

NERC workshop, "Evaluation of support for Early Career Researchers" – Overview

This overview summarises the consistent messages that arose from the discussions at the workshop and those that cut across the various findings of the report upon which discussion was based. The summary of discussions will be fed back to NERC to inform its decision making concerning its support for Early Career Researchers (ECRs).

ECRs may commonly have a cultural 'default' view that the academic career path is the most desirable, and that this may be compounded by a lack of awareness of other options outside and a view that leaving research/academia is somehow a failure or undesirable. This perception may contribute to some of the findings of the report.

Further information and evidence (including simple clarifications and more in-depth case studies) should be sought, and communicated, on:

- The career paths and destinations of ECRs, including the proportion of ECRs moving into tenured academic/research positions
- The nature of funding and employment landscapes for ECRs, including current funding opportunities (including R-Co-I) and how these positively impact career paths and successes
- The skills required by ECR employers from inside and out of research and academia, including possible 'core skills' or structures for career and professional development of ECRs
- The extent and causes of issues in equality and diversity
- The realities of any perceived requirement for 'mobility' of ECRs
- Positive examples of, and incentivising, good practice in all these areas

NERC could engage more on these agendas with ECRs, PIs, their employers, learned societies, other RCs (UKRI) and organisations outside of academia and research. The resulting information and communication should be used to provide a clear illustration of the realities and opportunities in each of the areas listed above.

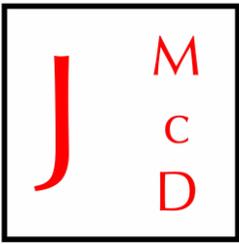
NERC also has the option to insert requirements into its grant application and reporting/assessment processes. These may demonstrate its commitment to ensuring promotion of equality and diversity, professional and career development of researchers as well as recognising the contributions of ECRs to grant applications. At the same time, these steps could communicate its clear expectations of funding recipients to address these areas, and even stipulate that funds and/or time are dedicated to this purpose. This may incentivise positive engagement with these agendas by PIs and employers.

More specific suggestions are made in each section of the report, and these include supporting the establishment of networks and peer groups for the support and development of ECRs and to address the agendas above. As well as encouraging career advice and training for ECRs.

Discussion regarding funding opportunities and how they fit with ECR-development was wide ranging, and brought in the shorter and longer term funding options and eligibility criteria, while recognising the constraints in terms of impact on funding more generally and concerns as to whether it would address the underlying problem of limited permanent positions.

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NERC workshop, "Evaluation of support for Early Career Researchers"

Summary of findings

Background and scope of this document

The following is a summary of findings from the NERC-sponsored workshop '*Evaluation of support for Early Careers Researchers (ECRs)*' at the Doubletree Hilton Hotel on 14th February 2018, and from written comments from invited participants who couldn't attend in person. This summary is divided into four themes based on the nine findings and recommendations made in the DJS Research report titled, "Evaluation of support for ECRs" that provided the basis for discussion at the event. The summary will be fed back to NERC to inform its decision making concerning its support for ECRs.

JMCD's remit in this summary is simply to communicate the key aspects of the discussion. As such, we have presented only the outputs and assertions from the workshop and do not offer any advice or opinions here. Several of the more consistent participant comments and suggestions cut across themes. So, to reduce duplication, we do not report all comments exhaustively in each section.

Constraints on interpretation of data

The workshop noted that 'ECR' is a loose term incorporating postdoctoral research associates (PDRAs) and independent research fellows (IRFs) who have different roles and responsibilities. In addition, sampling constraints were present in the underlying research in as much as 'employers' were primarily Universities or Research Institutes, and data is not taken from former ECRs who have moved away from academia or non-academic/RI employers. As such, caution is to be encouraged about applying general assessments to the results.

In regard to the workshop itself, there are also several potential constraints on interpretation of the data:

- How representative this participant group is of the diversity and make-up of the wider stakeholder community, and how representative its opinions are, is unknown
- In the context of a one-day event and several short discussions, participants were asked for their first ideas and opinions, as well as more considered positions
- Frequency of a statement does not necessarily equate to reliability, magnitude of impact, or accuracy
- Any process of collation and distillation will lose some specificity relative to the raw data. Data collated on the day and in this report are also prone to this effect, along with filtration through the author's perception of the patterns/trends.

Nonetheless, there are several repeating ideas and consistent themes in the findings of the workshop.

Theme A : The nature of funding and grants

F1 – Career instability and short-term contracts are a key challenge for ECRs; the current nature of ECR employment impacts on personal lives and can mean scientific work has to be abandoned

R1 – If possible, more long-term funding should be made available (e.g. more NERC research fellowships) in order to tackle career instability and improve the wellbeing of ECRs

The participants recognised the challenges that these aspects can present to individuals and the health of the research base.

Others observed that, *'there is a quality threshold, not all ECRs can become career academics'*. Several also noted that the adaptability, stimulation and motivation encouraged by a diversity of environments may contribute to the development of expertise and careers for ECRs, and that instability was common in many careers.

While some welcomed the possible extension of fellowships, others noted that this would have significant budget implications impacting the wider research landscape. Other reaction included that more, long-term funding could simply shift instability to a later point, as additional fellowships support is unlikely to increase the number of permanent academic positions available. Though another cited the successes of the RCUK Academic Fellowship programme that linked the funding to training and the expectation of a permanent position at its conclusion.

There was also a suggestion that NERC encourage Higher Education Institutions (HEIs) to make the career development of Fellows more of a concrete commitment at the funding application stage and that HEIs should state how they handle the *'contract challenge'* at the point of recruitment.

Discussion also noted there is a need for management of expectations among the ECR community about career paths in academia and careers in general (with respect to instability), and that comparison to other sectors might be useful. Another suggestion was raising awareness that holding of multiple-posts simultaneously could be a valid approach for Fellows that also encourages people to recognise their transferrable skills and the options those skills may create. Case studies may be a means of supporting these approaches.

F2 – The expectation to move institutions for each new contract is also considered a key challenge; many feel they are expected to make sacrifices in their personal lives in order to progress their career (and would be at a disadvantage if they did not frequently move around)

R2 – Although many recognise that mobility is important in order to develop research careers, extra consideration into the benefits of doing so could be applied on a case by case basis when reviewing applications

The possible negative impacts of the perceived necessity to move institutions were linked to family and life decisions, and to the equality and diversity agenda as well as fairness and equity in recruitment. Others remarked that it hampered delivery of projects. While there was some suggestion that moving posts and institutions broadens experience and offers new networks, challenges and perspectives, the evidence base for this was consistently questioned.

Accordingly, discussion noted that this expectation may be more a matter of perception than reality, and that there was no clear evidence that mobility actually benefited ECRs or research projects, or that it is necessary for career progression. The concerns that mobility was spuriously linked with development of expertise, excellence and independence, led to discussion of whether these characteristics could be developed, and discussed in recruitment, by other means.

Suggestions for response included removing the word 'mobility' from proposal assessment etc, and moving away from the idea of mobility *per se*. This might have a positive impact on the gender equality issue discussed later and allow the actual characteristics of independence and expertise to be addressed directly.

Making an assessment of the evidence / necessity for mobility was also mentioned as was the need for 'myth busting' and clearly informing ECRs of the realities of this situation. Case studies of different career routes from successful academics to those outside academia might help with this and help to correct misconceptions.

F3 – The inability for ECRs to act as PIs on grants currently is often discussed as an institutional barrier to applying for funding. Due to this, ECRs often assist more senior researchers in grant writing, but are not then acknowledged for the input (making it feel very difficult for ECRs to build a good track record and progress their career).

R3 – NERC should consider developing mechanisms to allow ECRs to co-author/co-PI on large-scale grants and ensure input is acknowledged

The negative impacts of this situation are that Early Career researchers may feel exploited, less committed to research, and unable to acquire experience in grant winning that they feel is useful to advancing their careers. It was also suggested that more details are required in finding which groups of ECRs feel affected by this. Some expressed concern that this is a misconception and questioned whether it is a genuine restriction on career prospects, particularly when other matters, like publication record, may be of greater significance. There was also a recognition that some institutions do reward ECR contribution.

The most common response to this finding was that 'Researcher Co-Investigator' (R-Co-I) status already exists and that this opportunity needs to be publicised, possibly along with case studies of successful 'graduates' of the R-Co-I opportunity.

It was also suggested that the current minimum commitment of time that applicants must dedicate to R-Co-I projects be reduced to less than the current 50%, or to a lesser commitment of time.

While there was also the view that this might be more of an institutional responsibility, rather than NERC's, various suggestions for NERC's consideration were made, namely that:

- NERC promote the R-Co-I option more fully and that the role of dedicated ECR grants, and the R-Co-I, in advancing academic careers be explored more fully in the context of the NERC research portfolio, which might also preclude apparent 'competition' with more established academics
- PIs be encouraged to recognise ECRs as R-Co-Is within their applications and make more use of this staff role
- Support for ECRs to be considered as an assessment criterion for NERC grants (see F6 and R6)
- ECR work on grants be acknowledged through formalised mechanisms (as an alternative to more complex Co-PI status)
- Consider opening smaller, admin-light, impact / accelerator and innovation-linked funding to ECR applicants
- PI training/experience be recognised in ECR development activities

F4 – Similarly, limited availability of funding is often discussed as a key gap in support

R4 – More small, short-term grants that are targeted at ECRs (where they can act as PI) would be beneficial, so that ECRs are not competing directly with more senior researchers and are then able to build a good track record of grant application writing

There was some assertion that limited funding is a 'fact of life' and that the resulting competition is good for a healthy research base. That said, participants also reported that, while small grants already exist outside of NERC, ECR-specific grants would encourage confidence, develop grant writing and assessing skills, as well as encouraging project management, profile-building and networking and independence (and would be a more reliable indicator of these characteristics than mobility (F2).

Several participants noted that these comments may be based on a preconception that the academic career path is 'the norm' and that transition away from this path is somehow a failure; however inevitable it may be given limited funding. Accordingly, there is a need for promotion of the message that non-research careers are a positive step.

There were concerns about the impact of making available more, smaller funds on other funding, as well as a concern about the perception of such a scheme among the wider academic community and questions of research quality. There was also a question of whether this is addressing what may be a misconception (F3), or that it may pass the problem further along the career pathway (F1). There was also some question of how more, smaller grants would help, given the observation of career instability made in F1.

That said, participants suggested opening smaller, admin-light, possibly impact-accelerating, activities and ring-fenced funding opportunities to ECR applicants (not existing supervisors or PIs). These might be extensions of doctoral and post-doctoral research.

Suggestions for the format of such schemes should take account of:

- Acknowledging ECR input on existing proposals and investigating low uptake of the R-Co-I role (F3)
- Changing the demographics of existing funding applications – possibly by preventing later stage academics from becoming PIs; introducing/promoting a new investigators (new PIs) role or broadening criteria for PI status
- Whether this would be more appropriate for PDRA or Fellowship roles
- The impact of small-funding processes on diversity of the researcher community
- The experiences of other research councils on similar schemes (are funding recipients any better able to compete later on, as a result)
- Being complementary to-, and signposting other-, non-NERC opportunities
- Making the application and administrative processes appropriate to the level of funding
- Making the funding scope of such a scheme appropriate (suggested figures included funding to £150K, or funding 33% of up to £200K, or even funding for use of equipment or non-monetary support)

Theme B: Current provision of training and support

F5 – Only 20% of ECRs rate the overall support available to them as good; many reference a lack of training targeted as ECRs as a key gap and there is limited awareness of support / training available currently (qualitative feedback suggests that a perceived lack of availability of support/training is partly due to a lack of awareness)

R5 – NERC should consider how it can work in partnership with ECR employers to improve availability and awareness of training and support opportunities. Considerations could include development of a code of practice for more structured ECR support, and working together to improve availability and signposting to information (online and offline) on professional development and careers advice for ECRs

The term ECR encompasses different roles with different emphases in terms of professional development and required skills, as well as people with different backgrounds and routes to their current position. As such, and bearing in mind the findings below, solutions that can be tailored to requirements were suggested.

While several participants stated that ECRs are clearly not being supported adequately, this is not uniformly the case and others noted that awareness of existing provision is an issue. In either case, further promotion of the development agenda, its necessity for career development, and the opportunities available to ECRs is needed. This may be via induction programmes and/or institutional means encouraged through research grant management processes and further outreach to fellows and PDRAs.

Employers and industry should be included in drafting any recommendations or codes of conduct. This consultation would help to make specific the various requirements for career progression in academic and non-academic roles. Any such code of practice should also take into account successful, existing efforts of organisations to promote continuing professional development (DTPs, Marie Curie process, learning from PGR development experience, best practice exchange), which vary in scope and nature and which are based in very diverse organisational (and PI) cultures and practices.

While some offered that this is primarily an institutional issue, other suggested NERC could exert its influence to promote the development agenda, particularly if development of the researcher is part of the aim of NERC's research funding. There was also a recognition that the existing Concordat should be providing such a stimulus. However, NERC may add to this by making explicit its expectations of development activity and including training statements in grant applications. Additionally, this may include NERC seeking reporting/appraisal of projects and PIs on training delivery and continuing professional development; and possibly assessing provision or provide additional funds to support it. This may encourage some PIs to engage with the development agenda rather than viewing it as a distraction from the research outputs on which they are assessed.

There was concern that this finding is based on the assumption of an academic/research career route, despite the realities of this career path. It was suggested that NERC collate destination and career pathway information, as well as data on the skills needed in those destinations, to illustrate such matters more conclusively, and distribute it to stakeholders, to allow informed decision making and motivate engagement. This might also contribute to the identification of core training needs (for example resilience), as well de-stigmatising careers outside of academia.

F6 – In some cases, ECRs feel that they are unable to attend available training opportunities due to a high workload and unsupportive supervisors / PIs

R6 –NERC should encourage supervisors / PIs to allow a set amount of time outside of research to be put aside for ECRs to attend relevant training.

As above (F5), there were clear statements that this situation is not acceptable. Accordingly, there was considerable support for the idea of making development activities (including training) mandatory, as a condition of NERC funding. This might include:

- Insisting on a training and development plan at the grant application stage
- Protecting funds and time to accommodate suitable development activities that meet the needs of relevant stakeholders
- Having funded researchers keep logs of development activities and assess these (or other methods of assessment)
- Ensuring parity of time and funding commitment between development of PDRAs and Fellows
- Explicit clarification of such expectations and what is available to PIs, institutions and ECRs
- Promoting awareness of existing arrangements and the Concordat

In addition, participants noted that this finding is set in a culture of overwork and some poor practice and that places research results above over researcher development. Against this background, measures should incentivise development activity and possibly tie discussions of this subject into annual reviews of PI and ECRs. This would be supported by selling the benefits of development activity to all stakeholders.

In relation to development activities more widely, use of media and development tools that require less travel was discussed and the development of a network of ECRs suggested.

Please also refer to the final two paragraphs of R5 and F5.

F7 – The majority of ECRs consider grant writing skills to be the most important training to be provided and of those who state they currently have this type of training available, the majority rate the quality as good. However, research management, careers outside of academia, coping with stress and time management are areas ECRs feel are more important to provide training and support on, but the current quality (and sometimes access) is rated as relatively poor. The majority believe these types of training should be provided predominantly by employers, though many are looking from additional support from NERC (particularly in regard to research management and careers outside academia), and learned societies / professional bodies. Similarly, publishing and research management are considered the most valuable skills for ECRs to possess by the majority of ECR employers / managers (and are considered important support / training opportunities to provide by ECRs themselves).

R7 – NERC should look to: a. provide additional support, particularly in research management and careers outside of academia b. encourage institutions to provide and promote training in all key areas mentioned c. encourage professional bodies / learned societies to get involved with advice on careers outside of academia.

These results may again reflect the underlying assumption that a career in academia/research is the 'best' destination for an ECR, despite the realities of the small proportion of ECRs reaching that stage. This may lead to a biased view of the skills and development required in the longer term. As a consequence, it may be other skills that are more appropriate – such as resilience, wellbeing, non-academic communication.

All of which emphasises the important role of industrial partners, learned societies and other appropriate stakeholders in the scoping, structuring, promoting and/or provision of subsequent development activities. It also suggests the importance of illustrating the value of non-academic career paths and the skills and development needed in those, equally valid, routes.

More specifically, a primary role for employers was seen in delivery and more effective promotion of this provision, while ensuring there is no conflict of interest or too narrow a perspective from within academia. Formation of peer-peer groups would be useful, possibly across institutions, e.g. the fellows' forum and a potential equivalent for PDRAs. Induction, promotion, and appraisal processes within HEIs may also be useful institutional platforms on which to build such activities.

Additionally, a NERC role was seen in supporting careers and formalising the requirement for training provision through grant applications assessment and the means described above (F5).

Theme C: Support for careers out of academia

F8 - There is a high recognition that the majority of ECRs will not secure a long-term post in academia, though many are unaware of how to achieve a career outside of academia, what their career options are, and where to find them. Support in careers outside of academia is ranked as the 7th most important support / training opportunities to provide overall.

R8 - There is a need to improve support and training in careers outside of academia, from NERC, institutions and professional bodies / learned societies. This could include guidance highlighting the many transferable skills that ECRs possess, and promotion of non-academic careers as a viable and rewarding alternative to the academic route. ECRs in academia appear to some extent blinkered towards the academic career route suggesting a need for more upfront and frank discussions by NERC and ECR employers from PhD level.

The report's respondent sample does not take account of the views of those who have already left academia. As this cohort would have a particularly pertinent opinion, it was suggested NERC canvass their views.

Participants recognised the importance of this finding. Some also emphasised the responsibility of the ECR in addressing their own career development and asked what NERC's remit/agenda is in this area.

A common reaction was, again, that the realities of how many researchers are funded and/or enter full time academic positions are not well known and should be gathered and discussed openly and frankly with ECRs and stakeholders, though this runs the risk of demoralising some. Similarly, the language and portrayal of a choice between 'staying' in academia or 'leaving' for 'everything else' was neither accurate nor helpful in terms of promoting an equally positive perception of other career routes and should be modified to a more positive and co-ordinated message from relevant stakeholders.

Participants suggested learning from experience of working with PhD candidates (CDT and DTP), and finding examples that emphasise the value of non-academic careers, the importance of transferable skills and making exposure to non-academic roles and opportunities the 'norm' during research programmes (as per the 'successful innovation' vision). Methods suggested to help with these findings included:

- Making doctoral training for careers support available to ECRs or adapting it to an ECR audience
- Placements (possibly scoring this in grant applications)
- Knowledge transfer fellowships
- Establishing peer support groups
- Workshops, careers fairs and presentation showcasing careers outside academia
- Linking with learned societies, and
- Emphasising again the support that is currently available
- Mentoring, buddying, partnering between academic and non-academic partners.

While it was recognised that a responsibility for this area lies with employers challenges in delivery may arise from the lack of availability of careers advice for ECRs and the lack of qualification of PIs or HEIs to provide independent advice not driven by the HEI agenda. As such, links with non-academic professional bodies and learned societies, as well as the UK Research Staff Association were mentioned. Likewise, support for ECRs at the level of discipline, institution or cluster could be encouraged.

NERC's role may include communicating the value of postdoctoral research experience to non-academic employers, as well as gathering and sharing the career pathways and successful case studies mentioned in relation to the other findings of the report.

Theme D: Addressing gender and diversity

F9 - Although the gender ratio for ECRs completing this survey is almost equal, there is a rather large drop off of female NERC Research Fellows and NERC Research Grant PIs; equality and status of women in research has been recognised as a key issue for the global research community (for example it was a key discussion topic at the Global Research Council 2016 Annual Meeting). Similarly, the vast majority of NERC researchers from student to Research Grant PI are white; only a very small proportion identify as any other ethnicity.

R9 - NERC should continue to give consideration to measures to encourage and support women in applying for funding and consider funding strategies and policies specifically designed to influence gender and ethnic diversity.

All groups noted that while gender ratio is a core issue, the discussion needed also to be about developing a more broadly inclusive approach to supporting career progression for ECR's. Many also expressed their disappointment and lack of surprise at the finding and emphasised that this is part of a wider issue that exists across researcher disciplines.

The particular situations discussed included:

- Returners
- Part time and flexible-working opportunities for ECRs
- The impact of dependents, including child care costs, parental leave and other caring responsibilities

The themes consistently considered a priority were:

- The need to gather data to further the evidence base on the challenges and causes of a lack of equality and diversity. Also the impact on the research community of such a lack, and the reasons why those women leaving academia did so.
- Supporting this, is a need for a positive language and overall narrative that reinforces good practice, dispels myths that maintain inequality, and celebrates success stories
- To challenge and make more appropriate and inclusive the language and process of grant applications and criteria for panels, making explicit the expectations of NERC in this regard. This might include a statement of support and commitment in grant applications, as well as a requirement for institutions to report on that.
- Highlight the successes and opportunities of the value of diversity to the research society through:
 - Case studies
 - Career champions (mentoring)
 - Networks and events that bring together RC funded researchers and successful alumni and that address such issues and offer peer support
 - Role models – e.g. Seminar series of women in academia

Following the first workshop, there was a general consensus that prioritising actions was not appropriate for this topic. They all needed to be done in conjunction. On challenging that – in terms of resource constraints - two suggestions were made:

- An option of pilot/feasibility studies – requiring less resource.
- However, when scale is an important feature an alternative is to partner up a 'direct action' activity with a research and evaluation project, that will provide the evidence for further activity and intervention.