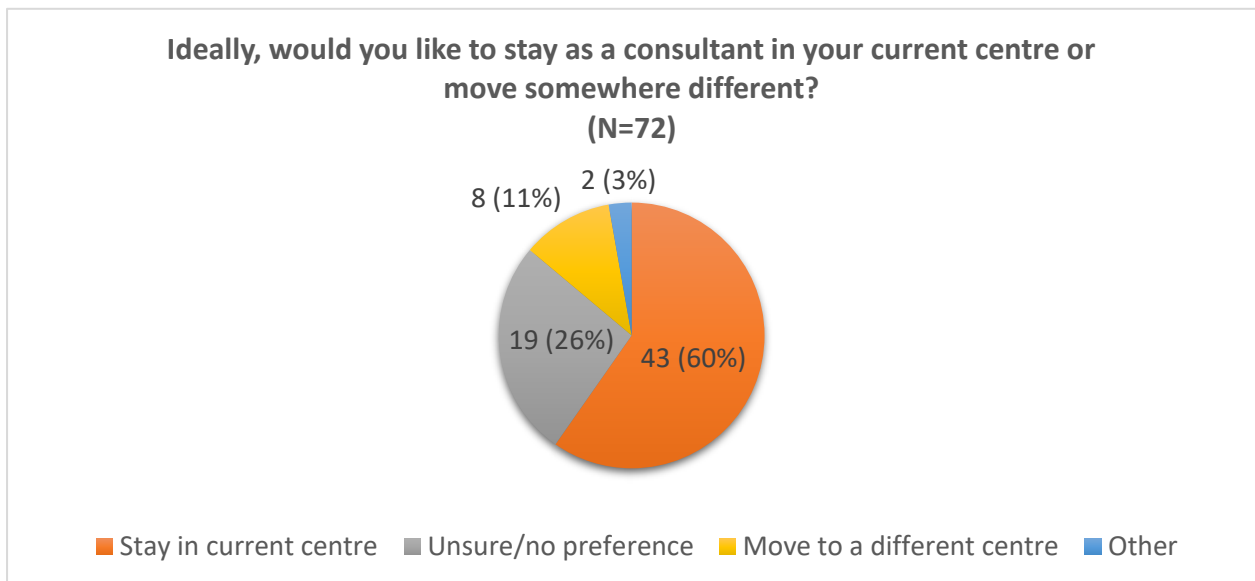


Figure 9 – Respondents’ views on staying versus moving centres as a consultant

Figure 9 demonstrates that 60% (n=43) of respondents wish to stay in their current centre for a consultant post, whilst 27% (n=19) are unsure and 11% (n=8) wish to move somewhere different. Meanwhile, Figure 10 provides more detailed insight into the geographical area within which they would like to work – with 25% (n=18) of respondents being unsure.

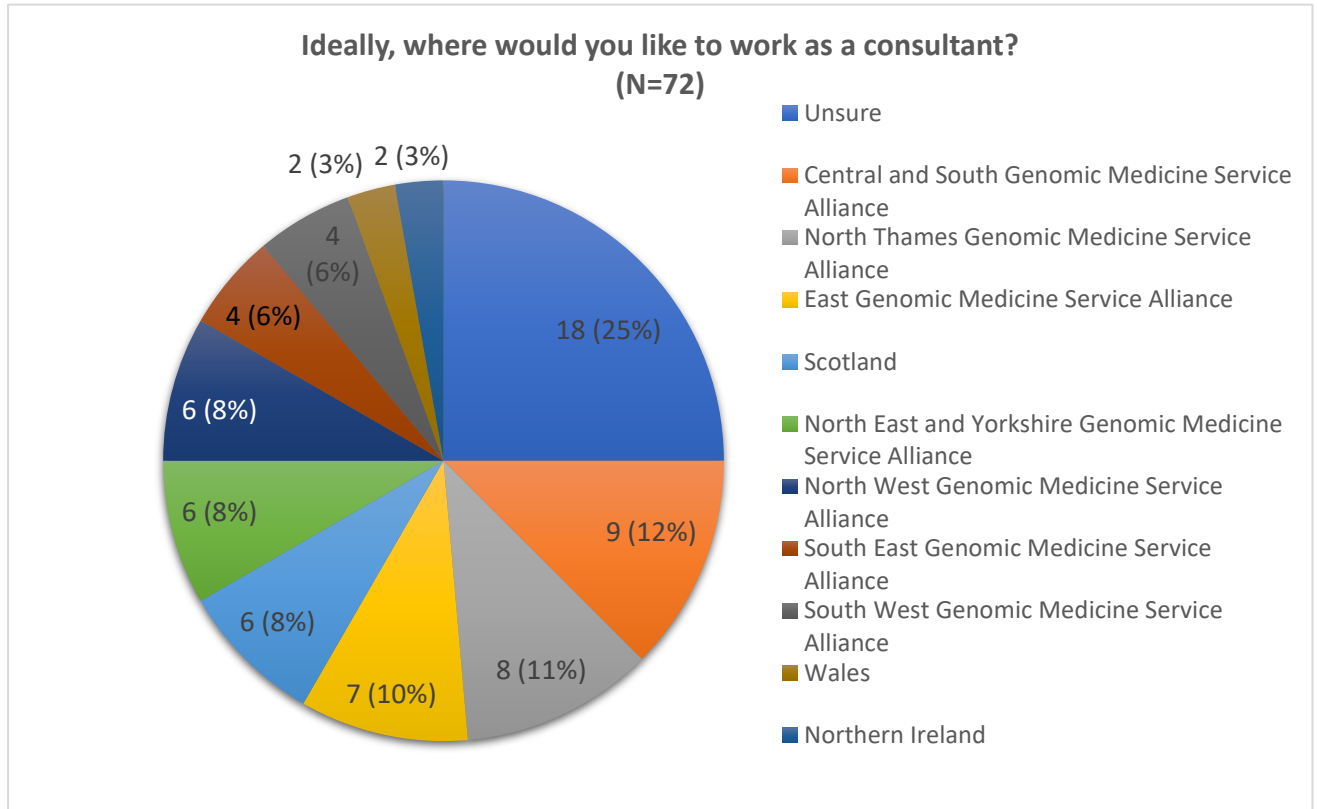


Figure 10 – Respondents’ views on where they would like to work as a consultant

Figure 11 outlines the factors that are important to StRs when deciding where they would like to work as a consultant. The most popular reasons identified by respondents were: family & friendship networks (79.2%, n=57), opportunity to pursue a subspeciality of your interest (61.1%, n=44), work life balance (58.3%, n=42), familiarity with the centre (56.9%, n=41) and reputation of the centre (47.2%, n=34).

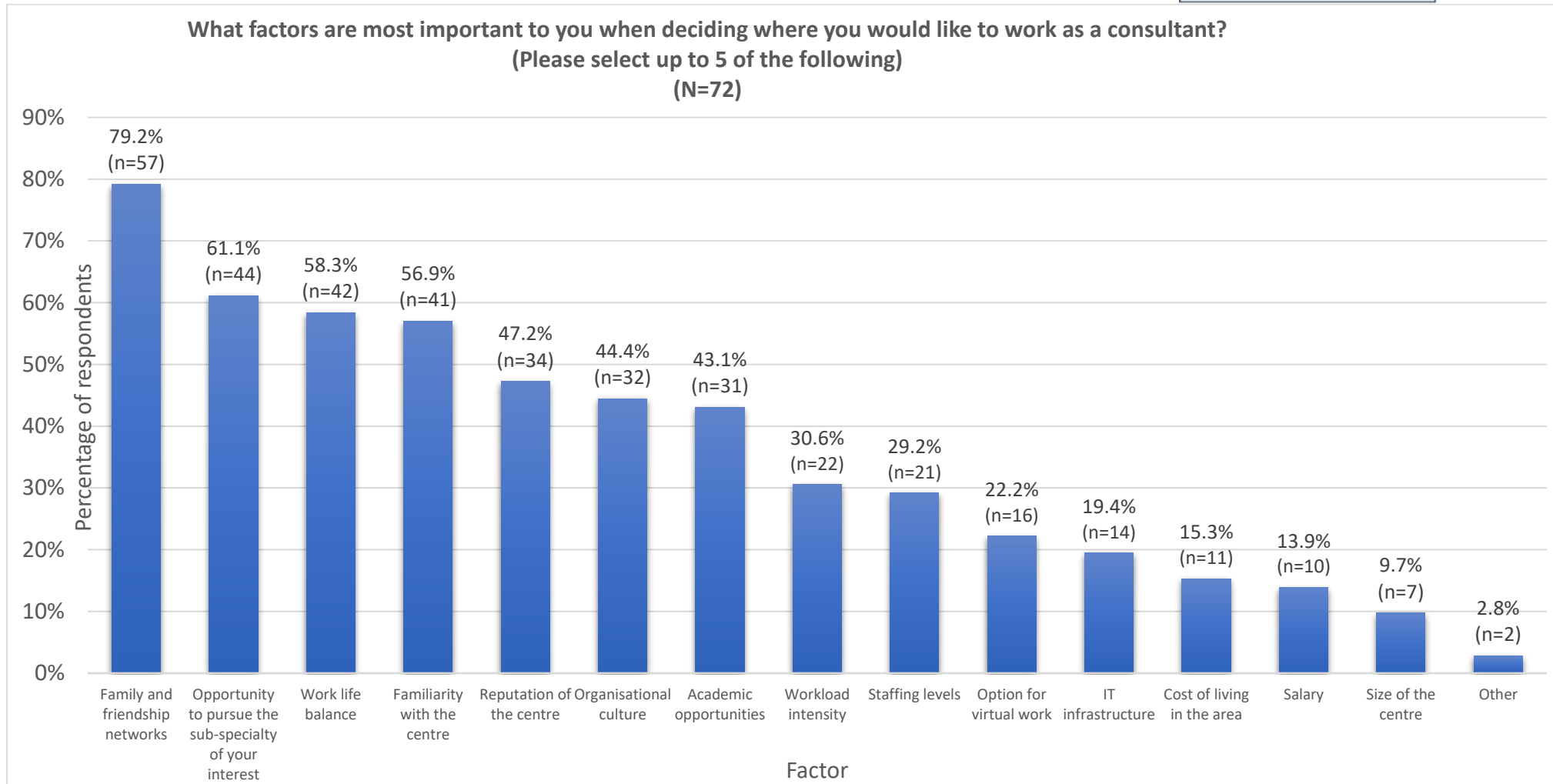


Figure 11 – Factors influencing where respondents would like to work as a consultant. Respondents were asked to select a maximum of 5 responses but 21 respondents selected more than 5 options, so all of these have been included.

Discussion

This report highlights important information that can help with workforce planning for Clinical Genetics. Through Freedom of Information requests to NHS Education for Scotland, Northern Ireland Medical and Dental Training Agency, Health Education and Improvement Wales & Health Education England, we ascertained that 93 specialty registrars were in post at the time of the survey (7 in Scotland, 3 in Northern Ireland, 6 in Wales and 77 in England). Of these 93 specialty registrars, 14 were on parental leave, and 9 were out of programme. A total of 21 of the 93 specialty registrars were recorded as occupying a clinical academic training post. This means that our response rate was 77.4% (n=72/93). The 72 respondents were spread across all geographical areas and years of training, but there was a relatively poor response rate for specialty registrars who were on parental leave (2 respondents out of 14 possible; 14.3%), and for specialty registrars who were out of programme (4 respondents out of 9 possible; 44.4%). Naturally, these groups are more difficult to reach through our communication channels. Some questions (such as regarding academic plans as a consultant) were not answered by all participants; the number of respondents to each individual question has been presented on each figure in this report.

Where respondents gave a free text answer with a range (such as '0.2-0.4 WTE'), the midpoint was chosen (for example, '0.3 WTE') to allow results to be combined for analysis.

At the start of the survey, 4 (5.6%) respondents said they were out of programme, but 12 (16.7%) respondents answered that they are currently doing a PhD/MD. This discrepancy may be because some individuals have re-entered training before completing their PhD/MD, or they may have unusual working arrangements, or there may be more respondents who are out of programme than the 4 who reported they were.

The CGS Clinical Genetics consultant workforce findings⁵ only reflect England, whilst the specialty registrar workforce findings are across the whole UK. Additionally the consultant workforce data predates the specialty registrar workforce data by 5 months. Therefore, comparisons between the two are crude and are only provide a limited picture.

This census represents a snapshot in time and ideally data should be collated annually to monitor any trends in these areas.

Working patterns

According to the survey responses, 56.1% of StRs work less than full time (LTFT), with 1 in 3 working 80%. Less than 1 in 5 StRs (19.5%) wish to work full time as a consultant, and half of StRs (50%) wish to work 80% LTFT. From the consultant workforce snapshot in July 2022, 70% of consultants in England work LTFT⁶, so this would reflect an increased rate of LTFT working in the future generation of consultants.

Throughout the junior doctor workforce, there has been a growing trend towards undertaking training as less than full time, often citing lifestyle as the driving factor.⁷ More recently, StRs in

⁵ Clinical Genetics Society. Clinical Genetics Workforce Snapshot (England) from July 2022. 12 Aug 2022.

⁶ Ibid.

⁷ Cathcart J, Mayne KJ, Hull R, et al Less than full-time training (LTFT), is this the new norm? A cross-sectional study using a UK-wide online survey to evaluate trainees' views and intentions for LTFT. *BMJ Open* 2022;12:e064518. doi: 10.1136/bmjopen-2022-064518.



England can opt to work LTFT without meeting specific criteria⁸, and this may increase the uptake of LTFT work. Whilst Clinical Genetics has traditionally been supportive of specialty registrars wishing to undertake their training as less than full time, systems may need to adapt to accommodate this continuing shift.

Academia

Within their working time, 68.1% of respondents would like some part of their workload to be academic time. The most frequently selected options were that 23.6% would like to have 0.2 WTE (1 day a week) academic, whereas 13.9% would like to have 0.5 WTE (half of a week) academic.

A PhD/MD had been completed, or is planned to be completed, by 58.3% of Clinical Genetics StRs. Over half (52.8%) of StRs have had or plan to have time out of programme for research. As research is deeply embedded within Clinical Genetics, it is positive that the workforce is able to take the opportunity to undertake academic work. Academic time is not required or desired by all StRs, but where StRs wish to undertake Out of Programme Research (OOPR) or further academic opportunities, this should be supported where possible. Having a mixture of StRs with more extensive academic experience should be seen as a strength within the Clinical Genetics workforce.

Time to progress through training

The range of time to complete training (from the point of commencing Clinical Genetics specialist training) reported by StRs was 3.3-11.8 years. The median time to complete training is 5.9 years and the mean time is 6.6 years. These are likely to be underestimates as 25% were unsure if their CCT date would be extended further and 12.6% said it would be extended but were unsure how much by. It is important to note this is the time from the commencement of a Clinical Genetics specialist training post (which starts at specialty training year 3 – ST3 – level), and many specialty registrars will have had several years of postgraduate training in alternate specialties before starting their Clinical Genetics StR post.

Given the relatively large number of specialty registrars taking time out of programme and the rapidly progressing pace of change within the specialty, continuing consideration will need to be given to supporting specialty registrars returning to training after a period of absence.

Using data provided by the SAC, we were able to undertake some additional analysis on those who have recently completed Clinical Genetics training. A total of 29 individuals completed Clinical Genetics training over 2019-2022. Data was unavailable for 3 of these individuals. Of the 26 individuals for whom data was available, the mean length of training was 6.9 years, and the median length of training was 7.2 years; slightly longer than the anticipated times to complete training identified from the December 2022 survey. The range of training time was 4.0-11.2 years. Parental leave was taken by 61.5% (n=16) of these individuals, with a mean of 15.2 months per person who took parental leave. Time out of training for OOPR was taken by 26.9% (n=7), with a mean of 36 months per person who took OOPR. Three individuals had time Out of Programme for Training (OOPT) or Out of Programme Career Break (OOPC), and no individuals took time out for Out of Programme Experience (OOPE).

Though Clinical Genetics training is ordinarily 4 years WTE (incorporating specialty training years 3, 4,

⁸ British Medical Association. Flexible training. Available from: <https://www.bma.org.uk/advice-and-support/career-progression/training/flexible-training> [accessed 14th February 2023].

5 and 6), there are many reasons why this may be prolonged. As the survey demonstrated, 56.1% of StRs work less than full time. Additionally, 69.4% of StRs take time out of training for parental leave, 52.8% take time out for OOPR and 20.8% take time out for OOPE. Only 5.6% of StRs have not had and do not plan to take any time out of training.

Planning for future consultant posts

The survey showed that 60% of respondents wish to stay in their current centre for a consultant post, 27% are unsure and 11% wish to move. This is further supported by familiarity with the centre being the fourth most popular factor (56.9%) when choosing where to work as a consultant. Other factors important to StRs were: family & friendship networks (79.2%), opportunity to pursue a subspeciality of your interest (61.1%), work life balance (58.3%), and reputation of the centre (47.2%). It is important to consider these factors in the context of CGS findings that 20.8% (29.1 WTE) of the current agreed consultant establishment in England is expected to retire in next 5 years.⁹

Over the next 5 years (until the beginning of 2028) our data indicates there would be a maximum of 55.5 WTE specialty registrars (n=70) completing their training. However, when the academic time they wish to work as a consultant is considered, this leaves 37.0 WTE clinical time. This is likely to be an overestimate because where respondents answered 'unsure' about their desired WTE as a consultant (n=5) or about how much time they would like to work academically (n=3), this was assumed as working 100% WTE with 0% academic time. We are missing responses for 22.6% (n=21) of specialty registrars; when we extrapolate the trends from this report about working patterns and desire for academic time, it would give an absolute maximum of 48.1 WTE (clinical time) specialty registrars completing training within the next 5 years.

There are 23.4 WTE substantive consultant vacancies in England alone, as of July 2022, with a further 29.1 WTE consultants expected to retire over the next 5 years¹⁰. From the survey data, 26 StRs anticipate to complete training by the end of 2024 (noting, however, that 5 of these are unsure if their training will be extended further) with the majority wishing to work LTFT. Although some data is missing for 21 (22.6%) specialty registrars, it is likely that the current and anticipated demand for consultant posts will not be met by the supply of specialty registrars finishing training.

Additionally, it is important to note that Clinical Leads in England previously reported that their ideal consultant workforce would be 178.1 WTE (compared to an actual consultant workforce of 119.2 WTE in England) in July 2022.¹¹ There is a clear demand for an expansion of the consultant workforce in order to meet the service requirements and patients' needs. The specialty registrar body would need to be significantly expanded in order to provide this consultant workforce.

Conclusion

These results provide up-to-date and important information for workforce planning in Clinical Genetics. They should not be interpreted in isolation, but should be considered alongside consultant data, and trends over the whole medical workforce should be monitored on an annual basis. Our data suggest the demand for WTE consultant posts will not be met based on the current specialty

⁹ Clinical Genetics Society. Clinical Genetics Workforce Snapshot (England) from July 2022. 12 Aug 2022.

¹⁰ Ibid.

¹¹ Ibid.



registrar workforce. Specialty registrars who complete their training may not be able to achieve their present desires for clinical and academic working time patterns. Their plans may also change by the time they complete training. However, for the purposes of workforce planning, it is important to facilitate flexibility in working patterns.

Recommendations:

1. National bodies should annually collate data on the Clinical Genetics specialty registrar and consultant workforce to observe and monitor trends.
2. Time to complete training should be collated from newly qualified Clinical Genetics consultants.
3. Specialty registrar workforce data should be considered along with consultant workforce data when undertaking workforce planning.
4. Urgent solutions are needed to address consultant vacancies which are unlikely to be met by specialty registrars completing training.
5. Urgently expand the Clinical Genetics medical workforce.

Acknowledgements:

Thank you to the specialty registrars who took time to submit their data and to encourage their colleagues to do so too. Thank you to the Training Programme Directors who circulated the survey to their StRs. Thank you to NHS Education for Scotland, Northern Ireland Medical and Dental Training Agency, Health Education and Improvement Wales & Health Education England who each responded to our Freedom of Information requests. Thank you to the CGS President (Professor Sarah Smithson), the CGS Workforce Lead (Dr Emma Hobson), the CGS StR workforce representative (Dr Melody Redman), the SAC Chair (Dr Alex Murray) and the SAC representatives (Dr Rhian Thomas & Dr Emily Sloper).