RCPCH MMC Cohort Study (Part2)

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Foreword

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Executive Summary

Background and Methodology

There have been considerable changes to the paediatric medical workforce in recent years and these are likely to continue with working time legislation and a move towards trained doctor solutions. Further, the changing morbidity of infants, children and young people with for example the rise in long-term conditions such as diabetes, the rise in obesity and the UK's position towards the bottom of the European league table on morbidity and infant mortality must influence the shape of the future workforce.

To obtain a better understanding of paediatric trainees career intentions and progress the RCPCH sent a questionnaire to all trainees who began training in paediatrics in 2007, who became members of the cohort. The initial survey was sent out shortly after the cohort completed their ST1 year by using SurveyMonkey. Email addresses were gathered from the College membership and training records

Part 2 included all respondents and non-respondents to part 1 and was sent using a further SurveyMonkey questionnaire following the cohort's 3rd year of training in October 2010. Data collection was closed in Spring 2011.

For those doctors who had left paediatrics and were willing to be contacted, an in-depth telephone interview survey was carried out between November 2011 and January 2012 to ascertain the reasons for leaving paediatrics.

Response

A good response rate of 80.5% was achieved for part 2 of the study. For those that had responded to part 1 87.4% responded to part 2. The attrition rate between ST1 and ST3 was 15%.

Findings

Characteristics of the cohort and attrition

1. Of the 354 respondents, 330 stated that they are currently working in the UK, and 24 stated that are not currently working in the UK. A total of 301 (85%) stated that they are currently training in paediatrics, 284 of whom are in the UK.
2. 39 (11%) stated that they are training in other specialties or working in another career representing attrition from the specialty. Taking into account only those who responded to this survey, the training attrition rate is 15% over a 3 year period at the ST3 cohort stage (approximately 5% per annum).
3. Over half, 20 (51.3%) of those no longer in paediatrics, are pursuing a career in general practice, and 4 (10.3%) are pursuing a career in clinical genetics. Only 5 (12.8%) are not training in another specialty i.e. they are in a career outside medicine or not in a career at present.
4. The figure shows that women represent 76.5% of the cohort (222/290). This compares to the current consultant workforce in which women represent 48.3%.
5. 65.9% of the cohort (191/290) were in an ST3 post on 1st August 2010, whereas 62 doctors were still in a more junior position and a small number, 29 reported having advanced to ST4.
6. Of the 62 doctors working in a junior position (ST2) only 39 were currently working full time whilst 17 were less than full time and 6 out of programme. Further investigation shows that 22 doctors had an out of programme career break and 4

doctors had an out of programme for academic related activities which could be the determinant for the curtailment in progress for senior grades.

Current post and preferences

7. Overall, 227 (78.3%) are working full time whilst 38 (13.1%) are working LTFT and 25 (86%) are working OOP.
8. The majority of the cohort (52%) would prefer to work full time as trained paediatricians. This compares with the current consultant workforce which is approximately 80% full time. Those in ST1 and ST2 have a stronger preference for working less than full time.
9. Overall 71.2% of respondents are happy choosing paediatrics as a career. This rises to 86.7% for those in ST4 and 78.1% for ST2s. There are a similar proportion of females (72.4%) who are happy choosing paediatrics to males (70.3%).

Training progress

10. Overall 69% of respondents reported that they were currently working on the middle grade rota. For those who have passed their exams, 82% are now on the middle grade rota as opposed to 45% of those who haven't passed their exams. This indicates that some relatively junior doctors who have not passed their exams are working at a fairly senior level.
11. Trainees have worked an average of 15.1 months rotation in general paediatrics, 11.5 months in neonatology and only 1.6 months in community paediatrics during ST1, 2 and 3.

Geographic preferences and constraints

12. 87.4% of females would prefer to stay in the UK compared to 80.3% of males
13. The data shows 51.4% of respondents who would like to work abroad intended to do so permanently compared to 48.6% who would prefer to work abroad temporarily. Male doctors showed more of a preference for working abroad permanently (58.3%) than females (47.8%).
14. Over two-thirds of females' choice of training location was limited by geographical constraints while only half of men were limited in the same way.
15. The most common constraints relate to the jobs of the doctors' spouses and home ownership in a particular area. There is little discernible difference between the spread of reasons given by males and females, although it should be noted that females on average provided 1.66 constraints compared to 1.1 for men.
16. Overall, similar numbers and proportions of doctors who have constraints in their training location have constraints when applying for consultant positions. 64.1% of the cohort state that they will be limited, suggesting a certain lack of mobility for the future workforce. A higher proportion of females (67.7%) have constraints compared to 53.3% of males.

Career intentions

17. 122 (38.7%) intend to be subspecialty paediatricians, 82 are undecided, 81 (25.7%) intend to be general paediatricians, 17 (5.4%) intend to be community paediatricians and 11 (3.5%) academic paediatricians. Two doctors do not intend to be paediatricians.
18. Very few males intend to be community paediatricians, but the proportion intending to be subspecialists is high – 61% of those who decided.
19. The proportion of trainees intending to be subspecialty paediatricians has risen since part 1 of the study, up to 38.7% from 16.8% in part 1.
20. The percentage of trainees intending to be general paediatricians has fallen since part 1, from 53.7% in part 1 to 25.7% in part 2.

21. The percentage of trainees who were undecided has risen substantially, from 7.7% in part 1 to 26.0% in part 2.
22. Of the 122 respondents that indicated subspecialty intentions, 36 (29.5%) intend to be neonatologists, 12 (9.8%) intend to be oncologists and 11 (9.0%) intend to be paediatric cardiologists.
23. The number of trainees intending to have neonatology as a subspecialty has increased considerably from 6.5% in 2008 to 29.5% in 2011 whilst the number of intending respiratory subspecialists has decreased by almost half from 8.4% to 4.1% in 2011.
24. There is a disproportionate percentage of trainees intending to be subspecialty paediatricians (52.8%) compared to the number of subspecialty consultants in the 2009 census (32.4%).

Confidence

25. Overall 30.5% (96) were not confident of obtaining their chosen post with 55.6% reasonably confident and 11.4% confident. Males showed higher levels of confidence overall with 20.3% confident compared to only 8.5% of females. Only 26.6% of men were not confident compared to 31.8% of females.
26. There has been an overall decrease in trainees' confidence of obtaining a consultant post since part 1, with 11.5% stating that they are confident compared with 12.3% in part 1, and 30.3% stating that they are not confident compared with 23.3% in part 1.
27. Of those who were not confident of obtaining a post, 53 (58.3%) said this was because there are not enough consultant posts available, 17 (17.7%) stated it was due to competition for a limited number of grid training posts and 9 (9.4%) said that it was because they would not complete training.

Training

28. Overall 37.1% of trainees stated that they had little or no guidance in developing their career. This rate is higher amongst ST3s (41.5%) and ST4s (40%).
29. The cohort provided 747 factors which they believed would improve training. The most common factors were more/protected teaching (131 mentions) and more staff/improved rotas (104 mentions).

1. Background

There have been considerable changes to the paediatric medical workforce in recent years and these are likely to continue with working time legislation and a move towards trained doctor solutions. The College's publication "Facing the Future" (2011) is proving influential in shaping future services, as will be the changes arising from the Health and Social Care Act 2012 in England, particularly the establishment of the NHS Commissioning Board. At the time of writing, the recommendations of the Children and Young People's Health Outcomes Forum[i] are still awaiting ministerial approval, but should they be accepted they will also be an important driver for children's services. Further, the changing morbidity of infants, children and young people with for example the rise in long-term conditions such as diabetes, the rise in obesity and the UK's position towards the bottom of the European league table on morbidity and infant mortality must influence the shape of the future workforce. Although the Health and Social Care Act applies in England only, developments in Scotland through recent reductions in training numbers, re-organisation of Health Boards in Northern Ireland and Wales along with potential service reconfigurations in both North and South Wales will all have an impact on the career pathways of the doctors in this study.

To obtain a better understanding of paediatric trainees career intentions and progress the RCPCH sent a questionnaire to all trainees who began training in paediatrics in 2007, who became members of the cohort.

The specific aims of the second part of this study were to:

- Make factual comparisons of the cohort's career intentions in terms of the paediatrician they wish to become, their specialty and subspecialty interests, their expectations regarding less than full time and full time working and any geographical restrictions they have in their career.
- Assess the level of confidence the cohort have about their career choices and any reasons for changes since ST1.
- Establish the current status of training careers in terms of examination passes, out of programme experience and working on middle grade rotas.
- To identify those who are no longer in paediatrics and assess the attrition rate and to carry out further investigations as to why they have left paediatrics.
- To look at changes in career intentions throughout the period of the study and to identify work-life balance issues.
- To inform the NHS workforce planning process.

2. Methodology

All trainees who began training in paediatrics in 2007 were selected to be members of the cohort. Initial survey was sent out shortly after cohort completed part 1 year by using a questionnaire on SurveyMonkey. Email addresses were gathered from the College membership and training records.

Part 2 included all respondents and non-respondents to part 1 and was sent using a further SurveyMonkey questionnaire following the cohort's 3rd year of training in October. Data collection was closed in Spring 2011. The data from SurveyMonkey was downloaded into an Access database and analysed using Access and Excel.

For those doctors who had left paediatrics and were willing to be contacted, an in-depth telephone interview survey was carried out between November 2011 and January 2012 to ascertain the reasons for leaving paediatrics and the results of this survey can be found within the discussion section.

Individual data has been kept confidential and no data will be presented which identifies individual doctors.

3. Response Rate and Demographics of the Cohort

The questionnaire for part 2 of the cohort study was sent to all 342 doctors who responded to part 1, plus the 92 respondents who failed to respond to part 1. Table 1 shows an analysis of the response rate for these various groups.

Table 1: Part 2 Response rate - Comparison between part 1 responders and non-responders

	Responded to part 2	Failed to respond part 2	Totals (part 1 response)
Responders part 1	304	44	348
	87.4%	12.6%	
Non-responders part 1	50	42	92
	54.3%	45.7%	
Total cohort	354	86	440
	80.5%	19.5%	

Overall an 80.5% response rate was achieved in part 2, which represents 354 individual respondents. Of those who had previously responded to part 1, 87.4% (304 individuals) responded in part 2 and among those who did not respond to part 1, 54.3% responded in part 2.

Survey respondents were asked whether they were still training in paediatrics, still working in paediatrics (but not in training), training in another specialty or working in a different career. The response to these questions is broken down in table 2 according to whether the respondent works in the UK or not.

Table 2: Training status and working location

	Training in paediatrics	Working in paediatrics but not training	Training in other specialties/working in different career	Totals
Working in UK	284	10	36	330
	86.1%	3.0%	10.9%	
Not currently working in UK	17	4	3	24
	70.8%	16.7%	12.5%	
Totals	301	14	39	354
	85.0%	4.0%	11.0%	

Of the 354 respondents, 330 stated that they are currently working in the UK, and 24 stated that are not currently working in the UK. A total of 301 (85%) stated that they are currently training in paediatrics, 284 of which are in the UK. A total of 14 (4%) stated that they are working in paediatrics but not training, 10 of whom are in the UK. A total of 39 (11%) stated that they are training in other specialties or working in another career representing attrition from the specialty, 36 of whom are in the UK. Taking into account only those who responded to this survey, the training attrition rate is 15% over a 3 year period at the ST3 cohort stage (approximately 5% per annum).

The 39 respondents who are no longer in paediatrics were asked which specialty or career they are now in and the findings are shown in table 3.

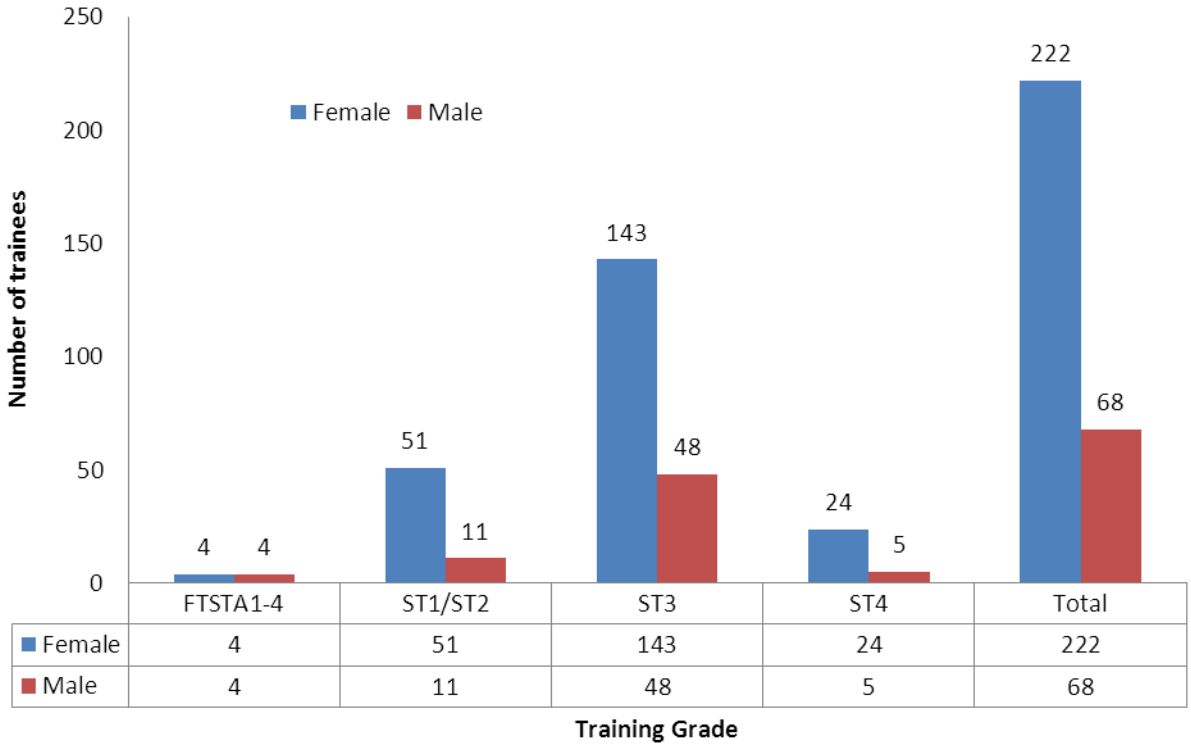
Table 3: Those no longer in paediatrics – other career by gender

	Male	Female	Totals
GP	5	15	20
Not training in other specialty	0	5	5
Clinical genetics	2	2	4
Public health	1	2	3
Acute Care Common Stem	0	1	1
Anaesthetics	1	0	1
Emergency Medicine	0	1	1
Medicine	0	1	1
Obstetrics and gynaecology	0	1	1
Paediatric Cardiology	1	0	1
Surgical Specialty - ENT	0	1	1
Totals	10	29	39

Of the 39 who are no longer in paediatrics, 29 (74.4%) are female. In the cohort as a whole, 74.9% of those who responded were female, indicating that there is not a significant difference in attrition rates between males and females. Over half, 20 (51.3%) of those no longer in paediatrics, are pursuing a career in general practice, and 4 (10.3%) are pursuing a career in clinical genetics. Only 5 (12.8%) are not training in another specialty i.e. they are in a career outside medicine or not in a career at present.

Although, the survey was conducted shortly following the 3 year point after respondents had commenced training, the path all respondents have taken is not even and Figure 1 shows the breakdown of the grades that the cohort were working in on 1st August 2010 according to gender. The doctors included in this figure are those who stated they were training in paediatrics in the UK and abroad, 11 of whom (8 female, 3 male) did not provide a grade.

Figure 1: Grade broken down by gender



The figure shows that women represent 76.5% of the cohort who are in training posts (222/290). This compares to the current consultant workforce in which women represent a little under 50%. 65.9% of the cohort (191/290) were in an ST3 post on 1st August 2010, whereas 62 doctors were still in a more junior position and a small number, 29 reported having advanced to ST4.

Of the 62 doctors working in a junior position (ST2) only 39 were currently working full time whilst 17 were less than full time and 6 out of programme. Further investigation shows that 22 doctors had an out of programme career break and 4 doctors had an out of programme for academic related activities which could be the determinant for the curtailment in progress for senior grades.

4. Trainees' Current Post and Preferences

Respondents were asked how they currently work in terms of full time (FT), less than full time (LTFT) or out of programme (OOP) and the findings are analysed in Table 4 for each grade. 11 respondents did not provide a training grade

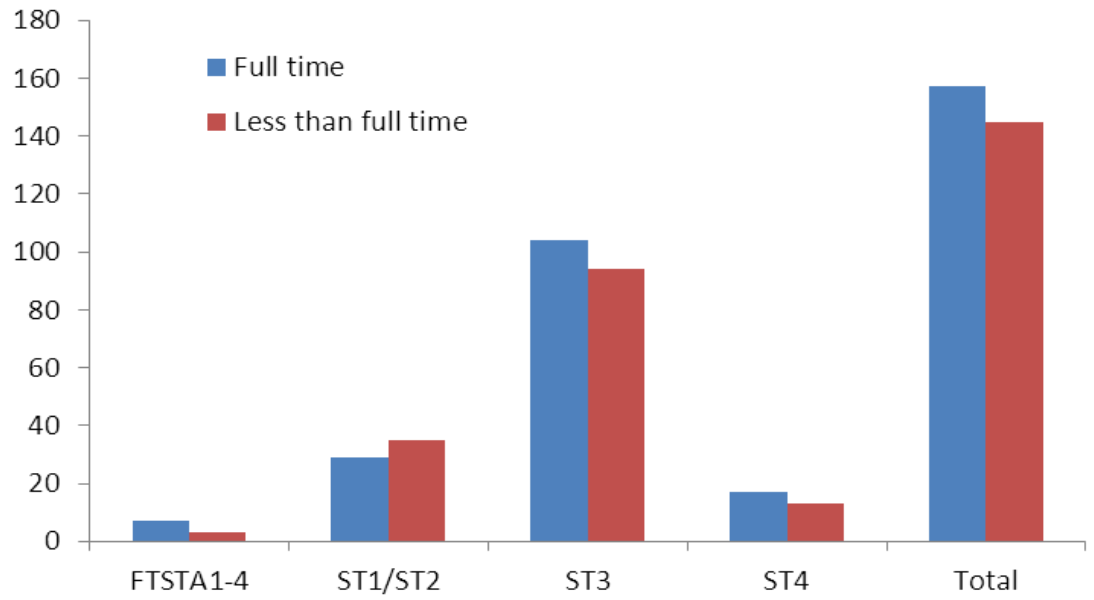
Table 4: How currently work by grade

		FT	LTFT	OOP	Totals
FTST1-4	No	6		2	8
	%	75.0%		25.0%	
ST1/ST2	No	39	17	6	62
	%	62.9%	27.4%	9.7%	
ST3	No	159	16	16	191
	%	83.2%	8.4%	8.4%	
ST4	No	23	5	1	29
	%	79.3%	17.2%	3.5%	
Total	No	227	38	25	290
	%	78.3%	13.1%	8.6%	

Overall, 227 (78.3%) are working full time whilst 38 (13.1%) are working LTFT and 25 (8.6%) are working OOP. The table shows that less than full time working and those out of programme are more common among FTSTAs and ST1/2 grades, perhaps partly explaining why those individuals have not moved into higher training grades. 25% (2/8) of the FTST1-4 grades were out of programme.

Each individual was also asked how they would like to work as a trained paediatrician in terms of full time and less than full time working. Figure 2 shows these preferences by current grade.

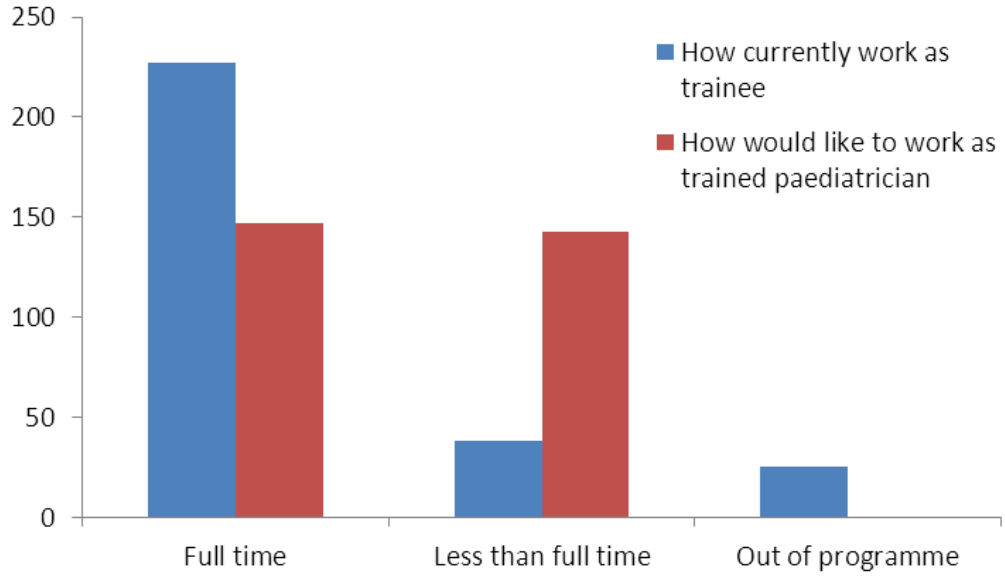
Figure 2: How would like to work as a trained paediatrician by grade



The histogram shows overall that the majority of the cohort (52%) would prefer to work full time as trained paediatricians. This compares with the current consultant workforce which is approximately 80% full time. The graph also shows that those in ST1 and ST2 have a stronger preference for working less than full time.

In Figure 3 the response on future intentions is combined with the data on how trainees currently work.

Figure 3: How currently work as trainee compared with how would like to work as trained paediatrician



This shows that fewer respondents would prefer to work full time (52%) once they have qualified compared to how they are working as a trainee (78.3%).

In table 5, future intentions in regard to full time/less than full time are shown according to gender and shows that the desire to work less than full time once qualified is far stronger for females (58.8%) than for males (14.9%)

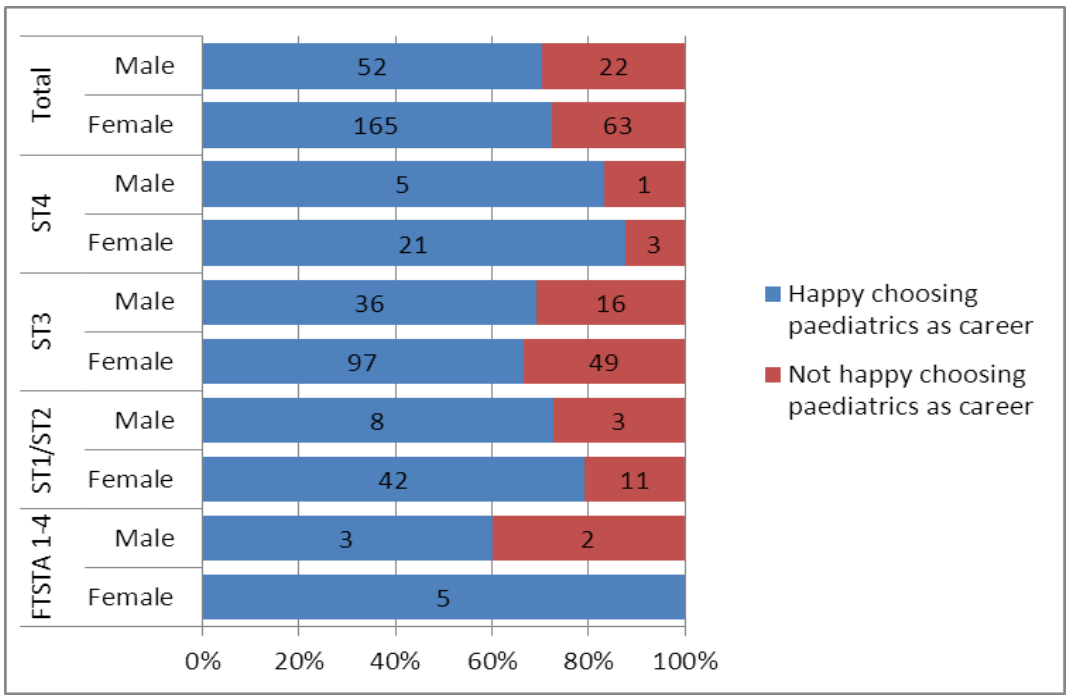
Table 5: How like to work by gender

	Female	Male
Full time	94	63
	41.2%	85.1%
Less than full time	134	11
	58.8%	14.9%
Totals	228	74

5. Work-life balance

Respondents were asked if they were happy choosing paediatrics as a career. The numbers and percentages answering yes or no are displayed in Figure 4 according to grade and gender

Figure 4: Happy Choosing Paediatrics by Grade and Gender



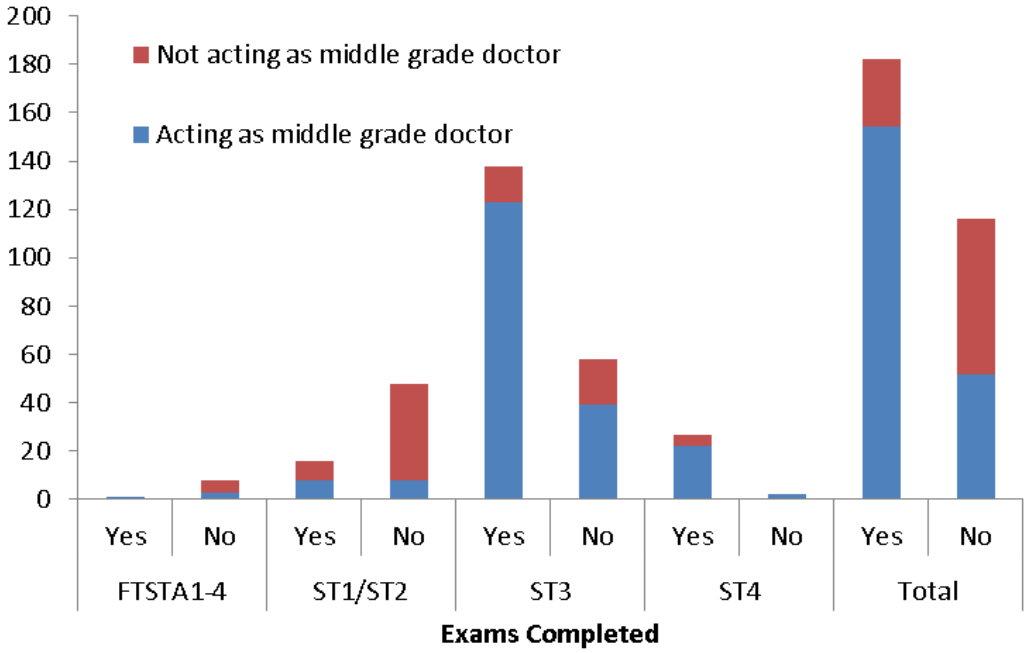
*13 respondents did not answer this question

Overall 71.2% of respondents are happy choosing paediatrics as a career. This rises to 86.7% for those in ST4 and 78.1% for ST2s, with those in ST3 a little less happy – 67.2%. There are some small differences between males and females at each grade, but overall there is a similar proportion happy choosing paediatrics – 72.4% of females and 70.3% of males.

6. Current Training Progress

The cohort was asked if they are currently acting as a middle grade on a rota and if they have completed their exams. The responses to these questions are combined in Figure 5 which show for each grade of doctor in the cohort whether they have passed the RCPCH exams or not and the number in each group now acting as a middle grade doctor. 17 respondents did not answer this question.

Figure 5: Paediatricians acting as middle grade by grade and whether passed final MRCPCH exams



This shows overall that the majority of those who have passed their final exams are now acting as a middle grade doctor. The graph also shows that this is the case for some doctors who are on ST1 or ST2 grades. It is perhaps of concern that a small number of ST1/2 doctors have reported acting as middle grades, yet they have not passed their final exams.

Table 6 summarises the data in Figure 5 by showing the number and percentage of those who said yes and no to acting as a middle grade according to whether they have passed the College exam.

Overall 69% of respondents reported that they were currently working on the middle grade rota. When looking at whether respondents have passed their exams or not, we find that among those who have, 82% are now on the middle grade rota as opposed to only 45% of those who have not passed their exams. This indicates again that some junior doctors who have not passed their exams are working at a fairly senior level.

Table 6: Currently acting as a middle grade on a rota by whether or not passed exams

Middle grade	Pass exams		
	Yes	No	Totals
Yes	154	52	206
%	82%	45%	69%
No	28	64	92
%	15%	55%	31%
Totals	182	116	298
%	100%	100%	100%

Each respondent was asked how many months they had spent on general/acute, subspecialty, community and neonatal rotations in the first 36 months of their training programmes and table 7 shows the average for each type of rotation. The total months do not quite add up to 36, but this will be because of time spent out of programme by some members of the cohort.

Table 7: Average months spend on specialty rotation from ST1-ST3

Rotation	Average no. of months	% of time
General/acute rotation	15.1	44.0%
Subspecialty rotation	6.1	17.8%
Community rotation	1.6	4.7%
Neonatal rotation	11.5	33.5%
All Rotations	34.3	

Time spent by the cohort is heavily geared towards time spent on the general/acute rota – 15.1 months (or 44% of time) and the neonatal rota (33.5%). In contrast, members of the cohort spent on average only 1.6 months on community rotations i.e. 4.7% of the time.

7. Geographic Preferences

Respondents were asked where they would like to work on completion of training and the results are analysed in table 8 by gender.

Table 8: Where Like To Work On Completion Of Training by Gender

Location preference	Female	Male	Totals
UK	201	57	258
	87.4%	80.3%	85.7%
Asia	7	6	13
	3.0%	8.5%	4.3%
Europe	5	1	6
	2.2%	1.4%	2.0%
Africa	4	2	6
	1.7%	2.8%	2.0%
Australasia	3	1	4
	1.3%	1.4%	1.3%
North America	2	1	3
	0.9%	1.4%	1.0%
Abroad - uncertain	2	1	3
	0.9%	1.4%	1.0%
No answer	6	2	8
	2.6%	2.8%	2.7%
	230	71	301

The findings show that 87.4% of females would prefer to stay in the UK compared to 80.3% of males. The most favoured area abroad was Asia with 7 females and 6 males wishing to work there on completion of training.

The respondents who would prefer to work abroad were asked how long they intend to stay abroad i.e. whether this was a permanent or temporary, and the findings are shown in table 9.

Table 9: How would you like to work abroad on completion of training?

	Female	Male	Totals
Permanently	11	7	18
	47.8%	58.3%	51.4%
Temporarily	12	5	17
	52.2%	41.7%	48.6%
Totals	23	12	35
	100%	100%	100%

The data shows 51.4% of respondents who would like to work abroad intended to do so permanently, compared to 48.6% who would prefer to work abroad temporarily. Male doctors showed more of a preference for working abroad permanently (58.3%) than females (47.8%).

The cohort was asked whether their choice of training programme is limited due to geographical constraints and the findings by gender are shown in table 10. There were 9 doctors did not list any constraints.

Table 10: Is choice of training programme limited due to geographical constraints?

	Female	Male	Totals
Yes	154	38	192
	66.96%	50.00%	62.75%
No	76	38	114
	33.04%	50.00%	37.25%
Total	230	76	306

The table shows that over two-thirds of females' choice was limited by geographical constraints while only half of men were limited in the same way.

Those who stated their choice was limited were asked to select reasons why this was. They could provide more than one answer and also specify other reasons. The reasons provided are set out in table 11 according to gender.

Table 11: Geographic constraints in regards to training programme by gender

	Female	Male	Total
My partner/spouse job is fixed to this area	105	21	126
I own a house	94	22	116
I like it here and my social network is in this area	91	20	111
My childcare is fixed to this area	50	11	61
I like my work place	25	7	32
Family commitments	10	0	10
Work/training	3	1	4
Other answer not directly relating to question	2	2	4
Visa issues	1	0	1
Total	381	84	465

The most common reasons relate to the jobs of the doctors' spouses and home ownership in a particular area. There is little discernible difference between the spread of reasons given by males and females, although it should be noted that females on average provided 1.66 constraints compared to 1.1 for men.

The cohort was asked whether their application for a consultant post will be limited due to geographical constraints and the findings by gender are shown in table 12. 11 did not answer this question.

Table 12: Will your application for a consultant post be limited due to geographical constraints

	Female	Male	Totals
Yes	155	40	195
	67.7%	53.3%	64.1%
No	74	35	109
	32.3%	46.7%	34.9%
Totals	229	75	304

Overall, similar numbers and proportions of doctors who have constraints in their training location have constraints when applying for consultant positions. 64.1% of the cohort say their application will be limited suggesting a certain lack of mobility for the future workforce. A higher proportion of females (67.7%) have constraints compared to 53.3% of males.

Those who stated their application for a consultant post will be limited were asked to select reasons why. They could provide more than one answer and also specify other reasons. The reasons provided are set out in table 13 according to gender.

Table 13: Geographic constraints in applying for consultant post by grade

	Female	Male	Total
My partner/spouse job is fixed to this area	106	23	129
I own a house	99	17	116
I like it here and my social network is in this area	85	21	106
My childcare is fixed to this area	55	11	66
I like my work place	21	9	30
Family commitments	13	1	14
Other answer not directly relating to question	4	3	7
Work/training	2	1	3
Total	385	86	471

The breakdown of reasons provided are broadly similar to the constraints which restricted mobility in training with spouse's job, home ownership and the doctor's social network being the most common reasons. Again, there is little discernible difference between the spread of reasons given by males and females, and as per training restraints females on average provided more reasons - 1.68 constraints compared to 1.1 for men.

Because the College understands that the handling of inter deanery transfers varies across the country, it was important to ask about these transfers. Table 14 shows the numbers in the cohort who asked for a transfer and the success rate.

Table 14: Since starting your training have you made an application for an inter deanery transfer? And for those that answered yes, was application for inter-deanery transfer successful?

Made an application for inter-deanery transfer

	Number	%
Yes	29	9%
No	164	52%
No answer	122	39%

If yes, was application for inter deanery transfer successful

	Number	%
Yes	22	76%
No	7	24%
Total	29	

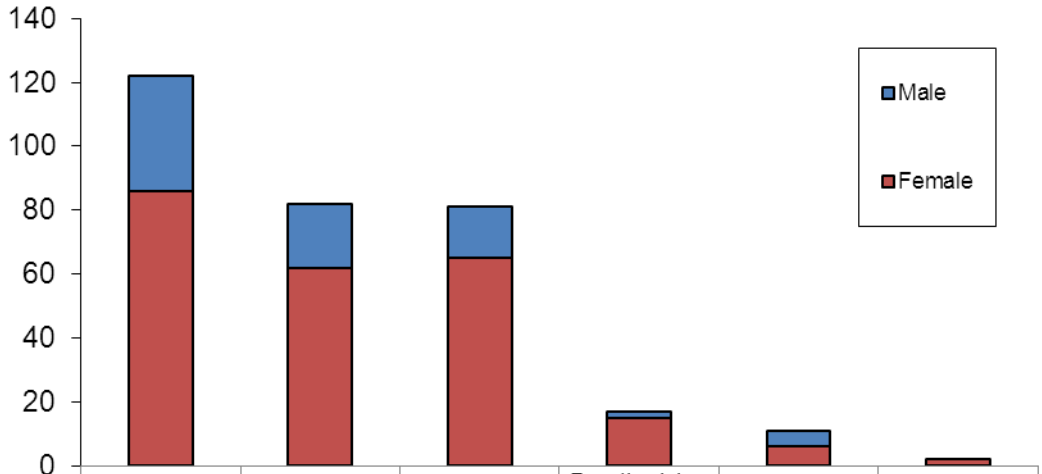
This shows that 29 doctors (9% of the cohort) have applied for a transfer, of which 76% were successful. This question will be repeated in future years to assess whether requests are more likely later in the training programme. We will also ask the reasons why people request transfers and why in some cases they are unsuccessful.

8. Career Intentions

The study asked respondents a series of questions about the cohort's career intentions; the type of paediatrician they intended to be, subspecialty intentions and if they intend to be a consultant or a specialty doctor

Fig 6 shows the response regarding the sort of paediatrician respondents intend to be according to gender.

Figure 6: Type of paediatrician intention, broken down by gender



	Subspecialty paediatrician	Undecided	General paediatrician	Paediatrician in Community Child Health	Academic paediatrician	Not a paediatrician
Male	36	20	16	2	5	0
Female	86	62	65	15	6	2

122 (38.7%) intend to be subspecialty paediatricians, 82 are undecided, 81 (25.7%) intend to be general paediatricians, 17 (5.4%) intend to be community paediatricians and 11 (3.5%) academic paediatricians. Two doctors do not intend to be paediatricians.

The graph shows that very few males intend to be community paediatricians, but the proportion intending to be subspecialists is higher than other sorts of paediatric careers. – 61% of those who have decided.

A similar question was asked in part 1 of the study and a comparison with part 2 is shown in table 15to ascertain whether intentions had changed between part 1 and part 2. There were some changes in the options given to respondents between parts 1 and 2. Neonatology was listed separately in part 1, but included as a subspecialty in part 2. The option of combined acute and community or other were not available in part 1.

Table 15: Type of paediatrician intention compared with part 1

	Part 1 (after ST1)	% of cohort	Part 2 (after ST3)	% of cohort
Subspecialty paediatrician	53	15.8%	122	38.7%
Undecided	26	7.7%	82	26.0%
General paediatrician	169	50.3%	81	25.7%
Paediatrician in Community Child Health	14	4.2%	17	5.4%
Academic paediatrician	17	5.0%	11	3.5%
Not a paediatrician	6	1.8%	2	0.6%
Neonatologist	29	8.6%	Included as subspecialty	
Combined - acute and community paediatrician	18	5.4%	Not an option	
Other	4	1.2%	Not an option	
Totals	336		315	

The data shows that the number and percentage of trainees intending to be subspecialty paediatricians has risen since part 1, up to 38.7% from 16.8% in part 1, 24.4% when intended neonatologists are included. Those intending to be general paediatricians has fallen between the 2 parts of the study from over half to 81 (25.7%) and the number intending to be community paediatricians has remained worryingly low. The percentage of trainees who were undecided has risen substantially, from 7.7% in part 1 to 26.0% in part 2. Of the 82 trainees who were undecided however, 52 or 63.4% did state a subspecialty that they had an interest in. Those preferences are listed in table 16:

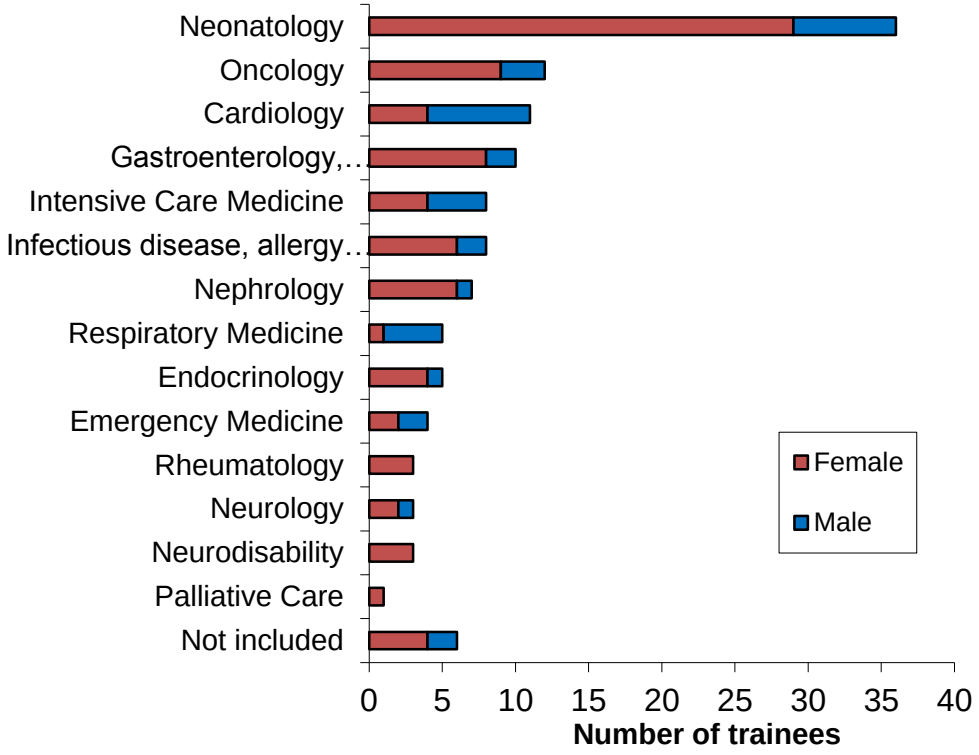
Table 16: Subspecialty intention of trainees who were undecided on type of paediatrician intended

Specialty	Number	%
Neonatology	5	6.1
Paediatric Endocrinology	4	4.9
Paediatric Respiratory Medicine	4	4.9
Community Child Health	4	4.9
Paediatric Nephrology	3	3.7
Paediatric Emergency Medicine	3	3.7
Paediatric Rheumatology	2	2.4
Paediatric Oncology	2	2.4
Paediatric Neurology	2	2.4
Gastroenterology and Hepatology & Nutrition	2	2.4
Paediatric Cardiology	2	2.4
Paediatric Intensive care Medicine	2	2.4
Paediatric Infectious disease, allergy & immunology	2	2.4
Paediatric Metabolic medicine	1	1.2
Other	14	17.1
None	30	36.6
Total	82	100

9. Subspecialty intentions

Each of the 122 respondents who intend to be a subspecialist indicated which subspecialty they would like to work in and the breakdown according to gender is shown in Figure 8

Figure 8: Subspecialty intentions of those who intend to be paediatric subspecialists



The largest group three times as large as the next highest is neonatology with 36 (29.5%). 12 (9.8%) intend to be oncologists and 11 (9.0%) intend to be paediatric cardiologists, which is not a specialty which RCPCH provides training for.

A similar question was asked in Part 1 of the study and a comparison of the response is shown in table 17. It should be noted that Gastroenterology, Hepatology & Nutrition were separate options in part 1.

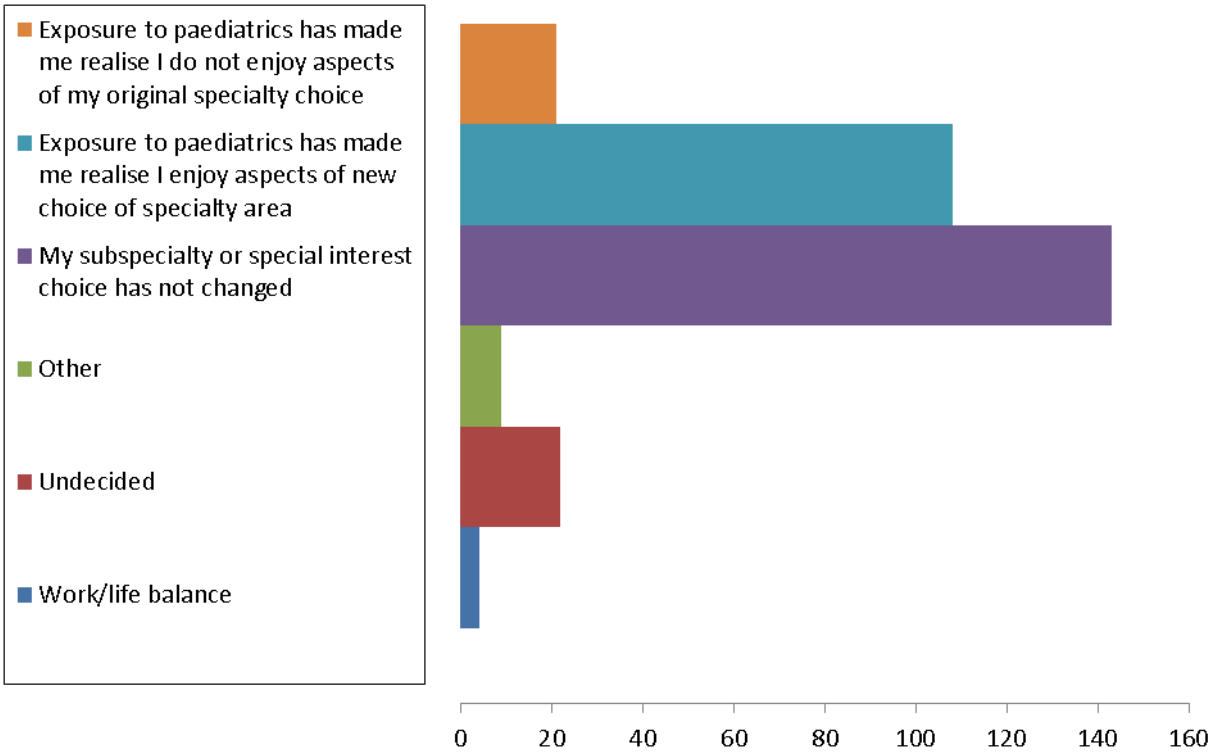
Table 17: Subspecialty intentions compared with part 1

	Type of Paediatrician Intended - All	
Subspecialty Intention	Sub-Specialty Paediatrician (after ST1)	Subspecialty Intention (after ST3)
Neonatology	29	36
Oncology	8	12
Paediatric Cardiology	12	11
Gastroenterology, Hepatology & Nutrition	6	10
Infectious Disease, Allergy & Immunology	4	8
Intensive Care Medicine	2	8
Nephrology	1	7
Respiratory Medicine	0	5
Endocrinology	5	5
Accident and Emergency	2	4
Neurology	0	3
Neurodisability	0	3
Rheumatology	2	3
Other	6	3
Not Known	1	3
Palliative Care	0	1
Haematology	1	0
Dermatology	2	0
Child Mental Health	1	0
Total	82	122

The number of trainees intending to have neonatology as a subspecialty has increased from 29 in part 1 to 36, and overall numbers intending to be oncologists, nephrologists, infectious disease specialists, nephrologist and respiratory medicine have increased showing that trainees are becoming more sure of their subspecialty intentions.

As a follow up to the subspecialty question, respondents were asked why their subspecialty or special interest preference had changed since training began and the response is shown in Figure 9.

Figure 9: Why has subspecialty or Special interest changed since training began.



*8 respondents left this question unanswered

The majority of respondents 143 (45.4%) have not changed their subspecialty or special interest intention since beginning training. 108 (34.3%) changed their subspecialty intention after exposure to paediatrics which introduced them to new specialties which they enjoyed whilst only 21 (6.7%) of respondents changed their minds after exposure to paediatrics. This demonstrates that paediatric training is successful in exposing different aspects to trainees which can influence their decisions.

In table 18, the broad career intentions of the cohort i.e. whether they intend to work in general, community, academic or subspecialty paediatrics is compared with the breakdown of the consultant workforce recorded in the 2009 RCPCH Census. Cohort study respondents who were undecided (82) or stated "Not a Paediatrician" have been omitted.

Table 18: How career intentions match job availability

	ST3 Cohort	Consultants 2009
General	81	1339.5
	35.1%	41.0%
Community	17	691.5
	7.4%	21.2%
Subspecialty	122	1057
	52.8%	32.4%
Academic	11	176
	4.8%	5.4%
Totals	231	3264

There appears to be a mismatch between the cohort and the current breakdown of consultant positions in terms of proportions intending to be different sorts of paediatricians. There is for example a shortfall in those intending to be general paediatricians (-4.9%) and community paediatricians (-13.8%).

There are a disproportionate percentage of trainees intending to be subspecialty paediatricians (52.8%) compared to the number of subspecialty consultants in the 2009 census (32.4%).

Most but not all doctors in the cohort intend to be consultants and table 19 provides a breakdown of the responses received.

Table 19: Percentage intending to be paediatric consultants and specialty doctors in future

	Total
Consultant	287
	91.1%
Specialty Doctor	9
	2.9%
Unsure	12
	3.8%
Not stated	7
	2.2%
Totals	315

Of those still in paediatrics, 91.1% intend to be consultants, 2.9% intend to be specialty doctors, 3.8% are unsure, and 2.2% did not state an intention. There is no difference in the percentages of male and female trainees intending to be consultants.

10. Confidence

Cohort respondents were asked a series of questions about the confidence they have in obtaining their chosen post when they complete training, the change in their confidence level since they were surveyed after ST1, the reasons for not being confident and if they are considering other career options. The following section sets out the findings in further detail.

All participants in the cohort who are still training or working in paediatrics were asked to select their level of confidence about obtaining their chosen post and the response is shown in table 20 for males, females and the total cohort.

Table 20: Confidence in obtaining chosen post by gender (all)

	Female	Male	Total
Confident	20	16	36
	8.5%	20.3%	11.4%
Reasonably Confident	135	40	175
	57.2%	50.6%	55.6%
Not Confident	75	21	96
	31.8%	26.6%	30.5%
No answer	6	2	8
	2.5%	2.5%	2.5%
Totals	236	79	315

Overall 30.5% (96) were not confident of obtaining their chosen post with 55.6% reasonably confident and 11.4% confident. Males showed higher levels of confidence overall with 20.3% confident compared to only 8.5% of females. Only 26.6% of men were not confident compared to 31.8% of females.

287 of the 315 reported that they wished to be a consultant and the distribution of their confidence levels by gender is similar to the total cohort illustrated in table 20 in which only 11.5% are confident of obtaining their chosen post.

Table 21: Confidence in obtaining chosen post by gender (Those intending to be consultants)

	Female	Male	Total
Confident	19	14	33
	8.8%	19.4%	11.5%
Reasonably Confident	129	38	167
	60.0%	52.8%	58.2%
Not Confident	67	20	87
	31.2%	27.8%	30.3%
Totals	215	72	287

Table 22 compares the confidence level of those choosing to be consultants in part 2 of the study (after ST3) with part 1 (after ST1).

Table 22: Change in confidence in obtaining a consultant post since part 1 (those intending to be consultants only)

	Part 1 (after ST1)	Part 2 (after ST3)
Confident	36	33
	12.3%	11.5%
Reasonably confident	188	167
	64.4%	58.2%
Not confident	68	87
	23.3%	30.3%
Total wishing to become consultant	292	287

There has been an overall decrease in trainees' confidence of obtaining a consultant post since part 1, with 11.5% stating that they are confident compared with 12.3% in part 1, and 30.3% stating that they are not confident compared with 23.3% in part 1.

The respondents were asked why they are not confident and were given choices as well as being able to provide other reasons. The reasons for not being confident in obtaining chosen post are set out in table 23.

Table 23: Reason for not being confident of getting chosen post (all posts)

	Female	Male	Total
Not enough consultant posts available	41	15	56
Competition for a limited number of grid training posts	16	1	17
Will not complete training	7	2	9
Not enough training or experience	5	0	5
Not certain about career choice	3	0	3
Not stated	1	1	2
External issues i.e., uncertainty in the NHS, government policy, economy	1	0	1
May not complete training	1	0	1
No consultant posts in area of interest	0	1	1
Not enough training, experience or advice	0	1	1
Totals	75	21	96

Of those who were not confident of obtaining a post, 56 (58.3%) said this was because there are not enough consultant posts available, 17 (17.7%) stated it was due to competition for a limited number of grid training posts and 9 (9.4%) said that it was because they would not complete training.

Table 24: Reason for not being confident of getting chosen post by post intended (those intending to be consultants only)

Type of Consultant post intended to obtain	Not confident of obtaining chosen post		Total cohort	
	No	%	No	%
Subspecialty paediatrician	39	44.8%	117	40.8%
Undecided	23	26.4%	68	23.7%
General paediatrician	22	25.3%	77	26.8%
Paediatrician in Community Child Health	2	2.3%	14	4.9%
Academic paediatrician	1	1.1%	11	3.8%
Total	87	100.0%	287	100.0%

Table 24 shows that trainees intending to become consultant subspecialty paediatricians were most insecure in their confidence of obtaining their chosen post (44.8%) compared to 40.8% of the total cohort intending to obtain a consultant subspecialty post. In comparison only 1.1% of trainees were not confident about obtaining a consultant academic paediatrician post (3.8% of total cohort).

11. Training

Each trainee was asked to select an option describing how much guidance and help they have received through their training so far. The responses are shown according to the grade of doctor at 1st August 2010 in table 24.

Table 24: Guidance and help with regards to developing career in paediatrics by grade

	A lot	Some	Little	None	Totals
FTSTA1-4	4	4	2	0	10
	40.00%	40.0%	20.00%	0.00%	
ST1	1	1	0	0	2
	50.00%	50.0%	0.00%	0.00%	
ST2	13	33	12	4	62
	21.00%	53.2%	19.40%	6.50%	
ST3	19	97	71	11	198
	9.60%	49.0%	35.90%	5.60%	
ST4	5	13	11	1	30
	16.70%	43.30%	36.70%	3.30%	
Totals	42	148	96	16	302
	13.90%	49.00%	31.80%	5.30%	

*13 did not answer

The data show overall that 37.1% of trainees stated that they had little or no guidance in developing their career. It is of some concern that this rate is higher amongst ST3s (41.5%) and ST4s (40%).

A further analysis of this data in each deanery is shown in table 25 to ascertain whether there are any regional patterns emerging from this data.

Table 25: How much guidance and help with regards to developing career in paediatrics by deanery

Deanery	A lot	Some	Little	None	Totals	% with Little or None
Wessex	1	1	3	0	5	60.0%
East Midlands North	1	2	2	2	7	57.1%
East Scotland	0	1	1	0	2	50.0%
KSS	1	4	5		10	50.0%
Northern	4	4	6	2	16	50.0%
Wales	3	4	5	2	14	50.0%
Oxford	1	4	3	1	9	44.4%
East Midlands South	0	3	2	0	5	40.0%
London	9	40	26	3	78	37.2%
North Western	2	12	7	1	22	36.4%
West Midlands	4	12	9	0	25	36.0%
Mersey	1	8	4	1	14	35.7%
Yorkshire and Humber	4	16	9	2	31	35.5%
Northern Ireland	1	7	3	1	12	33.3%
Peninsula	0	2	0	1	3	33.3%
East of England	4	9	6	0	19	31.6%
West Scotland	2	3	2	0	7	28.6%
Severn	0	8	2	0	10	20.0%
South East Scotland	1	4	1	0	6	16.7%
North Scotland	0	3	0	0	3	0.0%

The data is presented in descending order of deaneries according to those who have the highest proportion of trainees who have received little or no guidance and help with regards to developing a career in paediatrics. Although low numbers in some deaneries make comparisons less reliable, the table shows that Wessex and East Midlands North deanery have over 50% of doctors who have little or no guidance in developing their career in paediatrics.

Respondents were asked to list 3 things that would improve their training experience and these have been categorised and listed in table 26.

Table 26: Classification of factors which would improve training

Factors which would improve training	Total
More/protected teaching	131
More staff/improved rotas	104
Specialty/subspecialty exposure	66
Location and relocation of posts	61
Support/Supervision	61
Study leave and research	55
Greater flexibility/access to OOP	49
More hands on experience	40
Deanery/training programme structure	31
Less documentation/portfolio work	29
More/better career guidance	29
Better working hours	27
Less service provision focus	19
Ward round based teaching	19
Remuneration	10
Admin time	7
Passing exam	5
More nursing/other support	4
Total	747

*respondents were allowed to list more than one option

The 2009 Postgraduate Medical Education and Training Board survey of training showed that paediatrics was the specialty in which trainees were the most unlikely to be able to attend formal training[ii]. As per the findings in table 26 we see that the majority of trainees would prefer more teaching and support with improved rotas which coincides with the findings of the Paediatric Training in London report by London Specialty School of Paediatrics[iii].

All respondents were asked if they thought there were questions we have not considered

Table 27: Has answering this survey made you think of any questions we haven't considered?

	Number	%
Had ideas	53	16.82
Did not have ideas	139	44.13
Did not answer	123	39.05
Total	315	100

The table shows that 53 respondents had ideas and table 28 sets out the important comments received. These are divided into respondents' purposes for questions to be included or options to be given. These will be reviewed for part 3 of the study. Comments about limitations of the questionnaire are also listed, as are ad hoc comments that have

been made about their training progress and some miscellaneous comments. Below are the questions trainees suggested we could have asked. Some are very important and promote more in depth thinking. Furthermore, some questions may be incorporated in part 3 of the study or future RCPCH surveys.

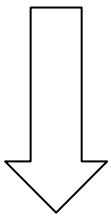


Table 28: Types of questions or comments received

1. Proposed questions for the Study
How much time per week is dedicated to actively "training" you to be paediatrician?
Are you considering a change of specialty?
Do you as a trainee feel that your opinions "actually" get listened to? - answer would be NO
Do you feel satisfied with the training you have received until now?
Do you feel well supervised? Do you feel ST3 should be middle grade?
Do you plan to take time out?
Have you been bullied at work?
How can we improve the training? Suggestions on implementing this. Have you worked in DGHs/Tertiary hospitals...If worked in both how is it different.
How many attempts have you had with MRCPCH? Part 1a/1b, 2, or clinical? Are you getting support with MRCPCH exams? How much money have you spent in trying to obtain MRCPCH? How many times have you work on a rota that has vacancies?
How people cope at ST3 level on the registrar rota in DGH.
Questions about exposure to academic paediatrics. There are differences between the nations with Scotland not having academic ST posts in academics.
If currently not full time, would you like the option to take work part time/career break/out of programme experience in the future?
Questions about work based assessments and whether they actually achieve/prove anything.
Questions on use of assessments -different deaneries have different policies on how many/extra achievements etc. before you can progress on
Questions regarding the influence of e portfolio on training.
To look in to the issues of moving of job every year which areas can't be covered by driving or travelling by the parent with child (indirectly affects the training by stress?)
Whether people had the chance of working in the sub specialty of their interest during ST1-3
Would you have liked to train in other deaneries or teaching hospitals for some months if given the opportunity?
Where you able to get a desired posting? Or where you made to do a posting you would rather not have done just to complete the numbers.
How people see the MRCPCH exam and what can be done to improve the pass rate
Communication between juniors and seniors, challenging situations (racism, bulling), mentoring
Question on being given options to work in subspecialty and if we are satisfied with exposure to specific area and confident in that area to move ahead as registrar.

2. Comments about the limitations of the questionnaire or difficulties answering
Aspirations may include working part-time as a paediatrician and part-time in academia/research/teaching.
I think it's hard to predict the future, so would have appreciated an option to answer 'not sure at present'.
I would like to work overseas but am flexible about the continent - drop down menu requires only 1 to be selected. I chose Africa to reflect my desire to work in a developing country.
I would like to be able to answer maybe, partly, etc. to some of the questions. my answers depend on more than yes or no
As a paediatric haematology trainee, I realise some questions don't provide answer options for me as my specialty is not on RCPCH grid. I note Paed Cardiology is not on the RCPCH grid but is provided for on the option list.
Sign post us to where else we can get further information if we wanted to
Situations keep changing. I personally would like to go back to full time training if circumstances are favourable. Hence, at this stage I am unsure whether I would be working full time or part time as a consultant. So an option of unsure or subject to change would be good.
The survey is too short and not diverse enough to be able to provide meaningful analysis. Too much text boxes for a small questionnaire. Should consider point scales
There are YES/NO questions which need to have an UNSURE/UNDECIDED option. E.g. Do you want to be a consultant....I am unsure of this. But have answered YES.
I am on career break, but not due to maternity or sickness, so that question was difficult to answer. I am on career break OOP to travel and to do the Diploma of tropical medicine
Your questions are very closed - at ST3 level it is hard to know exactly how I would like my consultant post to be! Also questions regarding time OOP not very easy to answer, especially as I am on OOPE!
3. Comments about training progress or experience
Do I wish to take time out of my career in future? Yes, I am going to do a research fellowship in paediatric oncology. Have I found it difficult taking time out? Yes, there has been little advice available to me and I have had to work hard to get my job.
Although I am grateful for the confidence I have in neonates after my extensive time in neonates as an ST1-3, I am concerned that I have a very neonatal heavy training for someone who does not want to apply for grid neonates.
Is it possible in the future to take 6 months out at a time to work abroad?
It would also be good to have more notice re rotations. For ST1-3 we knew the whole rotation at the start but from ST4 on we hear about each rotation just a short time before we change.
Support for SHOs in specialty posts.
There is a continuously increasing pressure on registrar expectations however from consultants are extremely high, without necessarily providing adequate support and minimal if not existing teaching. I also have big concerns regarding amount of training
Ways of improving training scheme
It will be a great help for trainees to be rotated in one area - rather than random placements all over EOE. This hinders work- family balance.
4. Other general comments
Why is paediatrics an under filled specialty? - Poorly staffed rosters, forced to do extra out-of-hours' work, poor long term prospects in terms of pay and resident consultant on-call, inflexibility in training (unable to get out-of-programme experience approved)
Any different subspecialty options which suit me, pay during breaks
The questionnaire is still quite linear along the MMC ST lines... there are some of us that have still not joined an MMC ST post (whether this is fixed term or run-through) but have lots of other experience... I feel that RCPCH is not particularly great.

12. Discussion

Background and the introduction of MMC

Historically, despite very long hours, career opportunities in paediatrics have been relatively good for those completing their training with a considerable expansion in the number of consultant posts in recent years. That situation is currently changing.

In the 1990's a unified registrar grade was introduced[iv]. At around the same time the "New Deal" was introduced which, for the first time, created a financial disincentive for hospitals to have rotas where trainees worked excessively long shifts and hours. In 1998 the Council of the European Parliament agreed the principle of the legislation for the European Working Time Directive (EWTD) which would reduce the average number of hours which doctors in training could be expected to work each week. There was an interim reduction in hours to 58 hours per week in August 2004, to 56 hours per week in August 2007 and subsequently to 48 hours a week in August 2009. The legislation has applied to career-grade doctors since it was introduced.

2005 saw the introduction of Modernising Medical Careers (MMC) which would replace the traditional medical grades of House Officer, Senior House Officer and Registrar with the grade of specialty trainee. Successful completion of this programme enables the trainee to obtain the certificate of completion of training (CCT) and eligibility to apply for consultant posts.

Previous cohort studies

There have been previous cohort studies of medical graduates where career choices have been assessed at the time of graduation and throughout training period. These preferences have been compared with the career posts that the trainee obtained and the factors resulting in these choices have been analysed[v, vi, vii, viii, ix, x]. The introduction of MMC presented the RCPCH with a unique opportunity to track a cohort of paediatric trainees and to study their career pathways and intentions which we believe will be invaluable in influencing both the current training programme and workforce planners.

Changes in the paediatric workforce

In 2012 there were 3878 registered paediatric trainees and 3418 consultants[xi]. The ratio for paediatrics was, therefore, 1 trainee to 0.94 consultants. This is not a sustainable ratio.
Whilst the total number of Specialty, Staff and Associate Specialists grades (SSASG) had fallen from 1,322 posts in the UK in 1999 to 1,227 in 2007, there had been a 4.7% increase between 2007 and 2009 to 1,285 posts[xii]

Issues raised by the RCPCH Cohort Study

- At an early stage in their training, 28% of STs had reservations about choosing paediatrics with the two most common reasons stated as a poor work life balance and the intense on-call commitments. It is of concern in this respect therefore that 37.1% of this cohort of trainees stated that they had little or no guidance in developing their career.

- The apparent mismatch between the type of post trainees aspire to and the roles that exist within the consultant workforce. It is time for the RCPCH to take stock and look at what the future models of care are likely to be for not only general paediatrics as it has done in Facing the Future, but in more detail for subspecialist and community services so that we are training the right numbers and the right kind of doctors. The survey revealed the limited exposure that trainees have to

community paediatrics – only 4.7% of their rotations in ST1-3. This may be a factor influencing future choice of subspecialty. Future work will also compare the subspecialty aspirations of trainees with the workforce planning and training requirement of RCPCH College Specialist Advisory Committees. In addition where paediatric trainees aspire to work in subspecialties e.g. paediatric cardiology which are part of the remit of other Colleges, it is important that we highlight these findings to the RCP and others.

- The attrition rate for STs over the first three years of their training is 15%. It is of considerable concern that such a high proportion of trainees have decided to leave the programme. These data have significant implications for workforce planning in paediatrics and are informing our strategy accordingly[xiii].

- So that we are better able to understand the reasons why trainees left paediatrics we contacted all those respondents: 26 agreed to take part in a follow-up telephone survey in the autumn of 2011 and subsequently 15 of those were interviewed. Four were in paediatric related clinical training programmes and 7 were in non-paediatric related clinical related programs and 4 no longer in training. 4 trainees had left in ST1, 4 in ST2, 6 in ST3 and 1 in ST4. Of those 39 no longer in paediatric training 29 (74.4%) were female, and there does not, therefore, appear to be a preponderance of females leaving the specialty. The average length of training was 27 months. The average length of time between deciding to leave paediatrics and no longer working in specialty was 8.6 months. The most common reason for this decision was that training in another specialty seemed to be more attractive then continuing in paediatrics. The most commonly stated reasons for preferring a different specialty were a better work-life balance, more variety of work and a more holistic approach to patient treatment. The most commonly expressed reservations about paediatrics were rota intensity, staffing pressures, reluctance to continue to work in neonatology and on-call commitments. On a positive note all 15 respondents said that they would recommend paediatrics to other doctors intending to train in this specialty.

- Over the first two years of this survey there has been a marked decrease in the trainees confidence in obtaining a consultant post with 11.5% stating that they were confident (fallen 0.8% since ST1) and 30.3% stating that they were not confident (an increase of 7% since ST1). The most common reasons given were lack of available consultant posts, competition for grid training posts and concerns that they would not complete training.

Summary

In summary, this survey has provided a unique insight into progress and aspiration of those doctors entering paediatric training. The RCPCH continues to recommend that services should be provided by trained doctors and the majority of our trainees aspire to consultant posts. We will continue to review these issues as paediatrician's progress through their training.

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