

Summary report

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# Wellcome Trust Clinical Career Tracker

Results of wave 3 (2013)  
September 2014



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## Introduction

In 2013, the Evaluation Team at the Wellcome Trust launched the third wave of the Wellcome Trust Clinical Career Tracker (WTCCT), an online survey that enables us to track and understand the career intentions, motivations and destinations of key cohorts of Wellcome Trust-funded clinical researchers. Collecting data on the training experience and subsequent career choices of those we fund provides important evidence to inform future Wellcome Trust funding mechanisms and strategy.

## Methodology

Each year, grantholders in the final year of their award and past grantholders receive a short online survey asking about their career intentions and development. New cohorts are added to the Tracker each year as grantholders enter their final year, while former awardees continue to receive the survey annually. Cohorts of current and former recipients of the following types of Wellcome Trust funding are included in the WTCCT:

- **Clinical PhD Programmes** – provide support for aspiring academics wishing to undertake rigorous research training in a structured environment.
- **Research Training Fellowships** – provide support for medical, dental, veterinary or clinical psychology graduates who hope to have a long-term career in academic medicine and wish to undertake a higher degree.
- **Postdoctoral Training Fellowships for MB/PhD Graduates** – provide support for newly qualified MB/PhD graduates, or those who undertook a PhD during or before starting their medical degree, to make an early start in developing their independent research careers.
- **Intermediate Clinical Fellowships** – provide support for outstanding medical, dental, veterinary or clinical psychology graduates to continue their research interests at a postdoctoral level and work towards independence.
- **Senior Research Fellowships in Clinical Science** – provide support for clinical investigators to further develop their research potential and to establish themselves as leading

investigators in clinical academic medicine.

- **Veterinary Research Entry Fellowships** (scheme is now closed) – provided support for veterinary graduates to undertake research leading to a Master's degree.
- **Integrated Training Fellowships for Veterinarians** (scheme is now closed) – provided up to six years' support to allow veterinary graduates to combine undertaking a PhD with clinical training.
- **Veterinary Postdoctoral Fellowships** (scheme is now closed) – provided support for veterinary postdoctoral researchers to undertake high-quality research and develop their independence.

Grantholders who receive funding via these schemes are included in the WTCCT as they are strategically important funding mechanisms for the Wellcome Trust and the UK more broadly and are intended to have a 'multiplier effect' by building clinical research capacity and enabling knowledge and skills to be shared with collaborators and across the research community. We intend to track individuals in each cohort for a minimum of five years, starting in their final year of funding on the relevant grant. In this way, as the cohorts build over time and our information on their career paths grows, we hope to understand the challenges and opportunities faced by former funding recipients and feed our findings into future funding strategy.

Respondent data are analysed by type of award, cohort and Wave:

- 'award' refers to the type of grant received
- 'cohort' refers to the financial year in which the researcher received their award
- 'wave' refers to the survey year from which the data have been taken.

In wave 3 of the WTCCT (October 2013), overall survey participation was high, with a total response of 80 per cent across all the cohorts (see tables 1–6), though there is some variation across scheme types. A key challenge in any kind of panel-based cohort tracking is to ensure that the response at each investigation point remains high; we are working with those we fund to secure high levels of participation.

**Table 1**  
**Response by clinical PhD students – wave 3**

Cohort	Number of grantholders	Number of responses
2007/08	25	21
2008/09	34	26
2009/10	38	28
2010/11	32	21
<b>Total</b>	<b>129</b>	<b>96 (74%)</b>

**Table 2**  
**Response by Research Training Fellowship recipients – wave 3**

Cohort	Number of grantholders	Number of responses
2006/07	29	22
2007/08	31	23
2008/09	41	32
2009/10	34	28
2010/11	39	32
2011/12	39	34
<b>Total</b>	<b>213</b>	<b>171 (80%)</b>

**Table 3**  
**Response by Intermediate Clinical Fellowship recipients – wave 3**

Cohort	Number of grantholders	Number of responses
2005/06	15	13
2006/07	6	5
2007/08	9	9
2008/09	6	6
2009/10	6	6
<b>Total</b>	<b>42</b>	<b>39 (93%)</b>

**Table 4**  
**Response by recipients of Postdoctoral Training Fellowships for MB/PhD Graduates – wave 3**

Cohort	Number of grantholders	Number of responses
2005/06	2	2
2006/07	4	4
2007/08	3	3
2008/09	4	4
<b>Total</b>	<b>13</b>	<b>13 (100%)</b>

**Table 5**  
**Response by Senior Research Fellowship in Clinical Science recipients – wave 3**

	Number of grantholders	Number of responses
<b>Total (various years)</b>	<b>20</b>	<b>14 (70%)</b>

**Table 6**  
**Response by recipients of veterinary fellowships – wave 3**

	Number of grantholders	Number of responses
Veterinary Research Entry Fellowships	13	10
Integrated Training Fellowships for Veterinarians	2	2
Veterinary Postdoctoral Fellowships	3	3
<b>Total</b>	<b>18</b>	<b>15 (83%)</b>

All data presented in this summary are based on the cohorts who responded, unless otherwise stated. Due to the relatively small cohort sizes, all charts and tables reporting survey data show raw numbers unless otherwise specified.

When appropriate, and for illustrative purposes, participants' verbatim comments have been included in this report to support the data and illustrate emerging themes and issues; these are anonymised and referenced according to the type of grant received by the individual.

## Overarching themes

There are some broadly consistent themes across all funding schemes. For early-career academic researchers, clinical PhD students and Research Training Fellows, while more than 80 per cent of respondents reported they intend to combine academic and clinical activities, the evidence suggests that only around half currently do and the rest continue conducting clinical activities only.

When asked what support (other than research grants) they considered would be most valuable in encouraging them to continue in academic research, current and former early-career academic researchers mentioned receiving career mentorship as vital for future success. They also mentioned flexibility and protected research time, support from the NHS and their academic/clinical departments and greater recognition of the academic clinician career path.

Balancing an academic career with clinical duties and training – perceived as doing two full-time jobs – has been mentioned as the biggest challenge to the pursuit of a career in academic research, alongside lack of appropriate resources and institutional support, perceived lack of job security, and regulatory burden from the NHS.

The former grantholders were asked if they would have done anything differently in their career. While the majority of those who answered the question were happy with the decisions and choices made, some would have improved their career by planning better, and seeking mentorship and collaborations.

## Clinical PhD students: career paths and aspirations

- Of the 129 clinical PhD students, 96 completed the survey (74% response).
- Of these 96 clinical PhD students, 57 reported that they had completed their award.
- The majority of current clinical PhD students indicated that they would like to combine academic research with clinical activities in their future career (36 out of 39, 92%); one mentioned that they planned to leave both academic research and clinical activities for the biotechnology/ pharmaceutical industry and two did not know what they wanted to pursue.
- Of the 57 former award holders:
  - the majority were in full-time employment (89%, n = 51)
  - the highest proportion (51%, n = 29) were combining some academic research with clinical activities (21 men and eight women)
  - 22 (29%) were working only as clinicians (13 men and nine women)
  - five (9%) were conducting academic research only (two men and three women)
  - one woman had left both academic research and clinical activities.
- Of the 22 former award holders who were doing clinical activities only, the majority (82%, n = 18) stated that they intended to return to academic research at a later stage and four were unsure about whether they would return to academic research.
- When asked what support (other than research grants) they considered would be most valuable in encouraging them to continue in academic research, current and former clinical PhD students overwhelmingly mentioned mentors. They also mentioned flexibility and protected research time, support from the NHS and their academic/ clinical departments, and greater recognition of the academic clinician career path (see box A).
- The biggest challenges to the pursuit of a career as a successful clinical academic were perceived by clinical PhD students to be balancing research with clinical commitments, obtaining funding, lack of posts for clinical academics, and challenges associated with the NHS such as bureaucracy and a failure to recognise the value of clinical academics (see box B).

### Box A

## Support that would be valuable in encouraging clinical PhD students to continue in academic research

### Comments from former clinical PhD students

*“A mentor who can demonstrate effective combination of research/clinical activities and family.”*

*“Flexibility – need to maintain clinical and research career side by side. Long term prospects – NHS consultant job availability inclusive of research. Job security.”*

*“There are very limited number of options for individuals outside the PhD/clin lectureship pathway. I finished my PhD and due to the lack of an established clin/lect pathway ended up almost completing my clinical training and then trying to get back to full time research. I think clinical PhD programmes needs to be established with a view of continuity for those who are keen to continue academic research.”*

*“Some buy in from the NHS to actually support me in taking the contractual time I am due for research and academic activities.”*

*“NHS Trust recognition of value of clinical academics. I think this is appreciated in my trust.”*

### Comments from current clinical PhD students

*“A career mentor. Reassurance that consultant/senior lecturer jobs exist which enable a mix of clinical and research activity.”*

*“A system and infrastructure where post-PhD clinician academics can be supported in continuing research. This would include allowing academic trainees to complete the remainder of their clinical training in one teaching hospital rather than being rotated round District Generals where it is impossible to continue research. The Deaneries/ Training Programme Directors/ARCP panels need to be more accommodating to academics. Currently barriers are put up by non-academic clinicians who feel academics are not meeting clinical training requirements (in my view this is actually not true, but the panels seem to have this perception). Having more academics on ARCP panels is important.”*

## Box B

### Biggest challenges to the pursuit of a career as a successful clinical academic

#### Comments from former clinical PhD students

*“The inadequate number of posts that allow simultaneous academic and clinical training for trainee psychiatrists.”*

*“Difficulty in achieving the requirements of clinical training whilst maintaining sufficient research activities to enable a return to academia in the future. Funding. Balancing clinical training requirements: particularly having to tick lots of training boxes that have little or no relevance to future practice as a clinical academic. Training in genetics/genomics not recognised outside of clinical genetics specialty.”*

*“Managing time between research and clinical activities, and having appropriate resources and support to conduct clinical studies.”*

*“The need to publish well and early, ideally before the DPhil is complete. Without this, it can be very difficult to be in a position to apply for further funding before CCT. The vast gap between clinical and research salaries is also necessarily a factor that will sway a lot of capable researchers.”*

*“The NHS and its indifference to value of academic career.”*

#### Comments from current clinical PhD students

*“Balancing the demand for excellence in the operating theatre with excellent research, all in the context of funding bodies who tacitly seem to think continuing clinical work is a ‘distraction’ and hence make ICF ridiculously research time-heavy. The powers that be need to wake up here.”*

*“Being pulled in two directions (demands of covering on call by hospital managers vs need to publish for university). There needs to be a conscious decision when creating posts to support clinical academics in this.”*

*“Needless bureaucracy from NHS, deanery training programme, Royal college and University system, and ethics committees. Politics of academia. These are the principal reasons I would give up academia and focus on clinical activities.”*

*“Lack of posts for clinical academics – that will allow sufficient time for research without overburdening the clinical workload.”*

## Intentions

At the time of wave 3, we knew current and intended sectors of work for 38 former clinical PhD students. Using data from waves 1–3, the table below shows intentions and actual career sectors. A large number (n = 32) originally intended to continue in both academia and clinical activities, but post-award this number was only 20, while the number pursuing clinical activities only was a lot higher in reality.

**Table 7**  
**Clinical PhD students – career plans and actual careers post-award**

	Career plans	Actual careers
A mixture of academic and clinical activities	32 (84%)	20 (53%)
Academic research only	2 (5%)	3 (8%)
Clinical activities only	1 (3%)	14 (37%)
Don't know	3 (8%)	0
Left both academia and clinical work (at the time of wave 3)	0	1 (3%)
<b>Total</b>	<b>38</b>	<b>38</b>

## Research Training Fellows: career paths and aspirations

- Of 213 Research Training Fellows, 171 completed the survey (80% response).
- 89 Research Training Fellows reported that they had completed their award, of whom 67% (n = 60) were men and 33% (n = 29) women. The majority (90%, n = 80) were in full-time employment.
- Of 89 former award holders:
  - the highest proportion (58%, n = 52) were combining some academic research with clinical activities (38 men and 14 women)
  - 28 (31%) were working only as clinicians (19 men and nine women)
  - seven (8%) were conducting academic research only (three men and four women)
  - two (2%) had left academia and clinical duties.
- Of 28 former Research Training Fellows who were doing clinical activities only, the majority (75%, n = 21) intended to return to academic research at a later stage (see box C for comments) and six were unsure about returning to academic research due to difficulties with assuring further funding, perceived lack of job security and personal circumstances (see box D for comments).

### Box C

## Research Training Fellows who intend to Return to academic research

### Comments from former Research Training Fellows

*“I thoroughly enjoy clinical medicine and academic research, and have a strong desire to pursue both.”*

*“I have returned to complete my clinical training and get CCT but I intend to return to academic research after this.”*

*“I wish to pursue an NHS consultant career in a University centre with academic interests. I do not think it is possible to achieve both clinical and academic excellence in craft specialities.”*

*“I am currently working as a consultant for the NHS. I am trying to publish as many papers as possible in order to apply for an academic post at a later stage.”*

*“My current clinical position does not have scheduled research time so I conduct research in my spare time. I hope to have an official clinical and research position in the future – they don’t exist as my clinical level.”*

*“Enjoyed research but found it hard once I was pregnant and had babies to fit in with family life as reality of academic life is 11 hour days.”*

### Box D

## Research Training Fellows who were unsure about returning to academic research

### Comments from former Research Training Fellows

*“Still writing PhD up. Looking for consultant jobs. If one with academic sessions was available, I would conduct research, but I am not exclusively looking for an academic job.”*

*“With time the unpleasant memories of my DPhil may fade.”*

*“Enjoy academic and clinical research – worries about job security.”*

*“It will depend on research/clinical training opportunities.”*

- All former Research Training Fellows were asked what support other than research grants they would consider most valuable in encouraging them to continue in academic research. The following were mentioned most frequently:
  - mentoring from senior colleagues or academics outside host institutions
  - protected research time
  - long-term support/tenure
  - institutional support
  - support for personal commitments.
- The majority of current Research Training Fellows (69 out of 82, 84%) indicated that they would like to combine academic research with clinical activities in their future career, with only a handful intending to conduct academic research only (n = 5) or clinical work only (n = 1).
- At the time of wave 3, we knew current and intended sectors of work for 51 former Research Training Fellows. The majority (n = 42) initially intended to continue in both academia and clinical activities. However post-award only 23 pursued this career option while a high number became full-time clinicians with no academic duties.

**Table 8**  
**Research Training Fellows – career plans and actual careers post-award**

	Career plans	Actual careers
A mixture of academic and clinical activities	42 (82%)	23(45%)
Academic research only	4 (8%)	5 (10%)
Clinical activities only	3 (6%)	21(41%)
Don't know	2 (4%)	0
Left both	0	2 (4%)
<b>Total</b>	<b>51</b>	<b>51</b>



## Intermediate Clinical Fellows: career paths and aspirations

- Of 42 Intermediate Clinical Fellows, 39 completed the survey (93% response).
- 24 Intermediate Clinical Fellows reported that they had completed their award, of whom 67% (n = 16) were men and 33% (n = 8) women.
- Of the 24 former Intermediate Clinical Fellows:
  - 23 (96%) were in full-time employment and one was working part-time
  - 21 (86%, 15 men and six women) were combining some academic research with clinical activities, three were carrying out academic research only (14%, two women and one man)
  - the majority were continuing to receive mentorship; 13 through their lab sponsor/supervisor, two from the Academy of Medical Sciences and five receiving other forms of mentorship.
- Of the 15 current Intermediate Clinical Fellows, 11 (six men and five women) expressed their intention to combine academic and clinical duties, three (two women and one man) would like to dedicate their time to conducting academic research only, and one was unsure about future career plans.
- The former fellows were asked what support, other than research grants, they would consider most valuable to encourage them to continue a career in academic research. Mentoring, support from colleagues and job security were mentioned most frequently (see box E).

### Box E

## Support that would be valuable in encouraging Intermediate Clinical Fellows to continue in academic research

### Comments from former Intermediate Clinical Fellows

*“A supportive clinical environment with sufficient resources to adequately cover my time away from the clinic. A senior mentor figure specifically within my sub-specialty who could provide support for developing other important aspects of my career.”*

*“Mentoring, enthusiastic colleagues (both clinical and research) and, if possible, more explicit feedback from unsuccessful grant applications to allow the best possible response in terms of ideas and future applications.”*

*“Career support within the University system and appropriate support in managing/balancing research and clinical responsibilities. In a stretched NHS, there is ever mounting pressure to do more clinical work even though I am funded by Wellcome for research primarily. Any extra clinical work above 2 PAs should be remunerated by the NHS Trust, but this is not something that has been forthcoming. An alternative would be to drop clinical activities, but because of NHS staff shortages this isn't possible because otherwise coverage of emergency (on-call) activities could not be achieved. This is a big concern for me going forward in my Senior Fellowship, and it is difficult to negotiate these terms locally. Some help directly from Wellcome would be appreciated if possible.”*

*“Opportunity to secure bridging funds and mentorship. Assistance with flexible working pattern. Improved veterinary research opportunities with combined clinical work. Better job security.”*

- The former Intermediate Clinical Fellows were asked if they would have done anything differently in their career (see box F). While the majority of those who answered the question were happy with the decisions and choices made, some fellows would have improved their career by planning their career better, seeking mentorship and collaborations.

## Box F

### What Intermediate Clinical Fellows would have done differently in their careers

#### Comments from former Intermediate Clinical Fellows

*“My early career path lacked focus, I would have benefited by discussing my career path with senior academics or with a mentor.”*

*“Focussed on publications earlier in my fellowship so I would not have to look for bridging support while getting the papers out, in order to move on to my next fellowship. Identify the right lab or environment to do the work – so that good collaborators and supervisors are always available.”*

*“Planned funding during/after ICF differently, gap of grant funding, loss of momentum, only just catching up with almost 12 months gap, huge impact on productivity and continuity including having had to build up new team.”*

*“With different advice I would have been more outward looking in my research career from an earlier date. The importance of building research links and engaging with others in the field was something I only came to more recently. I would have also started public engagement work at an earlier stage. I might have been more focused on my lab work & spent less time doing the many other things I’ve been asked to do.”*

*“I would have adopted a much narrower approach, focusing only on publication rather than other activities I also thought were important e.g. national/international works/reviewing/students as I increasingly feel this is the only output that really counts at the end of the fellowship with SCF applications. I tried to do everything and would not recommend that approach!”*

*“Dedicated more time to ‘affiliated’ research activities (e.g. membership of committees etc.) rather than intense bench-side research, analyses and paper-writing.”*

*“I think that retrospectively, doing my PhD during my undergraduate MBBS degree was perhaps a little too early. While my PhD was in a related sphere to my current research and furnished me with skills I would not otherwise have had – the disconnection between what I did previously and do now probably has disadvantaged me in terms of relative career stage to individuals of a similar age to myself.”*

Current and former fellows were asked what they perceive to be the biggest challenge(s) to the pursuit of a career as a successful clinical academic.

## Box G

### Biggest challenges to the pursuit of a career as a successful clinical academic

#### Comments from former Intermediate Clinical Fellows

*“It’s a very competitive environment, and a lot of senior academics are not very good mentors. So, it can take a long time to find out for yourself the most effective ways of developing your career. Job instability & uncertainty about the future. Working harder & earning less money than my NHS colleagues.”*

*“At times the traditional UK clinical academic politics and intimidation (and absence of encouragement) by senior relative to more junior colleagues. Over time this gets more difficult. The particular pressures that arise in terms of (lack of) equality and diversity in UK clinical science.”*

*“The transition from intermediate fellow to senior fellow which has to be done within 4 years (move from discovery journal publications as first author to senior author in some fields are more difficult) – integrating clinical and research. This is a particular challenge for me given that my research is primarily basic science – hence my international competitors are not medics (and therefore can spend 100% of their time on research).”*

*“These comments predominantly relate to establishing oneself as an independent investigator, typically after a very good experience in doctoral research: Lack of a supportive peer culture within which to address any perceived vulnerabilities of one’s own; Lack of structured approach to appreciating organisational psychologies and how to operate most effectively within them; Clinical academic interview panels tend to feel most comfortable with applicants whose methods they have personal experience of, the ‘unusual skill set’ may be scientifically very important, but can be penalised as a result. The Catch-22 of the track record: Best chance of getting intermediate stage funding by staying close to what you have shown you can do already. However in senior fellowship applications this can be held against you as the ‘bullet point headline’ is not perceived sufficiently distinct from original parent group (even if in practice this leads to synergy rather than overlap). Specific post-PhD/Intermediate level ‘diversification’ grant funding would be a huge help to overcome this. Costs/provision of childcare, why don’t funders look at providing subsidised childcare facilities near major academic centres for researchers?”*

## Postdoctoral Training Fellows (MB/PhD Graduates): career paths and aspirations

- All Postdoctoral Training Fellows approached to participate in the study completed the survey (n = 13, ten men and three women).
- Four of the 13 reported that they had completed their award (three men, one woman).
- All four were employed full-time, pursuing a mixture of academic and clinical activities.
- All four had also expressed a desire to continue pursuing both in previous waves of the Clinical Career Tracker.
- All nine who were still on award mentioned that they intended to pursue a mixture of academic and clinical activities once they finished their award.
- Current and former fellows were asked what support (other than research grants) they considered would be most valuable in encouraging them to continue in academic research. The most frequently mentioned themes were support from mentors and protected research time (see box H).
- The biggest challenges to the pursuit of a career as a successful clinical academic were perceived to be obtaining funding and clinical commitments (see box I).

### Box H

## Support that would be valuable in encouraging Postdoctoral Training Fellows to continue in academic research

### Comments from former Postdoctoral Training Fellows

*“The possibility of a permanent job.”*

*“Commitment from mentors to carry work on with their research staff pending my return to more formal research activity.”*

*“Support of my peers and mentors.”*

*“Educational courses incl. distance learning, travel grants.”*

### Comments from current Postdoctoral Training Fellows

*“Appropriate academic department/research facilities. Dedicated time for academic research (protected from clinical work). Academic mentor.”*

*“Mentorship from experienced clinical researchers and a clear career pathway that is supported”*

*“Advice on the timelines of applications”*

### Box I

## Biggest challenges to the pursuit of a career as a successful clinical academic

### Comments from former Postdoctoral Training Fellows

*“Some clinical specialties would require more than 20% time spent in them to allow continued clinical credibility and substantive grants from Wellcome/MRC mandate an 80/20 split.”*

*“Clinical commitments and ensuring you are a capable and well trained physician. The competition. The main problem with them is that in the international pursuit of findings, many of the competition don’t have clinical commitments.”*

*“Curiously (because of the associated health burden), to promote funding bodies interest and investment in mental health research and clinical neurosciences balancing the often conflicting demands of the clinical and academic roles ever increasing management/admin tasks.”*

### Comments from current Postdoctoral Training Fellows

*“Lack of understanding from body responsible for post-graduate medical training regarding the special training needs of trainees pursuing a clinical academic career. Lack of dedicated/protected time for academic activities.”*

*“Obtaining further research funding in a highly competitive environment.”*

*“The biggest challenge is continuing the research despite interruptions of clinical speciality training.”*

*“Uncertainty – it’s a very uncertain career for 10 years post-CCT for most people, meaning that over half of one’s working life has been spent without a definite future – Financial challenge – medical academics give up substantial salary to pursue their academic career – spending longer in training, less time in banded jobs, reduced chance of merit awards post-CCT – Multi-tasking is often inefficient and always stressful. Single track training would avoid these task-switching costs (but has downsides of its own)”*

*“The desire to have a career break at some stage for personal reasons without the danger of compromising my career”*

*“Managing progression of clinical career alongside continuity of research”*

## Senior Research Fellows in Clinical Science: career paths and aspirations

- Of 20 Senior Research Fellows, 14 completed the survey (70% response). All of those who responded were men.
- Of those who responded, 11 were still on their award; three had finished their award.
- Of the 11 still on their award, nine expressed an intention to combine clinical activities and an academic career; two expressed an intention to pursue academic research only.
- Of the three who had finished their award, two were employed full-time, pursuing a mixture of academic and clinical activities, and one was employed full-time in academia.
- When asked what support (other than research grants) they considered would be most valuable in encouraging them to continue in academic research, current fellows mentioned a reduction in administrative burdens and bureaucracy, protected research time, and greater support from the NHS (see box J).
- The biggest challenges to the pursuit of a career as a successful clinical academic included the bureaucracy and the regulatory burden of the NHS and funding (see box K).

### Box J

## Support that would be valuable in encouraging Senior Research Fellows to continue in academic research

### Comments from current Senior Research Fellows in Clinical Science

*“A reduction in the admin burden associated with clinical and animal based research. A narrowing of the gap that has emerged in rewards for clinicians versus clinical academics.”*

*“Continuing ability to protect research time, access to high quality shared equipment, freedom to innovate and take risks.”*

*“A research body that is willing to support the risks and timelines necessary for innovation in translational neuroscience, including the vision of the Wellcome Trust and University support. Active mentorship, independent of University line management. Clarity over promotion. Greater pressure from major funding bodies (WT, MRC) on the NHS and DoH and their governance arrangements, to enable rather than stifle clinical research. The UK continues to deteriorate rather than improve in this regard.”*

*“Protection of research time.”*

### Box K

## Biggest challenges to the pursuit of a career as a successful clinical academic

### Comments from former Senior Research Fellows in Clinical Science

*“Appointing excellent staff and students.”*

*“Inflexibility of modern day training. The WT panels have now been amalgamated. The non-clinicians do not understand the career track of the clinicians. I don't think the clinicians should plead a special case – but they shouldn't be compared at the early stages of their career to scientists who have had an extra 5 years training. In the past the WT had different panels – and the system was fairer.”*

### Comments from current Senior Research Fellows in Clinical Science

*“Beyond the predictable personal time restrictions having more support for the administration of research would help greatly.”*

*“Money and time. And bureaucracy.”*

*“A creeping regulatory burden of the NHS, which takes ever more time and tasks, with little genuine increase in safety or clinical excellence. The regulatory burden for working with humans, especially patients, where hundreds of hours are wasted during preparation, running and reporting of even the lowest risk studies. Life as a clinical academic is tremendously rewarding and exciting, and it is a privilege to be in this position. It can be hard to remember this sometimes, when running what amounts to two full time jobs.”*

*“Obtaining grant funding in the present climate.”*

*“Funding, both its acquisition and its brevity which tilts the outcomes to short-termism in terms of papers (even high profile papers commonly don't really advance the world) rather than thinking what can be left behind that is more substantial, meaningful, long-lasting. If we were designing the system from scratch today, I don't think we would have peer review grant funding and manuscripts in quite the same way.”*

*“Maintaining compliance with changing standards applied to clinical care at the same time as conducting and leading cutting edge research. Maintaining and raising the resource required to conduct cutting-edge clinically based studies.”*

*“Time pressures. Increasing complexity of the regulatory framework.”*

## Veterinary fellows: career paths and aspirations

- Of the 15 recipients of veterinary fellowships who responded to the survey, three were still on their award and 12 had finished. Two of those still on their award expressed an interest in pursuing a mixture of academic and clinical activities and one in continuing their career in academia (see box L).

### Box L

#### Future career plans

##### Comments from current veterinary fellows

*“To use both my scientific and clinical specialist skills/ training, for variety, and because this balance is what I have always aimed for.”*

*“I intend to continue the research to work towards a PhD and hopefully later post-doctoral research. I have an interview for a Research Training Fellowship with Wellcome.”*

*“I am a partner in a veterinary practice so will be undertaking clinical work in this setting. However I hope that I will principally be an academic researcher if a suitable position becomes available as I really enjoy all aspects of this work.”*

- Of the 12 who had finished their award (six men and six women), six were carrying out academic research only (two women and two men), three were performing clinical activities only (two women and one man) and two were combining some academic research with clinical activities (both men).
- Current and former fellows were asked what they perceive as the biggest challenges to the pursuit of a career as a successful clinical academic (see box M).

### Box M

## Biggest challenges to the pursuit of a career as a successful clinical academic

##### Comments from current veterinary fellows

*“Lack of job security. Remaining clinically skilled. Finding the right support (bioinformatics, laboratory assistance, mentoring). Time management and prioritising research questions. Securing funding and staying ahead of competition. Finding time to write good grants and papers. Work-life balance.”*

*“There are always specific clinical and teaching duties which limit the time for research.”*

*“Finding a position in the current economic climate.”*

##### Comments from former veterinary fellows

*“The next stage in my career – either a post-doc or early fellowship – will be quite difficult. I anticipate changing fields in order to maximise my learning, but this will in itself be a challenge and may reduce my research output for a year or so.”*

*“Securing funding for future fellowship and maintaining expertise in both research and clinical work. Obtaining an appropriate post within a university to enable both academic and clinical career paths to be followed.”*

*“Availability of grants for clinical training alongside basic research training.”*

*“Finding a conducive environment.”*

*“Given time to submit for funding and short term contracts, no long term security.”*

*“Support from senior colleagues both in lab and clinical settings.”*

*“To actually bring together the One Health concept from the veterinary side.”*

*“If one wants to continue with clinical practice and find enough time to perform good research, this can be difficult to juggle. I find as a vet in research that one is often perceived in the middle ground; not a basic scientist or a true clinician, which can make it difficult to be taken seriously as either.”*

The former fellows were asked what support other than research grants they would consider most valuable to continue a career in academic research. Mentoring, support from colleagues and continuing funding were mentioned most frequently (see box N).

#### Box N

### Support that would be valuable in encouraging veterinary fellows to continue in academic research

#### Comments from former veterinary fellows

*“Having enough time outside clinics to perform good research.”*

*“Post-doctoral fellowships.”*

*“If the Wellcome Trust had continued to fund the 6 year intercalated fellowships providing support to complete a PhD and further clinical training (residency), this would have been a huge incentive to continue in academic research.”*

*“Cross over research between clinical and research themes.”*

*“Support from senior colleagues.”*

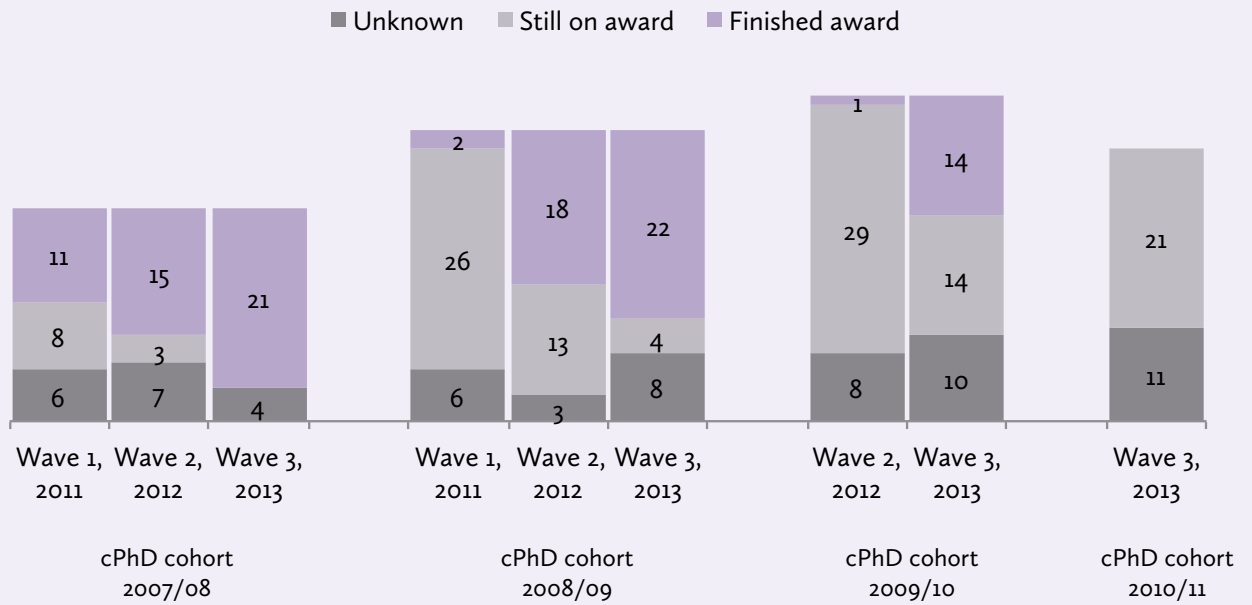
*“Assistance with membership fees from the RCVS in order to be able to keep up clinical skills which I believe is useful in the long run.”*

*“Proper facilities to carry out in vivo studies.”*

# Appendix A: Clinical PhD students

## Award status

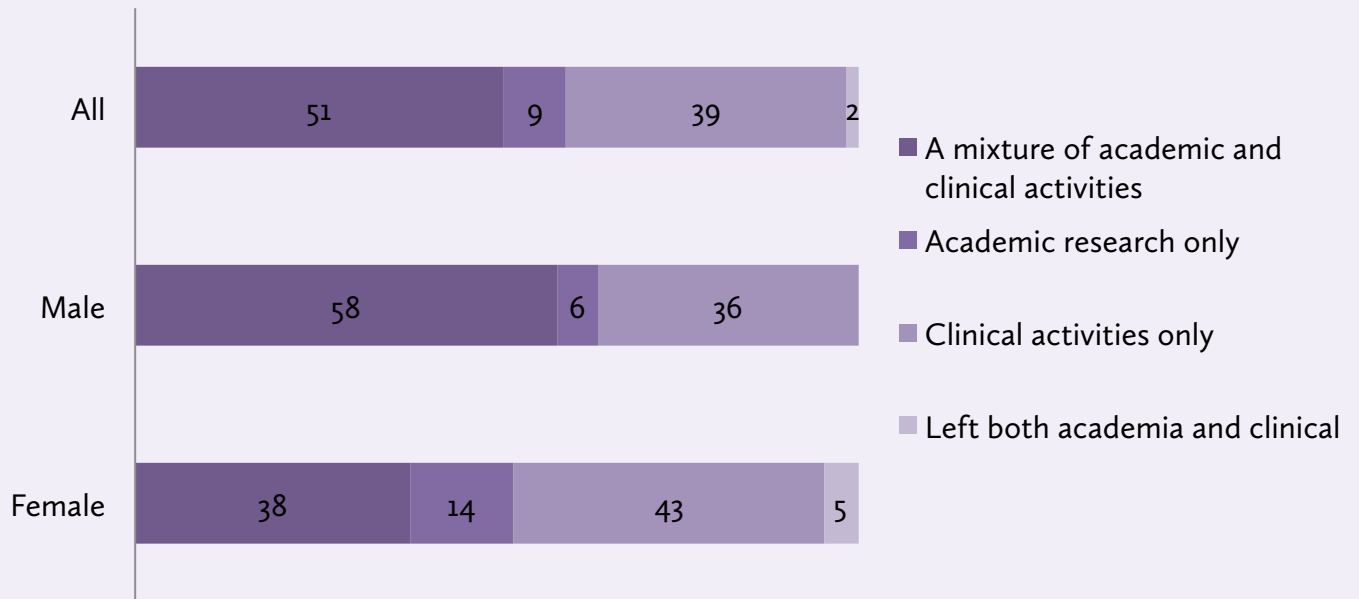
### Clinical PhD students – award status



Base: Clinical PhD Programmes – cohorts 2007/08 (n = 25), 2008/09 (n = 34), 2009/10 (n = 38), 2010/11 (n = 32)  
 Q: Are you still on award or have you finished your award?

## Working pattern – all cohorts

### Former clinical PhD students – working pattern (%)



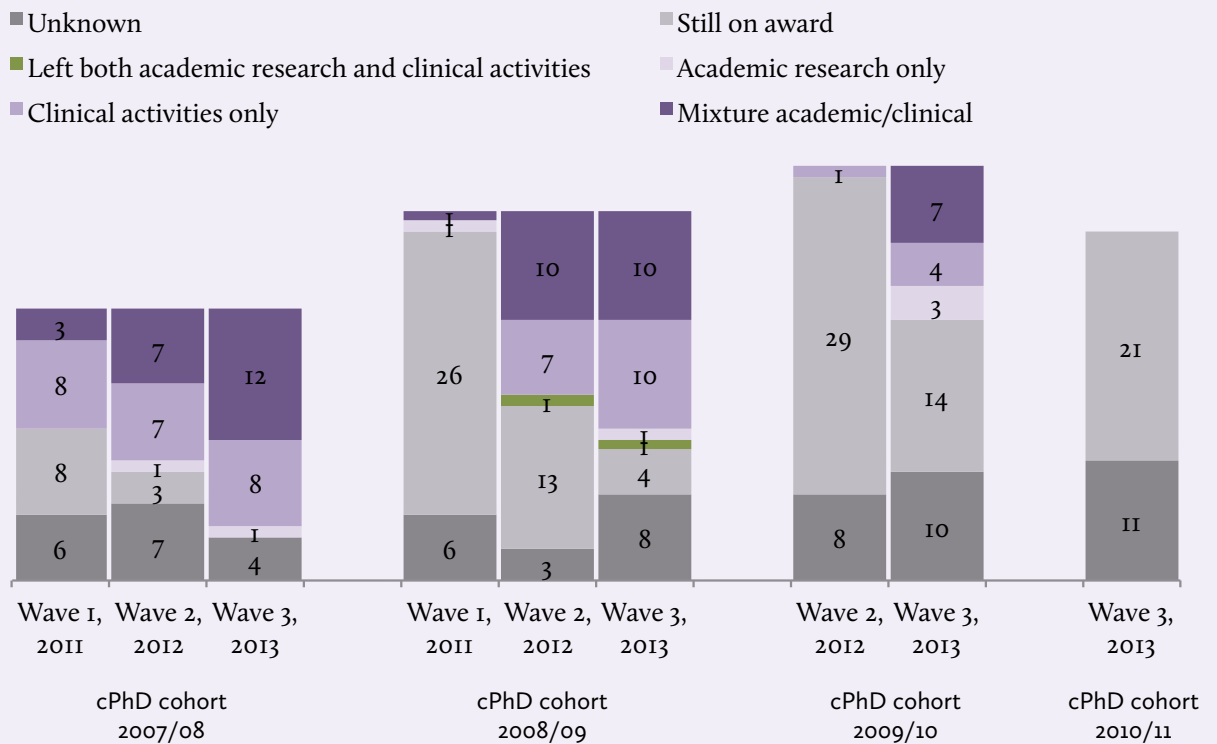
Base: Clinical PhD Programmes – all former Clinical PhD students (n = 57); male, n = 36; female, n = 21

Q: Are you still on award or have you finished your award?



## Working pattern by cohort

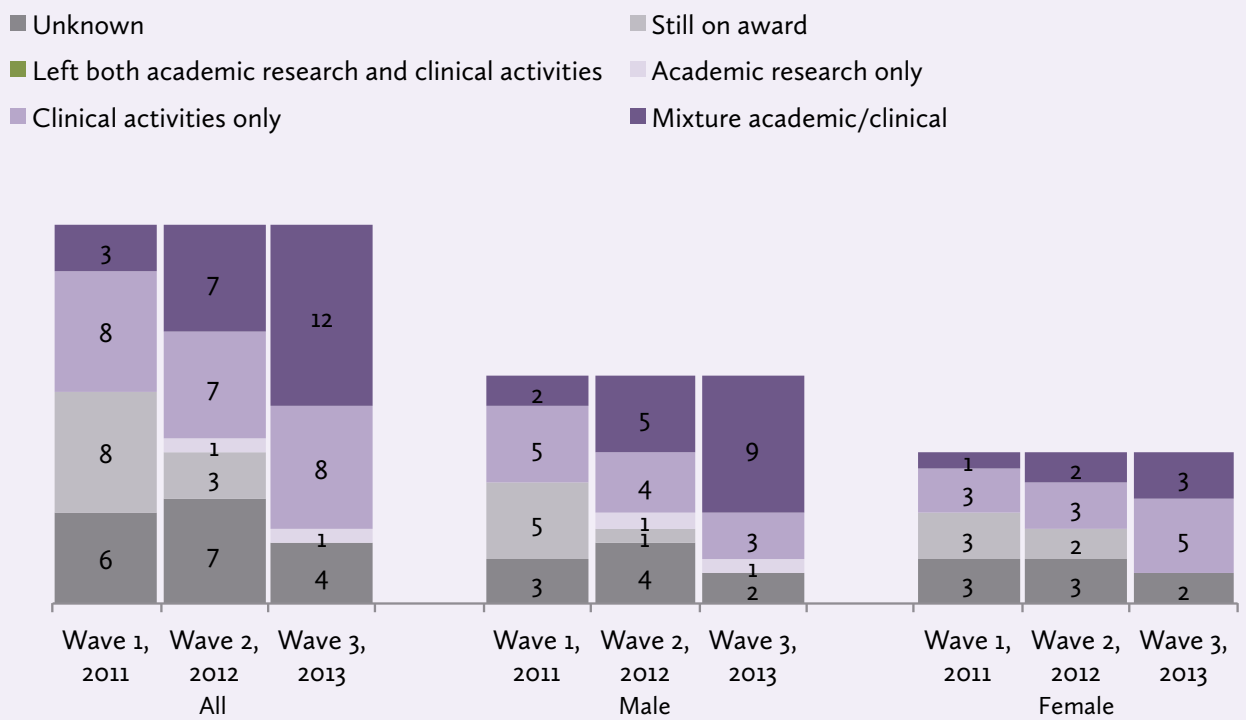
### Clinical PhD students – working pattern by cohort



Base: Clinical PhD Programmes – cohorts 2007/08 (n = 25), 2008/09 (n = 34), 2009/10 (n = 38), 2010/11 (n = 32)  
 Q: Which of the following best describes your current working pattern?

## Working pattern by gender

### Clinical PhD students – working pattern by gender (cohort 2007/08), waves 1–3, 2011–2013



Base: Clinical PhD Programmes – cohort 2007/08 (n = 25); male, n = 15; female, n = 10  
 Q: Which of the following best describes your current working pattern?

## Working pattern by gender continued

### Clinical PhD students – working pattern by gender (cohort 2008/09), waves 1–3, 2011–2013



Base: Clinical PhD Programmes – cohort 2008/09 (n = 34); male, n = 20; female, n = 14  
 Q: Which of the following best describes your current working pattern?

## Working pattern by gender continued

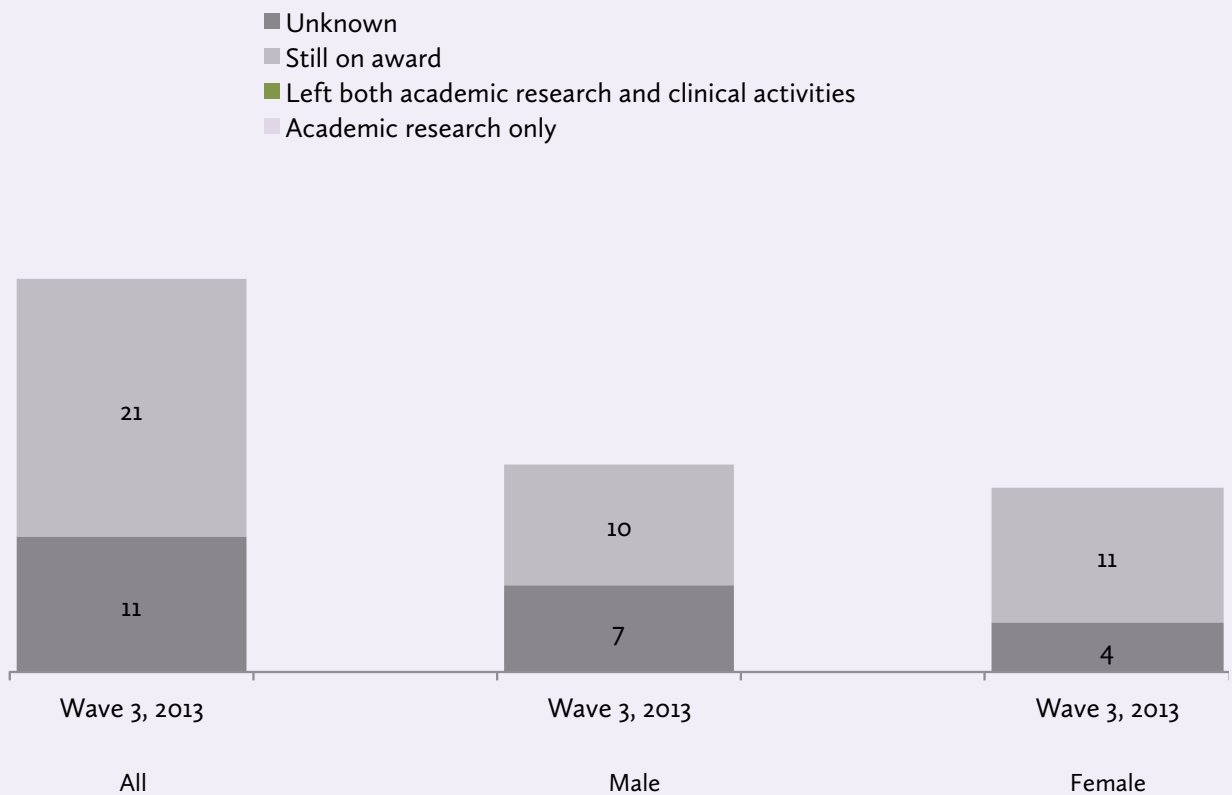
### Clinical PhD students – working pattern by gender (cohort 2009/10), waves 2–3, 2012–2013



Base: Clinical PhD students – cohort 2009/10 (n = 38); male, n = 20; female, n = 18  
 Q: Which of the following best describes your current working pattern?

## Working pattern by gender continued

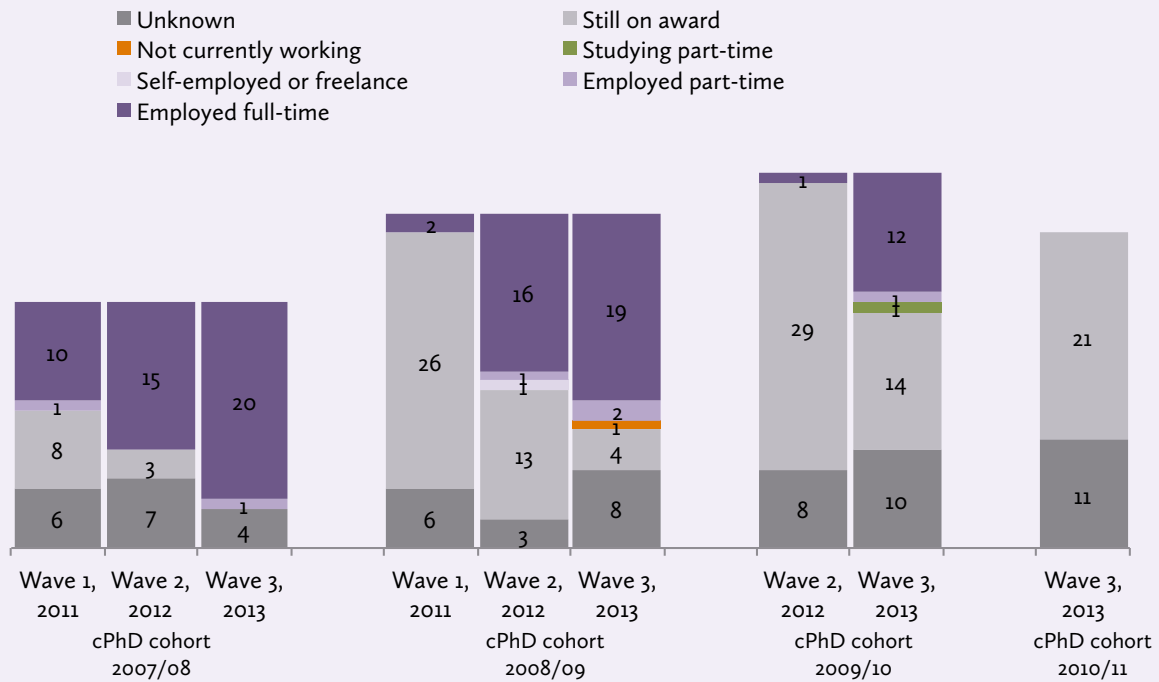
### Clinical PhD students – working pattern by gender (cohort 2010/11), wave 3, 2013



Base: Clinical PhD students – cohort 2010/11 (n = 32); male, n = 17; female, n = 15  
Q: Which of the following best describes your current working pattern?

## Employment status – all cohorts

### Clinical PhD students – employment status



Base: Clinical PhD students – cohorts 2007/08 (n = 25), 2008/09 (n = 34), 2009/10 (n = 38), 2010/11 (n = 32)  
 Q: Which of the following best describes your current employment status?

## Employment status by gender

### Clinical PhD students (cohort 2007/08) – employment status by gender



Base: Clinical PhD students – cohort 2007/08 (n = 25); male, n = 15; female, n = 10  
 Q: Which of the following best describes your current employment status?

## Employment status by gender continued

### Clinical PhD students (cohort 2008/09) – employment status by gender

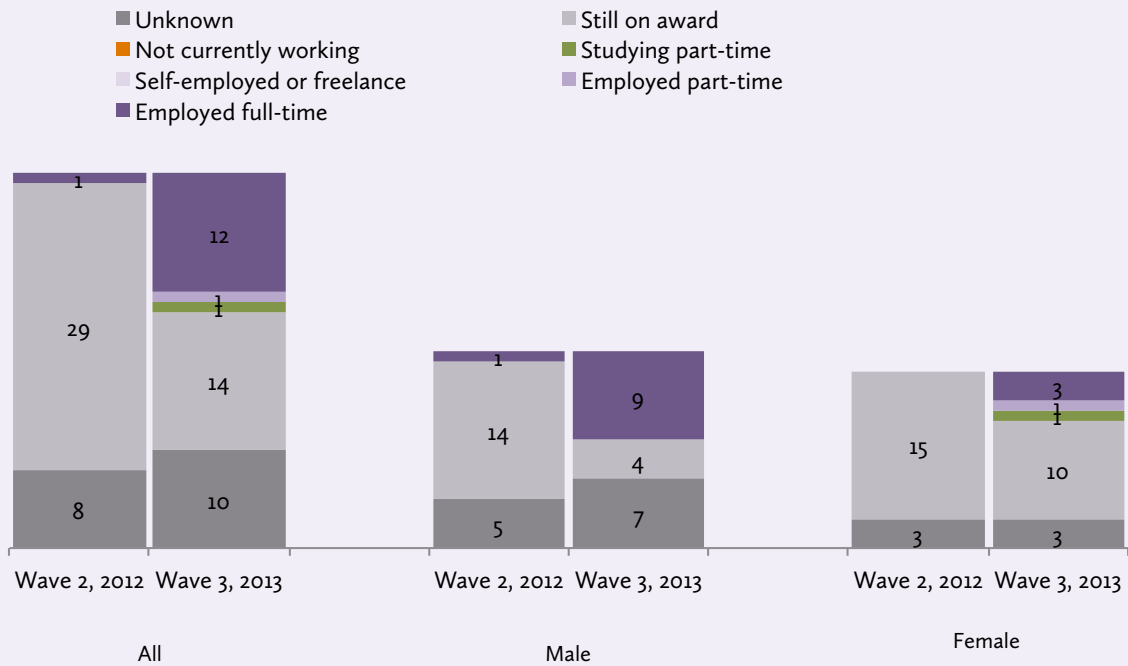


Base: Clinical PhD students – cohort 2008/09 (n = 34); male, n = 20; female, n = 14  
 Q: Which of the following best describes your current employment status?



## Employment status by gender continued

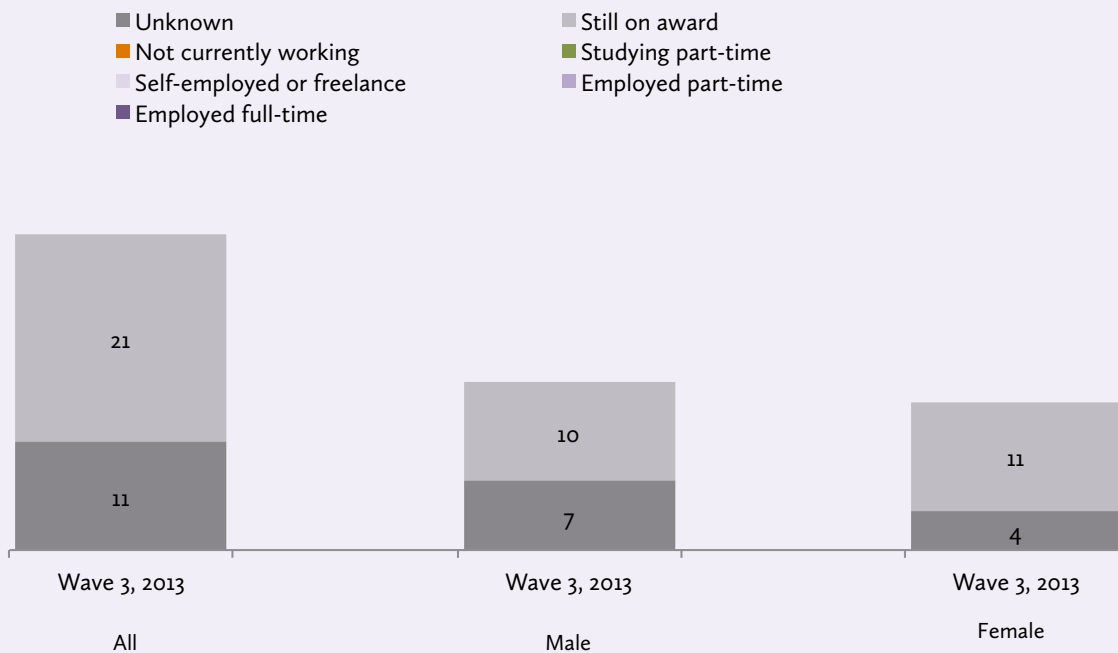
### Clinical PhD students (cohort 2009/10) – employment status by gender



Base: Clinical PhD students – cohorts 2009/10 (n = 38); male, n = 20; female, n = 18  
 Q: Which of the following best describes your current employment status?

## Employment status by gender continued

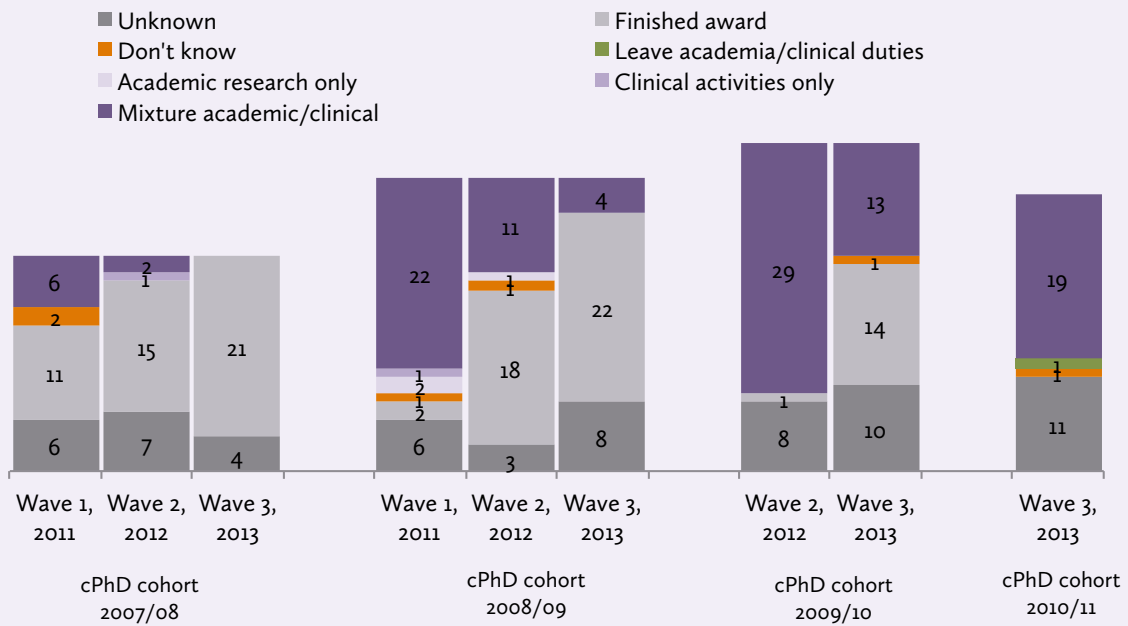
### Clinical PhD students (cohort 2010/11) – employment status by gender



Base: Clinical PhD students – cohort 2010/11 (n = 32); male, n = 17; female, n = 15  
Q: Which of the following best describes your current employment status?

## Career plans

### Clinical PhD students – career plans



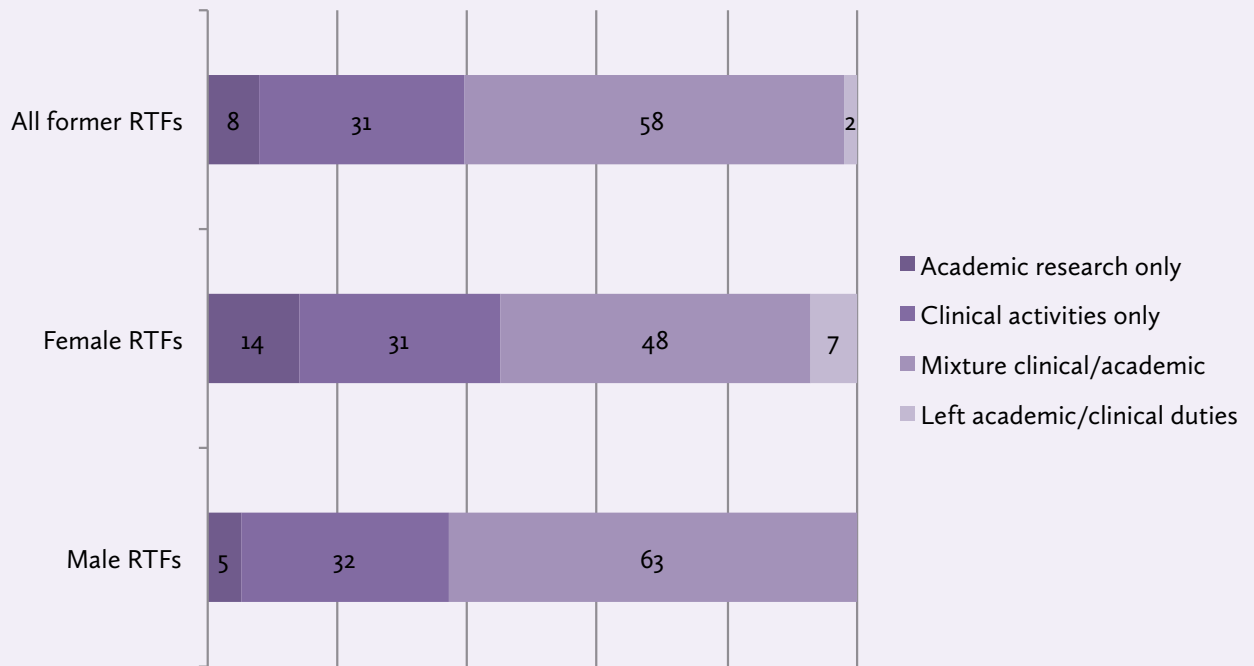
Base: Clinical PhD students – cohorts 2007/08 (n = 25), 2008/09 (n = 34), 2009/10 (n = 38), 2010/11 (n = 32)  
 Q: Which of the following are you most likely to do once you have finished your award?



# Appendix B: Research Training Fellows

Working pattern – all cohorts

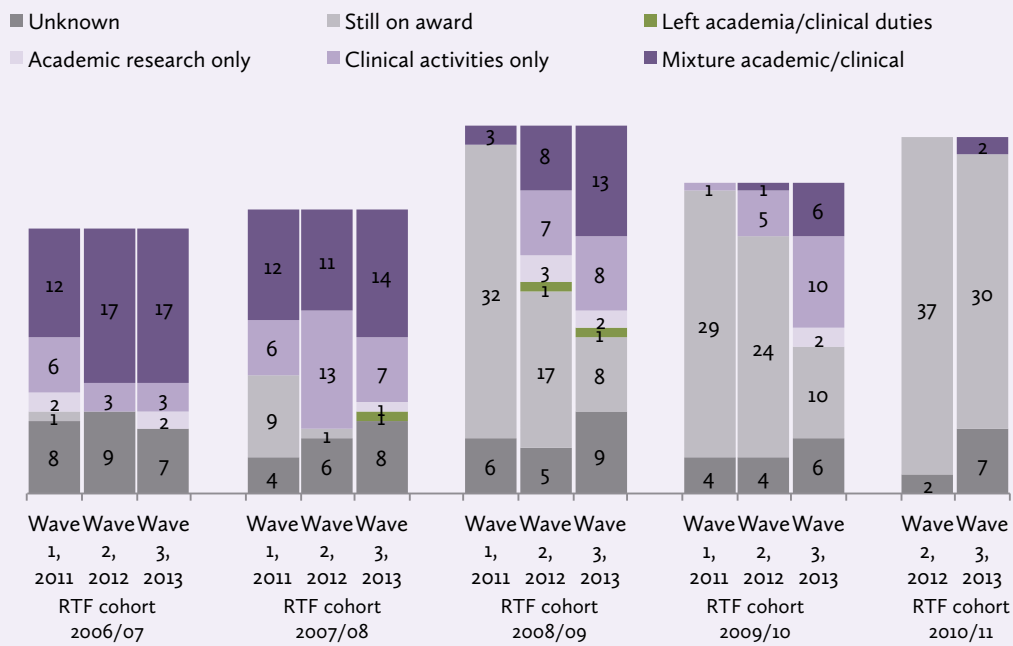
## Former Research Training Fellows – working pattern (%)



Base: Former Research Training Fellows (n = 89); male, n = 60; female, n = 29

# Working pattern by cohort

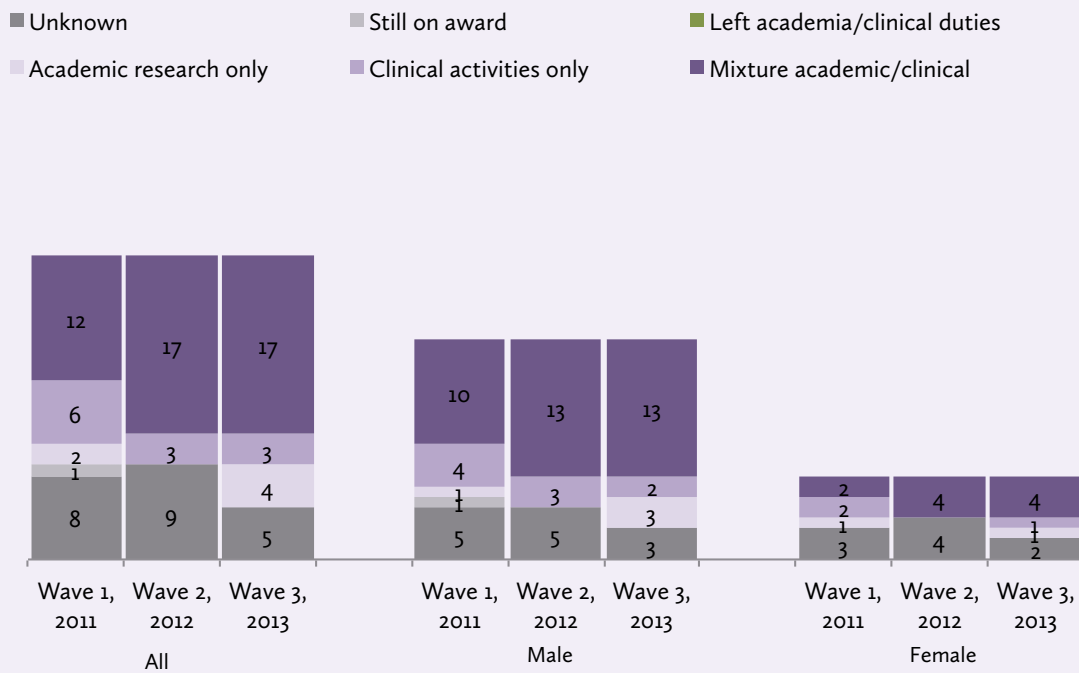
## Research Training Fellows – working pattern by cohort



Base: Research Training Fellows – cohorts 2006/07 (n = 29), 2007/08 (n = 31), 2008/09 (n = 41), 2009/10 (n = 34), 2010/11 (n = 39), 2011/12 (n = 39)  
 Q: Which of the following best describes your current working pattern?

## Working pattern by gender

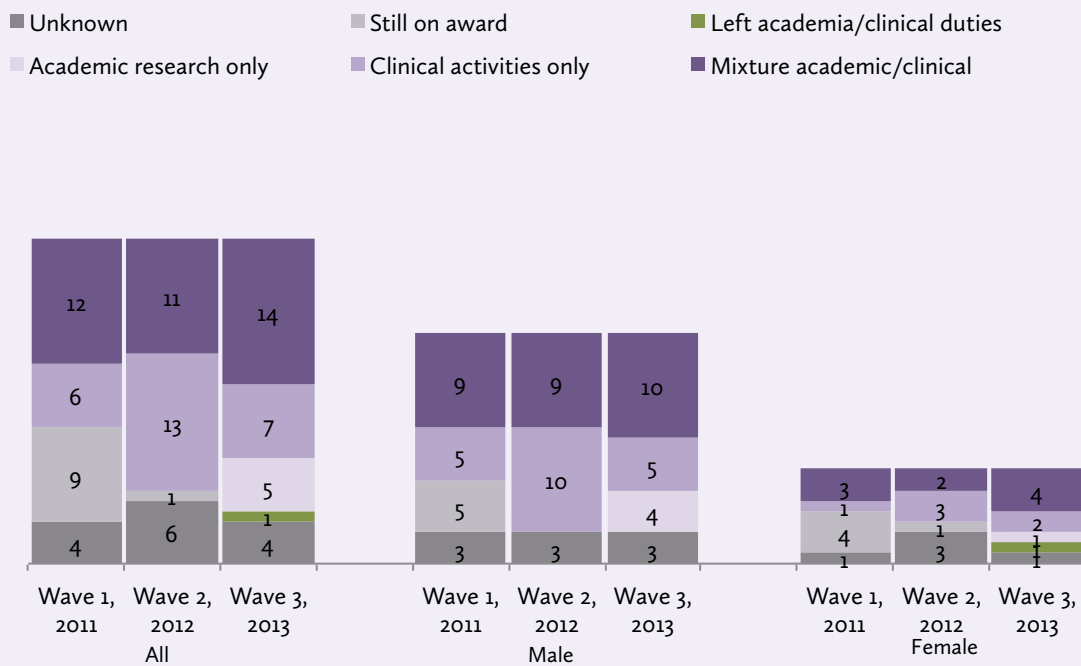
### Research Training Fellows – working pattern by gender (cohort 2006/07), waves 1–3, 2011–2013



Base: Research Training Fellows – cohort 2006/07 (n = 29); male, n = 21; female, n = 8  
 Q: Which of the following best describes your current working pattern?

## Working pattern by gender continued

### Research Training Fellows – working pattern by gender (cohort 2007/08), waves 1–3, 2011–2013

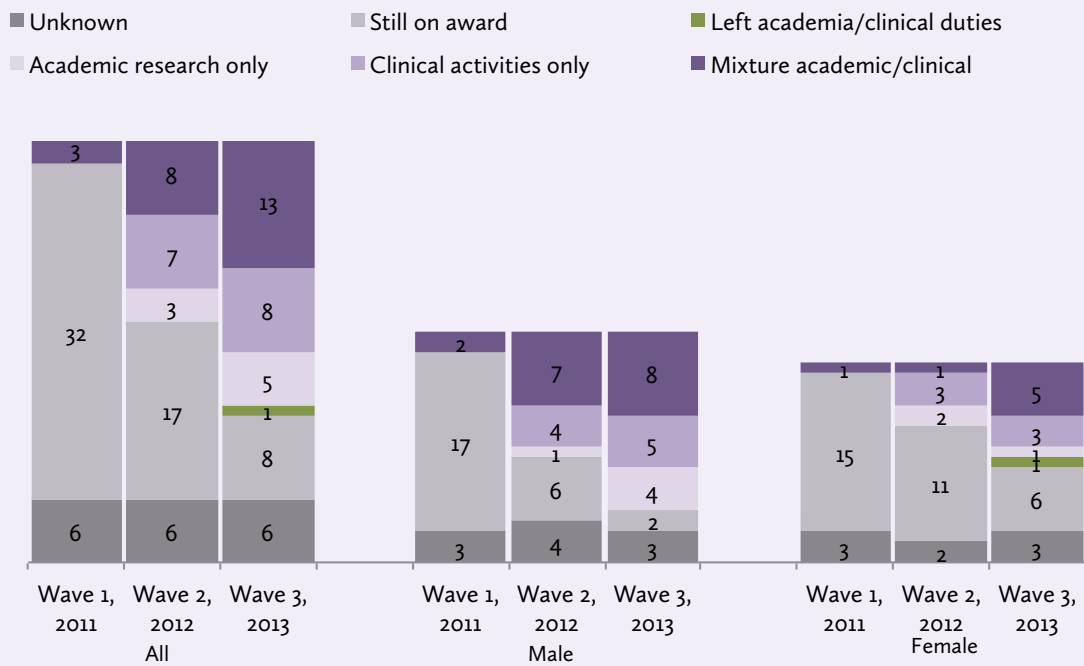


Base: Research Training Fellows – cohort 2007/08 (n = 31); male, n = 22; female, n = 9  
Q: Which of the following best describes your current working pattern?



## Working pattern by gender continued

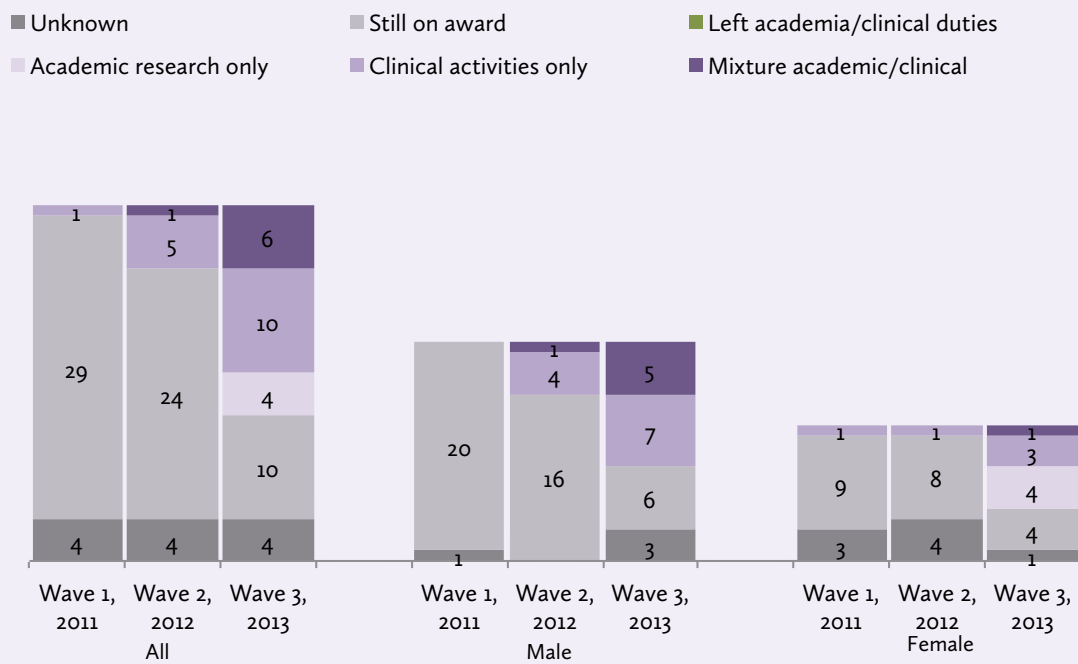
### Research Training Fellows – working pattern by gender (cohort 2008/09), waves 1–3, 2011–2013



Base: Research Training Fellows – cohort 2008/09 (n = 41); male, n = 22; female, n = 19  
 Q: Which of the following best describes your current working pattern?

## Working pattern by gender continued

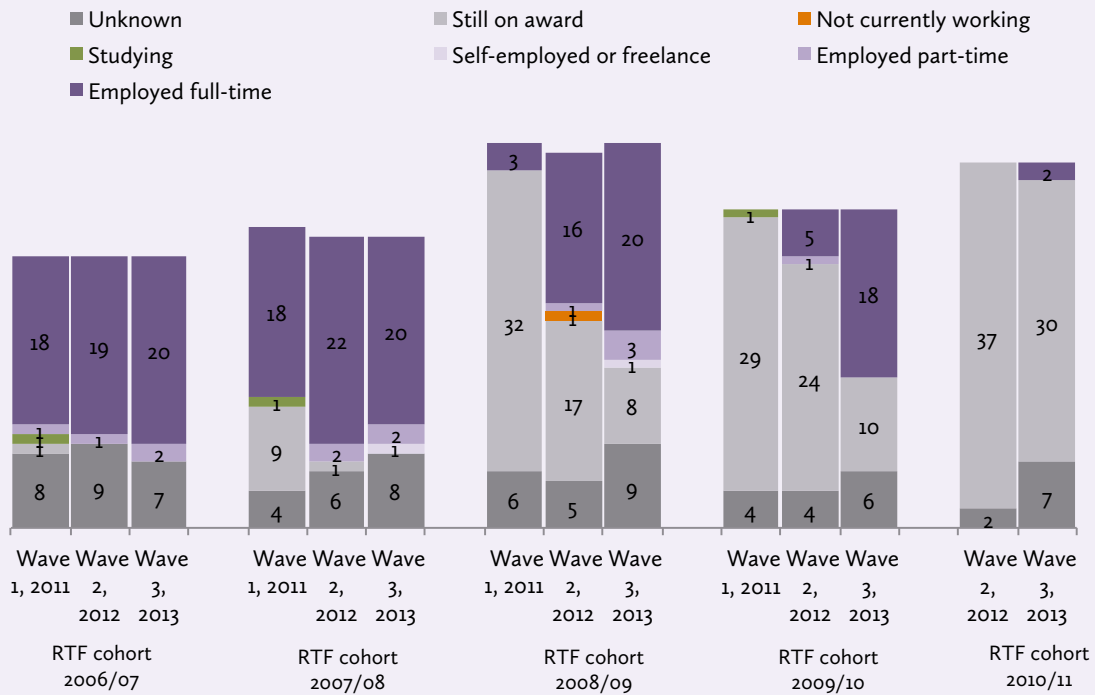
### Research Training Fellows – working pattern by gender (cohort 2009/10), waves 1–3, 2011–2013



Base: Research Training Fellows (cohort 2009/10 (n = 34); male, n = 21; female, n = 13)  
 Q: Which of the following best describes your current working pattern?

# Employment status – all cohorts

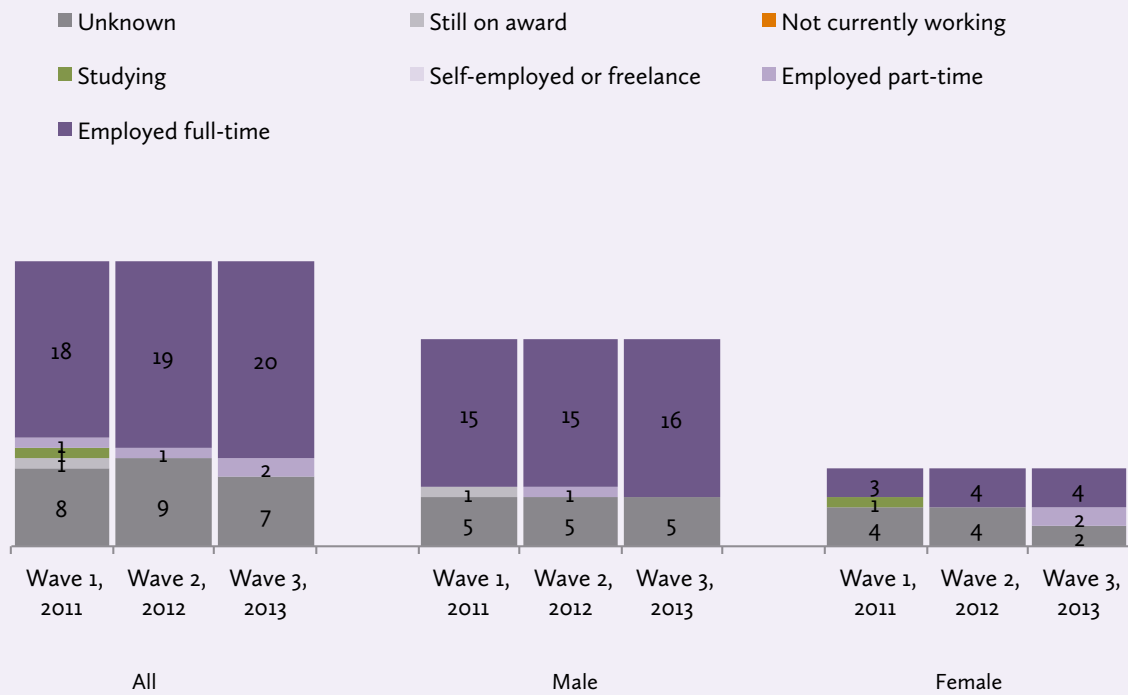
## Research Training Fellows – employment status



Base: Research Training Fellows – cohorts 2006/07 (n = 29), 2007/08 (n = 31), 2008/09 (n = 41), 2009/10 (n = 34), 2010/11 (n = 39)  
 Q: Which of the following best describes your current working pattern?

## Employment status by gender

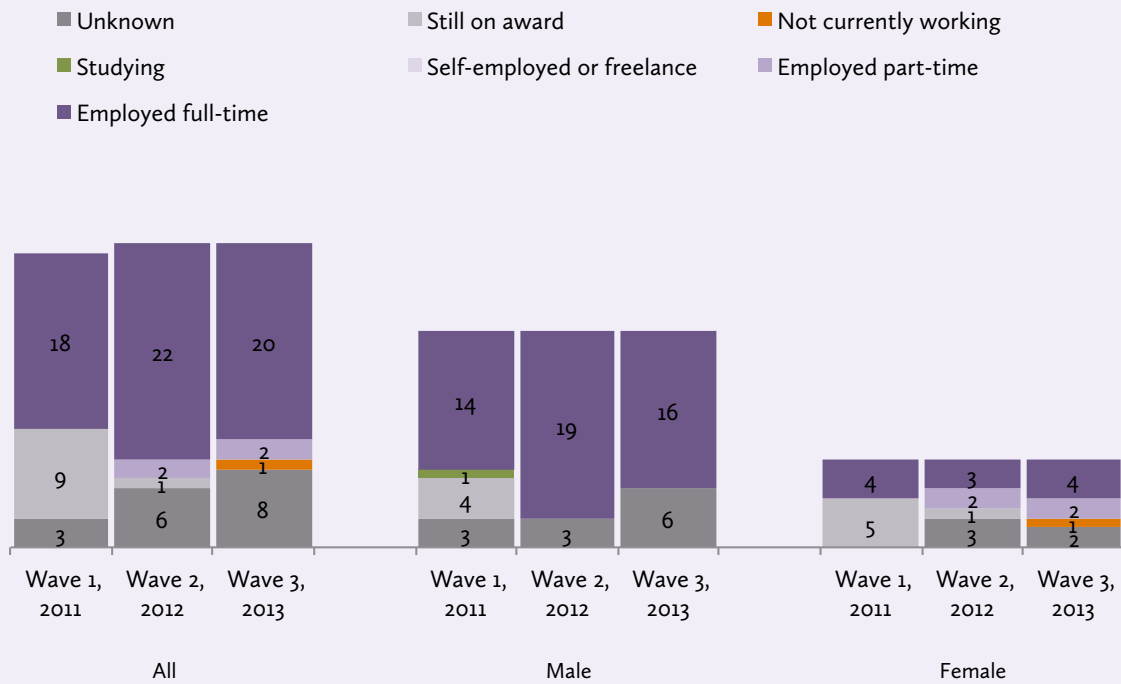
### Research Training Fellows (cohort 2006/07) – employment status by gender waves 1–3, 2011–2013



Base: Research Training Fellows – cohort 2006/07 (n = 29); male, n = 21; female, n = 8  
 Q: Which of the following best describes your current employment status?

## Employment status by gender continued

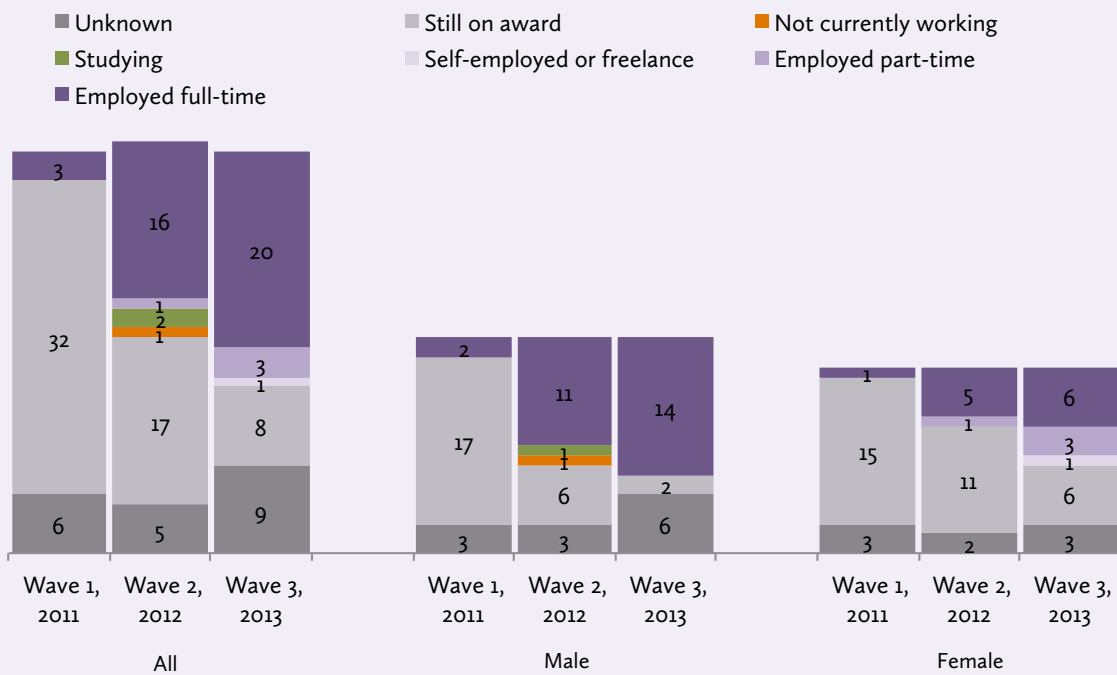
### Research Training Fellows (cohort 2007/08) – employment status by gender waves 1–3, 2011–2013



Base: Research Training Fellows – cohort 2007/08 (n = 31); male, n = 22; female, n = 9  
 Q: Which of the following best describes your current employment status?

## Employment status by gender continued

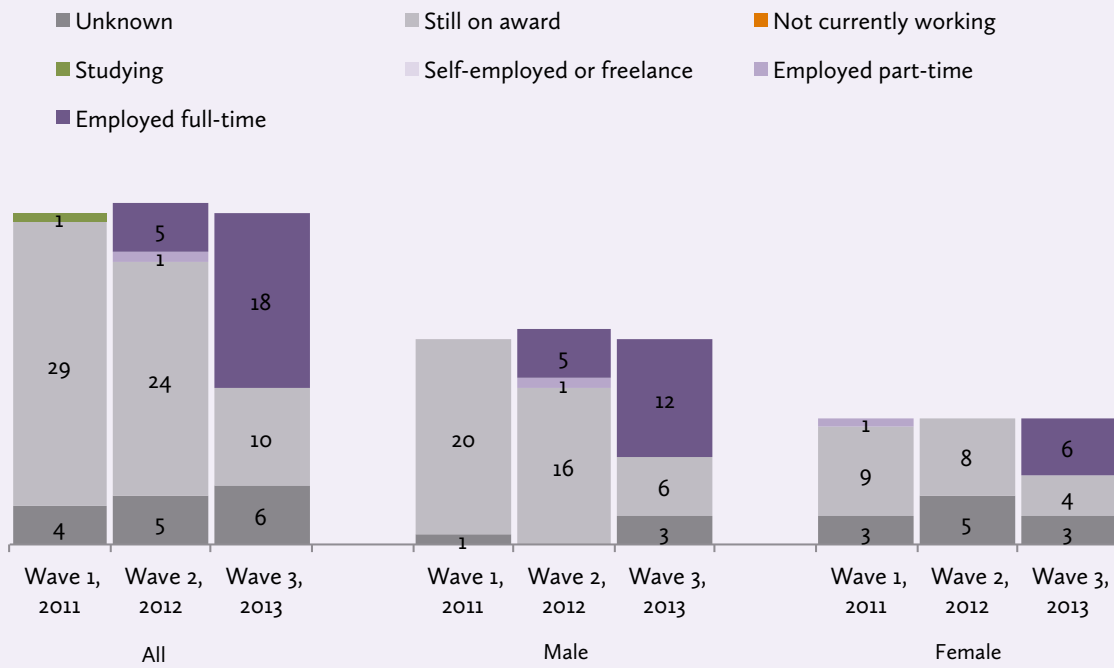
### Research Training Fellows (cohort 2008/09) – employment status by gender waves 1–3, 2011–2013



Base: Research Training Fellows – cohort 2008/09 (n = 41); male, n = 22; female, n = 19  
 Q: Which of the following best describes your current employment status?

## Employment status by gender continued

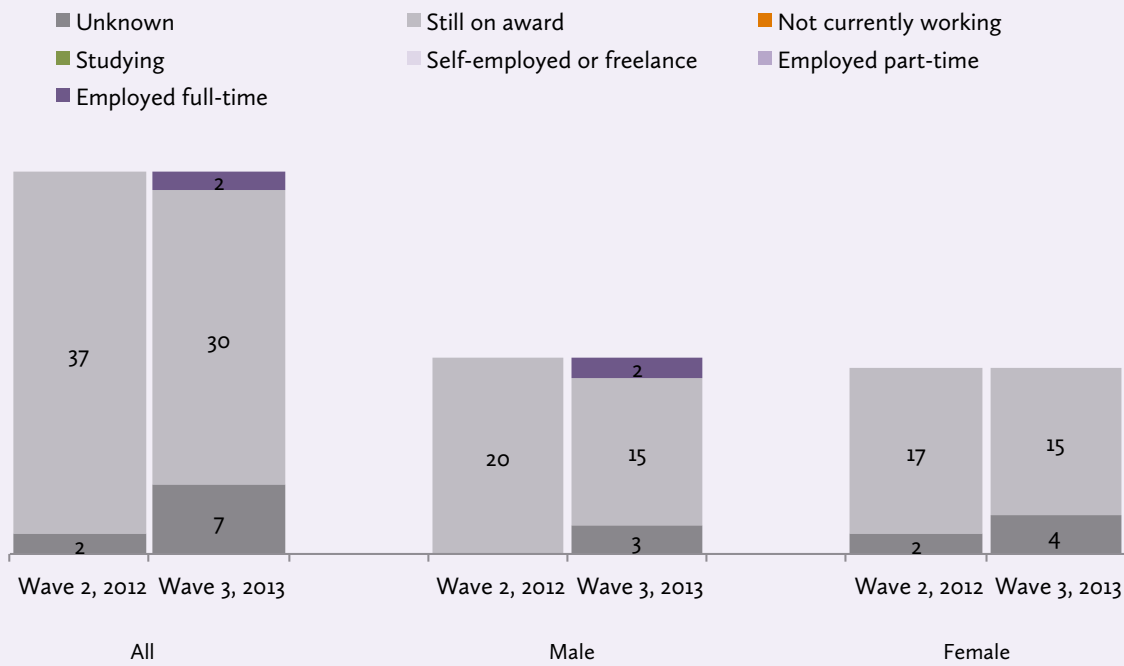
### Research Training Fellows (cohort 2009/10) – employment status by gender waves 1–3, 2011–2013



Base: Research Training Fellows – cohort 2009/10 (n = 34); male, n = 21; female, n = 13  
 Q: Which of the following best describes your current employment status?

## Employment status by gender continued

### Research Training Fellows (cohort 2010/11) – employment status by gender waves 1–3, 2011–2013

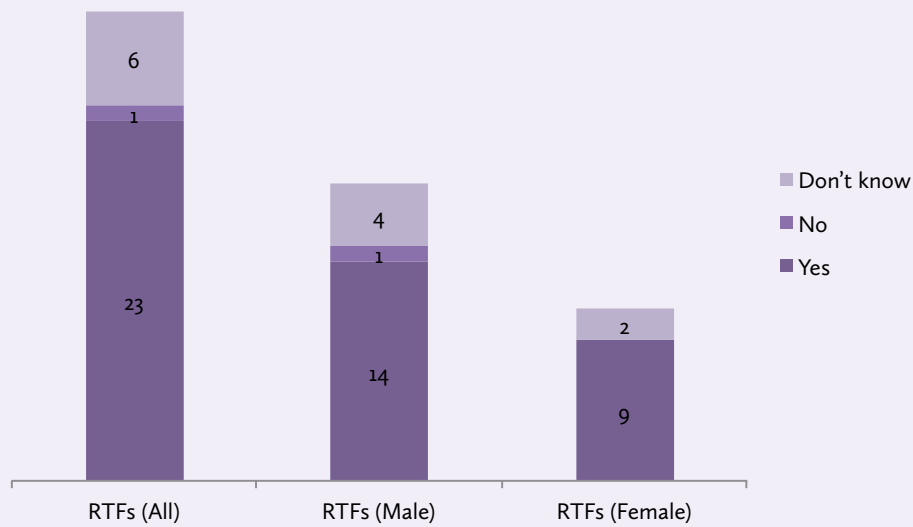


Base: Research Training Fellows – cohort 2009/10 (n = 39); male, n = 20; female, n = 19  
 Q: Which of the following best describes your current employment status?



## Career plans

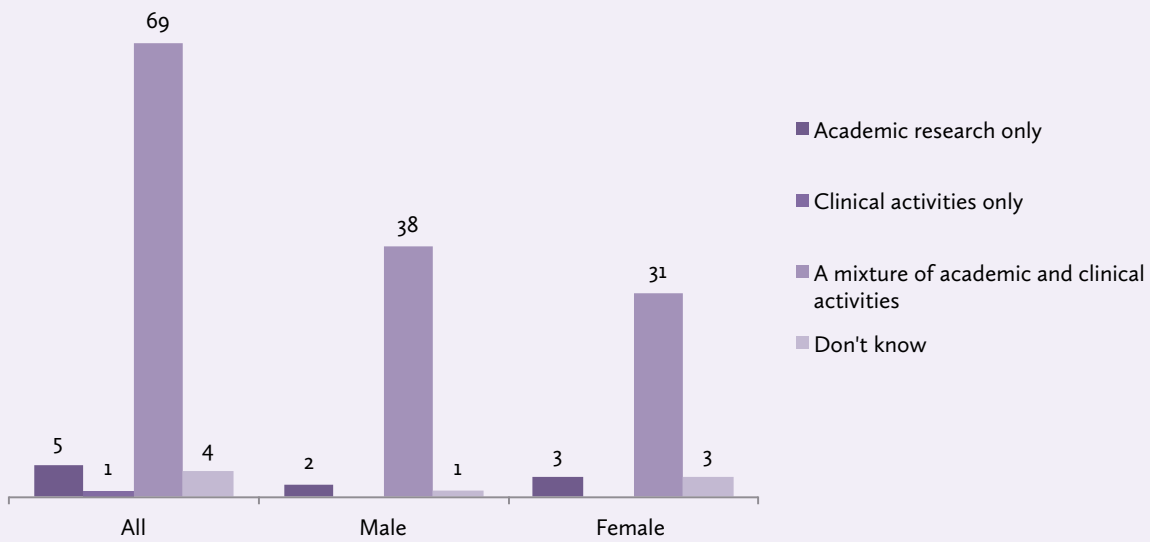
### Former Research Training Fellows (cohort 2009/10) – intention to return to conducting academic research



Base: Research Training Fellows who have completed their award and do not conduct currently academic research – cohorts 2006/07–2011/12 (n = 30)  
Q: Do you intend to return to conducting academic research at a later stage?

## Career plans by gender

### Current Research Training Fellows – career plans

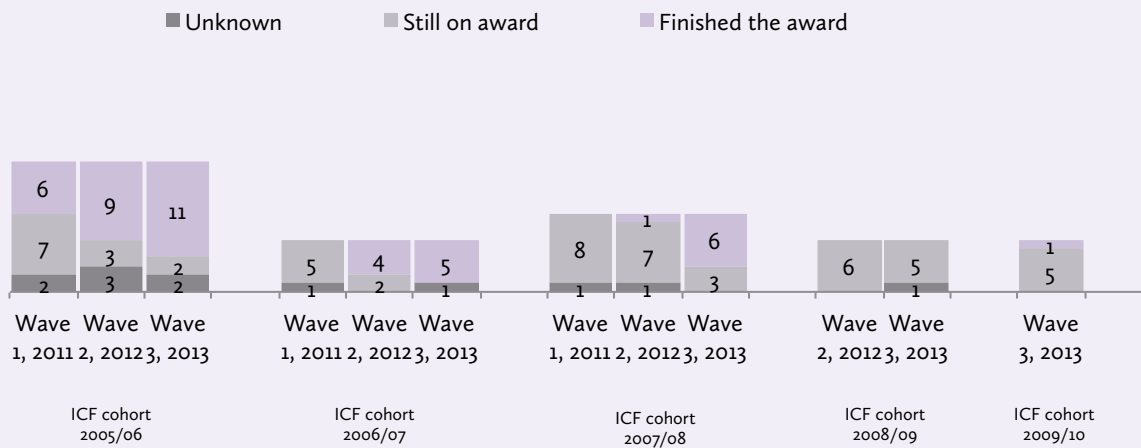


Base: Research Training Fellows still on their award – cohorts 2006/07–2011/12 (n = 82); male, n = 21; female, n = 37  
Q: Which of the following are you most likely to do once you have finished your award?

# Appendix C: Intermediate Clinical Fellowship

## Award status

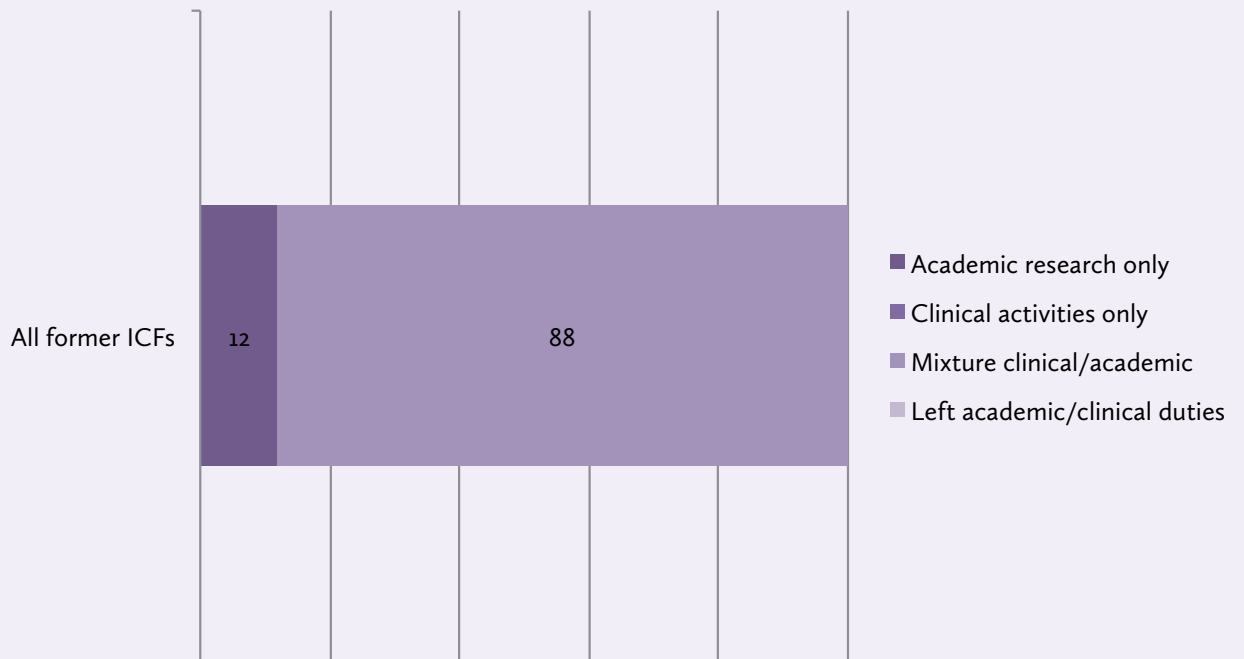
### Intermediate Clinical Fellows – award status



Base: Intermediate Clinical Fellows – cohorts 2005/06 (n = 15), 2006/07 (n = 6), 2007/08 (n = 9), 2008/09 (n = 6), 2009/10 (n = 6)  
 Q: Are you still on award or have you finished your award?

## Working pattern – all cohorts

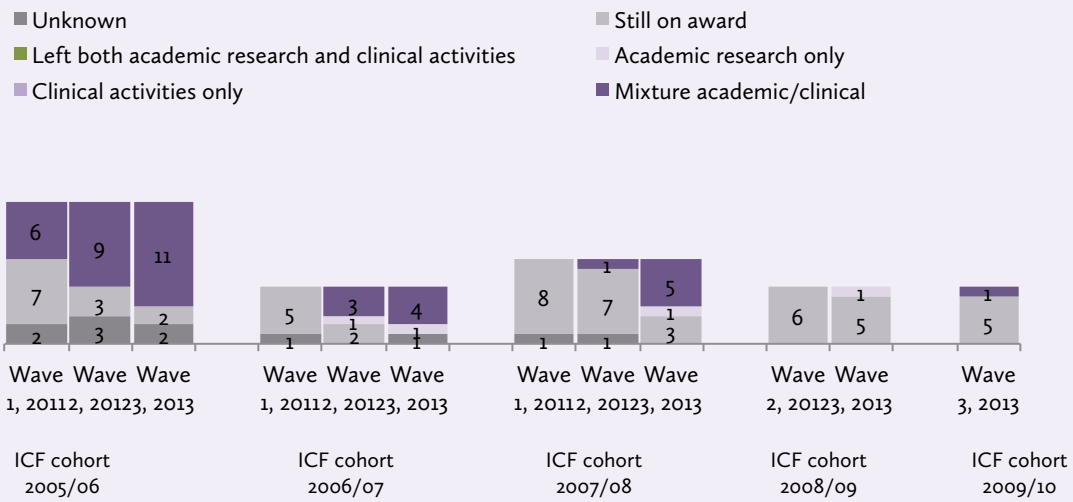
### Former Intermediate Clinical Fellows – working pattern (%)



Base: Former Intermediate Clinical Fellows (n = 24); male, n = 16; female, n = 8

# Working pattern by cohort

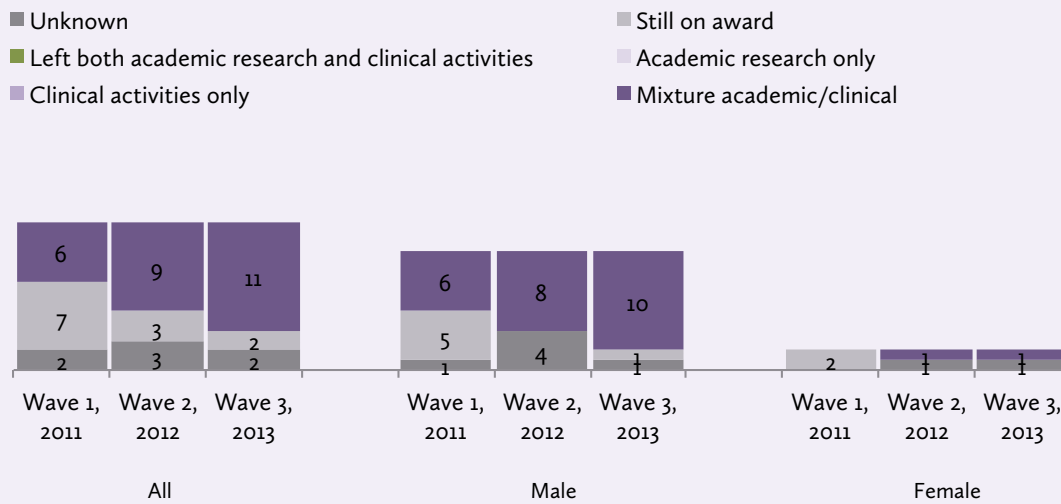
## Intermediate Clinical Fellows – working pattern by cohort



Base: Intermediate Clinical Fellows – cohorts 2005/06 (n = 15), 2006/07 (n = 6), 2007/08 (n = 9), 2008/09 (n = 6), 2009/10 (n = 6)  
 Q: Which of the following best describes your current working pattern?

## Working pattern by gender

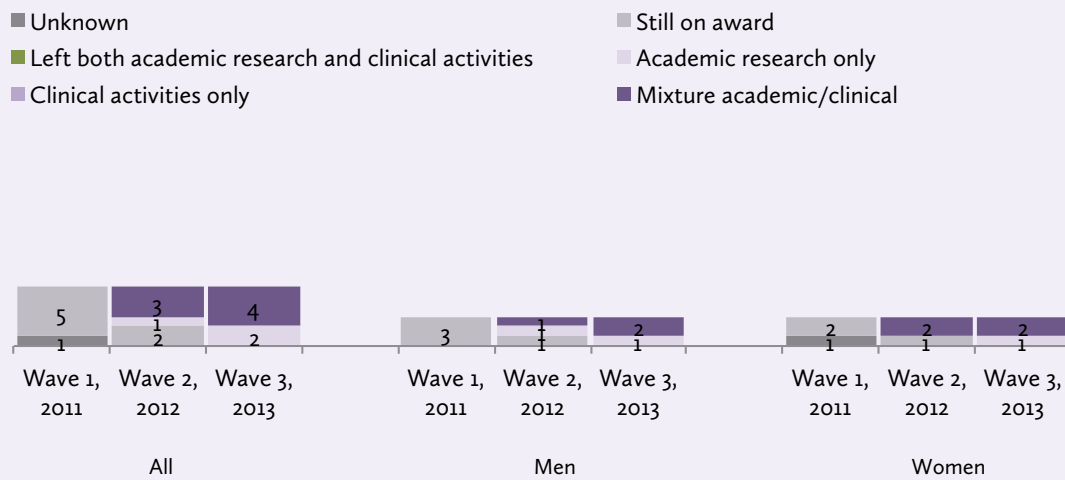
### Intermediate Clinical Fellows – working pattern by gender (cohort 2005/06), wave 1–3, 2011–2013



Base: Intermediate Clinical Fellows – cohort 2005/06 (n = 15); male, n = 12; female, n = 2  
 Q: Which of the following best describes your current working pattern?

## Working pattern by gender continued

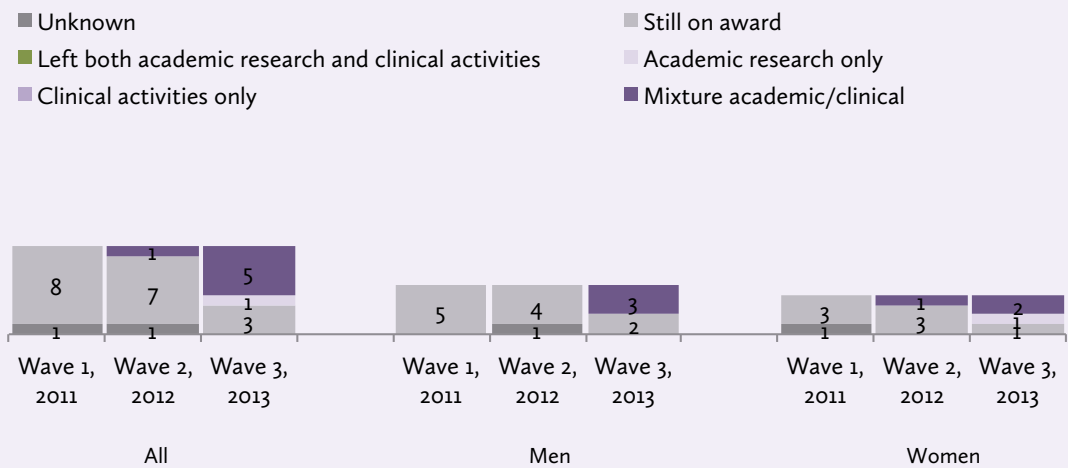
### Intermediate Clinical Fellows – working pattern by gender (cohort 2006/07), waves 1–3, 2011–2013



Base: Intermediate Clinical Fellows – cohort 2006/07 (n = 6); male, n = 3; female, n = 3  
 Q: Which of the following best describes your current working pattern?

## Working pattern by gender continued

### Intermediate Clinical Fellows – working pattern by gender (cohort 2007/08), waves 1–3, 2011–2013

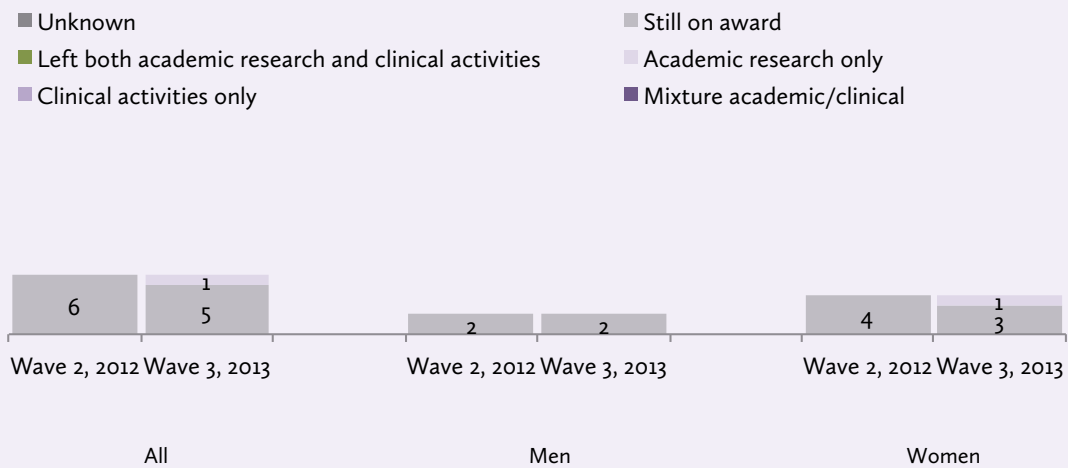


Base: Intermediate Clinical Fellows – cohort 2007/08 (n = 9); male n = 5; female , n = 4  
 Q: Which of the following best describes your current working pattern?



## Working pattern by gender continued

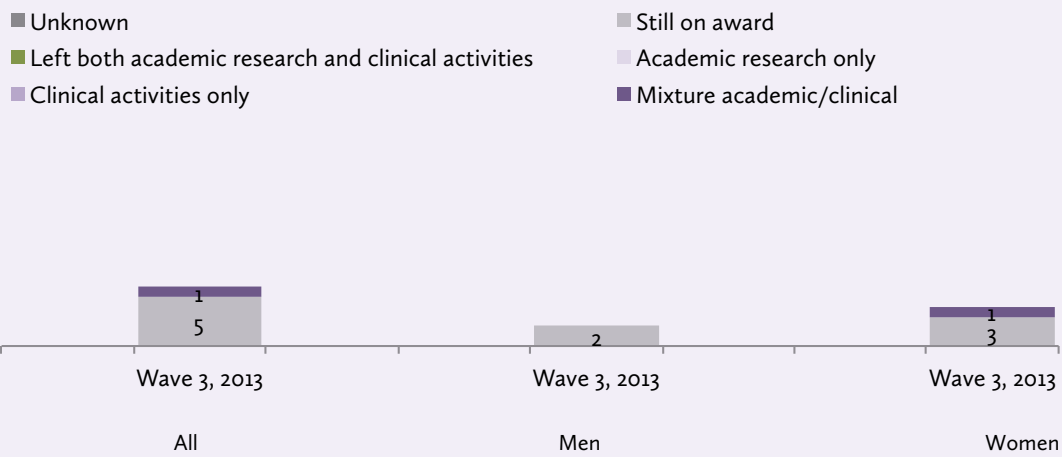
### Intermediate Clinical Fellows – working pattern by gender (cohort 2008/09), waves 2–3, 2012–2013



Base: Intermediate Clinical Fellows – cohort 2008/09 (n = 6); male, n = 3; female, n = 3  
 Q: Which of the following best describes your current working pattern?

## Working pattern by gender continued

### Intermediate Clinical Fellows – working pattern by gender (cohort 2009/10), wave 3, 2013

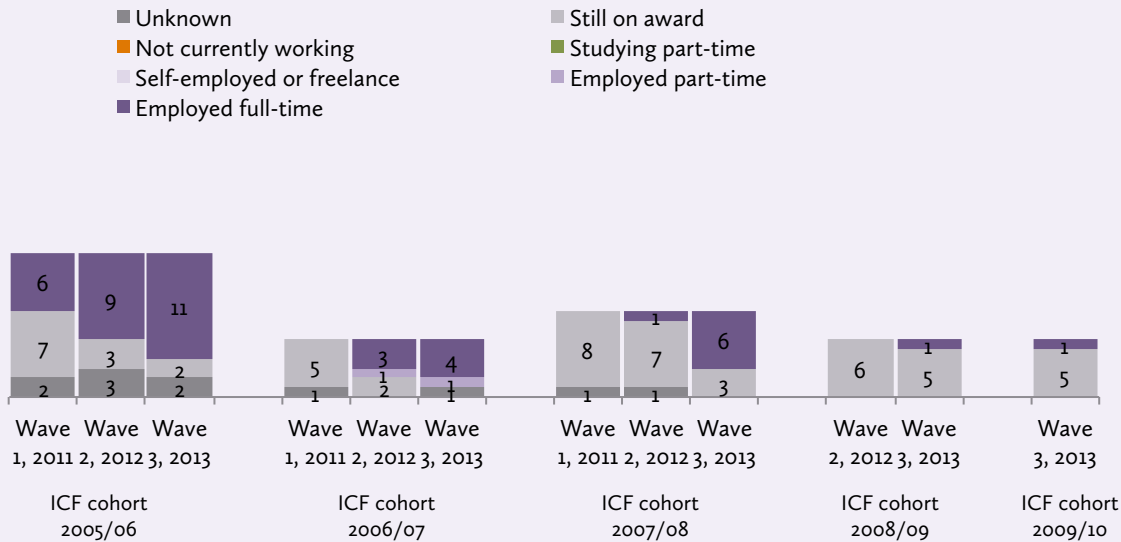


Base: Intermediate Clinical Fellows – cohort 2009/10 (n = 6); male, n = 2; female, n = 4

Q: Which of the following best describes your current working pattern?

## Employment status – all cohorts

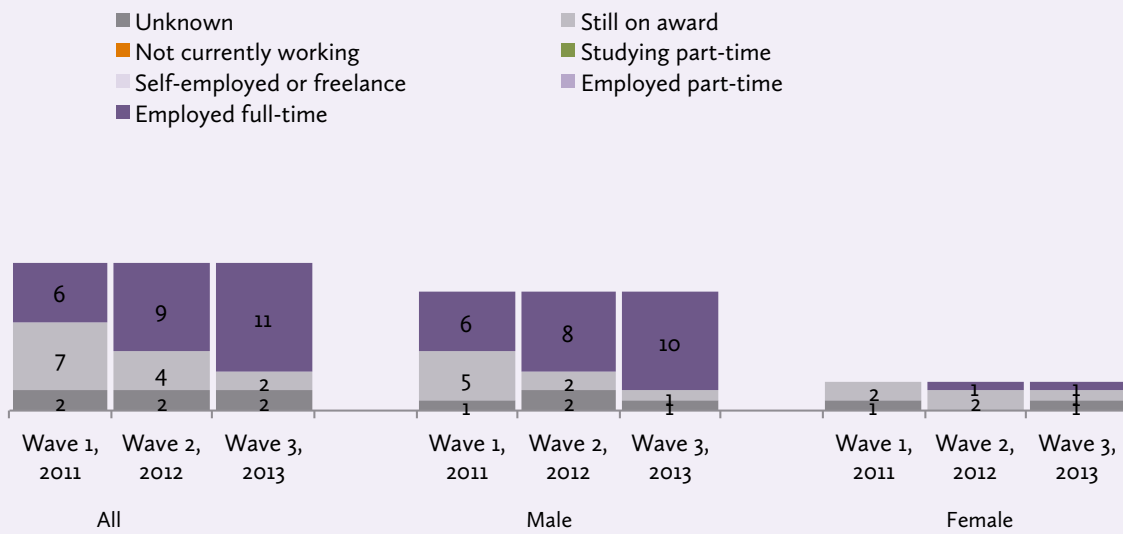
### Intermediate Clinical Fellows – employment status



Base: Intermediate Clinical Fellows – cohorts 2005/06 (n = 15), 2006/07 (n = 6), 2007/08 (n = 9), 2008/09 (n = 6), 2009/10 (n = 6)  
 Q: Which of the following best describes your current employment status?

## Employment status by gender

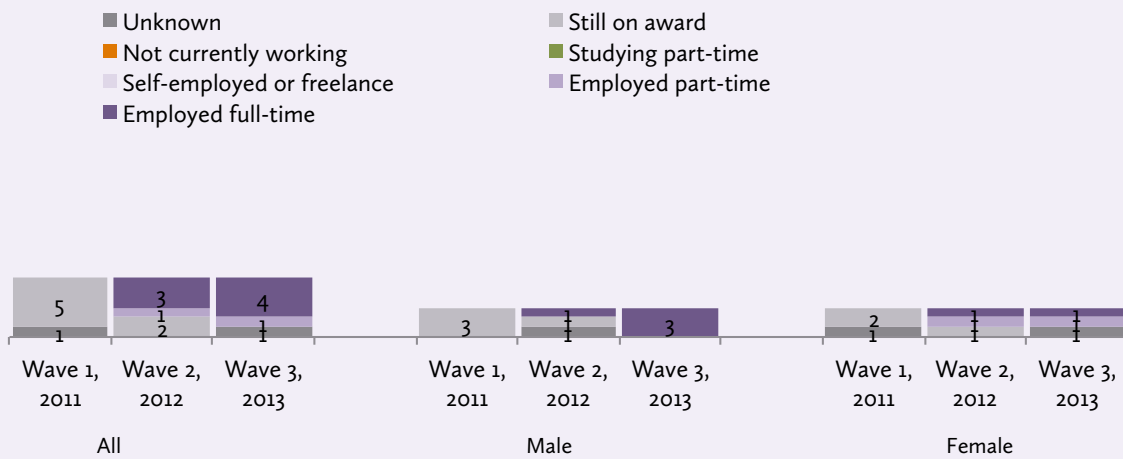
### Intermediate Clinical Fellows – employment status by gender (cohort 2005/06), waves 1–3, 2011–2013



Base: Intermediate Clinical Fellows – cohort 2005/06 (n = 15); male, n = 12; female, n = 3  
 Q: Which of the following best describes your current employment status?

## Employment status by gender continued

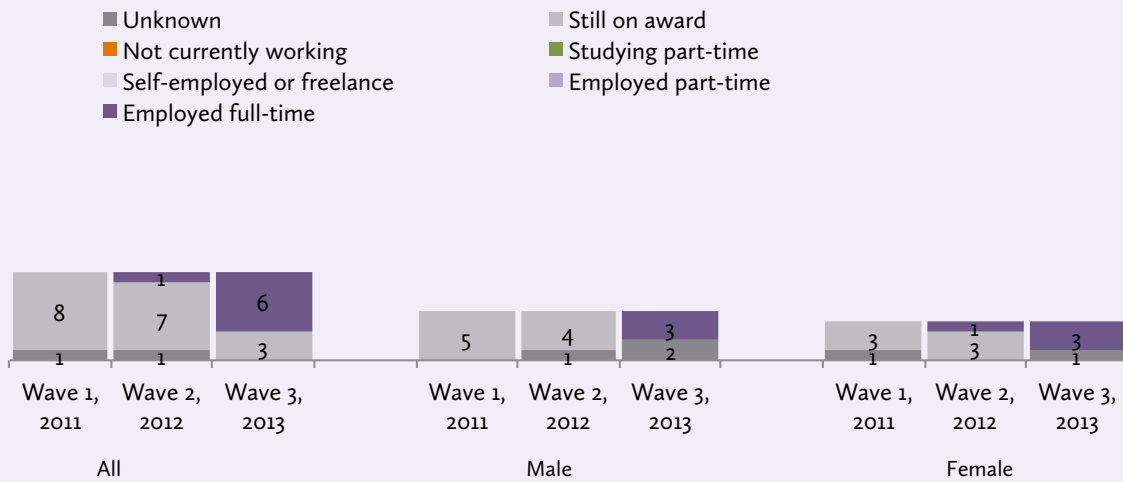
### Intermediate Clinical Fellows – employment status by gender (cohort 2006/07), waves 1–3, 2011–2013



Base: Intermediate Clinical Fellows – cohort 2006/07 (n = 6); male, n = 3; female, n = 3  
 Q: Which of the following best describes your current employment status?

## Employment status by gender continued

### Intermediate Clinical Fellows – employment status by gender (cohort 2007/08), waves 1–3, 2011–2013

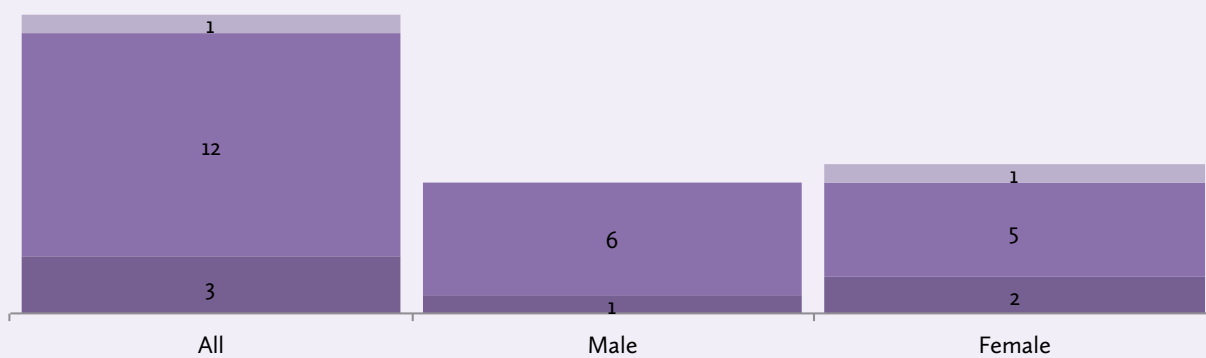


Base: Intermediate Clinical Fellows – cohort 2007/08 (n = 9); male, n = 5; female, n = 4  
 Q: Which of the following best describes your current employment status?

## Career plans by gender

### Intermediate Clinical Fellows – career plans (cohort 2007/08), waves 1–3, 2011–2013

■ Academic research only   ■ Mixture academic/clinical   ■ Don't know



Base: Intermediate Clinical Fellows who are still on their award – cohorts 2005/06–2009/10 (n = 16); male, n = 7; female, n = 8  
Q: Which of the following are you most likely to do once you have finished your award?

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We are independent of both political and commercial interests.

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