**The Health Research Board Review of Funding Award Processes 2017**

Executive Summary

HRB have committed to the goal of creating gender balance in the health research its funds, both in terms of who is conducting the research and who is benefitting from it. This review sets out to understand if the funding processes used at the HRB help to achieve this objective and to derive recommendations to improve the processes further.

The review focussed on two funding schemes, one which awards funding to individual investigators, and another which awards funding to individual research projects. Three research phases were undertaken as part of the review: Policy and process review, interviews with key stakeholders and live unconscious bias observation.

The schemes’ policy and processes were reviewed to understand whether best practice assessment approaches were being used and whether they were directing decision-making in a way that helps or hinders unconscious bias. The aim was to determine whether the policy and process documents were written in a way to maximise fairness and gender balance.

The second stage of the research involved interviewing peer reviewers and HRB project staff, to understand how decisions were made in practice and to clarify points emerging from the policy review.

The last stage of the project was to observe three panel meetings, using an approach called live bias review. This is a passive observational technique used to measure the degree of bias in decision-making and to ascertain whether decisions are being made in line with the stated process.

The review identified that stakeholders involved in HRB funding schemes were diligent, conscientious and concerned to make fair and bias free decisions. They engaged with their work with professionalism and treated applicants with dignity and respect. It was clear that they undertook their roles seriously and understood the importance of making high quality recommendations and decisions.

The review also identified a range of issues where the HRB could improve. The issues were grouped into three themes; clarifying the role and selection of Chairs and panel members, improving the assessment mechanisms and empowering the funding stakeholders to identify and challenge bias.

In conclusion, the review found the HRB funding schemes to be operating well but at the same time identified changes that can be made to further safeguard decisions from bias and to help HRB meet their gender objective.

 **Overview/Introduction**

The HRB have committed to the goal of creating gender balance in the health research its funds, both in terms of who is conducting the research and who is benefitting from it. Pearn Kandola was invited to review two of HRB’s funding award processes. The aims of the review were to:

* Identify and challenge potential sources of gender bias in the peer-review process
* Determine how the peer-review process incorporates consideration of sex and/or gender dimension in HRB funded research proposals where these have been identified as relevant variables
* Receive guidance aimed at external experts who provide HRB with peer review.

The purpose of the report is to highlight these risk areas and to provide recommendations to improve the funding decision making further. The recommendations are to serve as the basis of a conversation between Pearn Kandola and HRB to identify the actions and activities that will make the greatest impact on HRB’s journey to meeting its gender objective.

**Methodology**

The review examined two funding schemes, one which awards funding to individual investigators, and another which awards funding to individual research projects. Three research phases were undertaken as part of the review: Policy and process review, interviews with key stakeholders and live unconscious bias reviews.



The schemes’ policy and processes were reviewed to understand whether best practice assessment approaches were being used and whether they were directing decision-making in a way that helps or hinders unconscious bias. The aim was to determine whether the policy and process documents were written in a way to maximise fairness and gender balance.

The policy documents were reviewed against a number of criteria that assessed the quality of the documents and their ability to result in objective and fair decision-making. A summary of these criteria is presented below.

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| Best Practice Assessment Criteria |
| Documents provide clear and unambiguous guidance to all decision-makers. |
| Decisions are based on objective criteria. |
| Assessment tools allow criteria to be accurately assessed. |
| Assessment criteria are consistent and unambiguous. |
| Clear decision-making and weighting rules are used. |

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| Managing Unconscious Bias Criteria |
| Fairness and equality are prominent in the guidance for decision-makers. |
| The link between using objective decision-making and fairness/equality is communicated. |
| The conditions that allow unconscious bias to impact decisions (time pressure, comparisons between participants, reliance on memory and overall impressions) are not evident in the process. |
| Decision-makers are encouraged to challenge each other’s decisions and to uphold the use of an objective process. |

The second stage of the research involved interviewing peer reviewers and HRB project staff, to understand how decisions were made in practice and to clarify points emerging from the policy review.

The last stage of the project was to observe three panel meetings, using an approach called live bias review. This is a passive observational technique used to measure the degree of bias in decision-making and to ascertain whether decisions are being made in line with the stated process.

The meetings were reviewed against a range of competencies derived from research and best practice in assessment and unconscious bias presented below:

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| Best Practice Assessment Criteria |
| Decision-makers use the appropriate documentation. |
| Decisions are based on objective criteria. |
| Evidence is offered in support of decisions. |
| Panel members use the same criteria and make decisions consistently. |
| Clear decision-making and weighting rules are used. |

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| Managing Unconscious Bias Criteria |
| Fairness and equality are highlighted in the meeting. |
| The conditions that allow unconscious bias to impact decisions (Time pressure, comparisons between participants, reliance on memory and overall impressions, tiredness) are not observed. |
| Examples of bias, such as confirmatory or priming, are not observed in the meeting. |
| Evidence that panel members will challenge poor decision-making practices. |

**Findings**

Findings from the process and policy review, interviews and live bias reviews are presented in strengths vs weaknesses.

**Strengths**

The review identified that stakeholders involved in HRB funding schemes were diligent, conscientious and concerned to make fair and bias free decisions. They engaged with their work with professionalism and treated applicants with dignity and respect. It was clear that they undertook their roles seriously and understood the importance of making high quality recommendations and decisions. Key strengths in HRB processes and documentation include:

* **Gender policy[[1]](#endnote-1)**

The HRB gender policy is a positive step in improving outcomes both for researchers and research beneficiaries, from a gender perspective. The documents make clear that research proposals need to consider the impact of the research both on men and women, as well as stating that gender will be ‘among the ranking factors to prioritise proposals with the same scores’.

* **Clear award criteria, application process, right to reply phase**

The criteria by which the quality of the awards is determined are shared with applicants when they apply. The assessment criteria and weighting used for scoring each component of the application is also shared in the guidance documents which directly correspond to the scoring criteria used by the reviewers.

The eligibility of the lead applicant, co-applicants and collaborators is clearly defined. Their expected roles and responsibilities on the project are defined, and the minimum experience, using measurable criteria.

The key milestones of the application process are shared up-front with applicants, in terms of clearly defined assessment stages and the involvement required by the applicant.

Applicants have the opportunity to respond to the comments from peer reviewers prior to the panel or interview panel taking place. This gives applicants an opportunity to challenge where they feel the comments are unfair or unwarranted. Similarly, the reviewers know that their comments will be seen by the applicants. Transparency has been found to increase the fairness and objectivity of ratings when those reviewing performance know that their decision will be reviewed by others.

* **Identification of conflicts of interest**

A number of steps are taken to reduce the likelihood that a conflict of interest occurs. HRB staff searching for potential peer reviewers actively search for possible signs of a conflict of interest before contacting the individuals. They are also given guidance on how to check for this. Once selected, peer reviewers are asked to sign a Conflict of Interest disclosure prior to commencing the role. Additionally, reviewers are asked to inform the HRB immediately should they recognise a conflict of interest, so that an alternative reviewer can be found.

For panel members where a conflict of interest exists, clear guidance is given on what they should do (e.g. ‘leave the room during the panel interview’).

* **Peer reviewers sign a fairness statement**

Peer reviewers are required to tick their agreement to the statement - ‘I will endeavour to review this proposal fairly and objectively and not let bias influence my judgement’. Research shows that prompting reviewers to be fair and objective immediately prior to judging the performance of others can help to reduce the impact of bias. The impact of this could be enhanced further by expanding the statement to include *how* the reviewers can be fair – for example, ‘by only basing performance on the criteria provided’.

* **Panel review – Independent Chair, processes and feedback to applicants**

The Chair is not involved in the review or scoring of the applications themselves. Research shows that having an impartial outsider can help to increase objectivity of the discussion.

Each application has a primary reviewer, who is able to focus their time and attention on a specific application in detail.Secondary reviewers are assigned to each application, ensuring that alternative points of view are considered.

Panel members individually review the applications in detail in advance of the meeting, and complete a panel review form to capture their individual judgements. This can help to reduce the social pressures that can influence decisions, for example, the social pressure to conform with the views of others and Group Think.

Applicants receive feedback, including comments from interview panel. This helps to ensure that the process is transparent and decisions need a clear justification.

**Weaknesses**

The review also identified a range of issues where the HRB could improve. The issues were grouped into three themes. These themes, whilst being areas for improvement for HRB, are highly typical of research funders that Pearn Kandola has worked with.

1. **Clarifying the role and selection of Chairs and panel members**
* **Criteria for panel Chair and panel members**

Criteria are provided for international peer reviewers and for panel Chairs, but limited guidance exists for HRB staff to select panel review members. There is no guidance to encourage HRB staff to find diverse people when selecting reviewers. The risk here is that HRB staff members are likely to rely on the same people from year to year to carry out reviews, especially at the panel stage.

* **Chair responsibilities**

Chair responsibilities include ‘ensure fair and equal procedure for all applications’ – however no guidance is provided to the Chair on what is meant by bias (unconscious or otherwise), and how they should ensure that the procedure is fair.

The Chair may influence the opinions of the committee members. Within the Chair responsibilities, the Chair ‘*should not hesitate to state his/her scientific opinion where appropriate’,* however how this is done is important. Should the Chair share their opinion too early, there is a risk that this can lead to Priming. There is also some contradictory information in the Chair’s responsibilities. They are encouraged to share their opinion, but the responsibilities also note that ‘*the Chair should not influence the proceedings in favour of or against any individual application’.*

1. **Improving the assessment mechanisms**
* **Limited information on what is meant by unconscious bias, and how it can be avoided**

Reviewers are asked to ‘endeavour to ensure their review is free from unconscious bias which might arise from e.g. the gender, career stage or scientific domain of the applicant’. With no definition provided on what is meant by unconscious bias, it is unclear what is meant. As a result, there is a risk that the statement will be dismissed or misunderstood by individuals who have not had previous training on unconscious bias.

* **Risk of unconscious bias from applicant name(s)**

Applicant names are shared with peer reviewers when reviewing the application. Research has shown that names on applications can lead to unconscious bias. Names bring additional information about the applicant to mind – for example, gender, race, country of origin, which can lead to priming or confirmatory bias (generating expectations of what the reviewer will see, which can influence how they perceive the evidence).

* **Criteria – Amount, Length and Ambiguity**

The funding schemes reviewed require peer reviewers to base their ratings on multiple criteria. Reviewers will need to rely on their memory of the items in order to make a judgement. Some of the items listed in the criteria include several different behaviours. This can lead to different reviewers interpreting the criteria in different ways, focusing on one part of the criteria, or disregarding some points.

Some items listed in the assessment criteria are particularly long. This can lead to an over-reliance on the memory of the reviewer, who needs to keep the entire sentence in memory when making their judgement. As with multiple criteria, particularly long items can be interpreted in different ways by different reviewers, with the salient points for them typically being the ones that are remembered and considered.

The language used in some of the criteria is ambiguous and can be interpreted in different ways by different people. Interviews revealed that the HRB criteria ‘feel’ familiar to experienced reviewers, with comments that they are ‘fairly standard’ and similar to those used by other funding organisations. This raises the risk that the more experienced reviewers may not refer to and base their ratings on the full range of criteria (but those that sit with their existing system for reviewing research applications).

* **Rating scales**

Peer reviewers and panel members score the applications using a Likert rating scale (1-5, poor to excellent). The 1-5 scale descriptors can be interpreted differently by different people. This increases the likelihood that different raters will respond differently to the same information.

A small number of competencies are used to score applicants, which leads to limited variance in scoring and makes it more difficult to differentiate between them. This situation makes it more likely that subjective decision making will be used to differentiate between applicants. In addition, the criteria which make up the competencies were not very easy to score. This is likely to lead to more impressionistic and high-level scoring, where important data could be overlooked. Scoring was also seen to be used comparatively in meetings. Applicants tended to be compared with others, rather than against the criteria. This can lead to sub-optimal decision making.

To resolve this set of issues it is recommended that the competencies are re-designed to make them easier to assess against and therefore more likely to be used. The gold-standard approach of using behaviourally anchored rating scales is strongly advised.

* **Rank ordering**

At the end of each panel the panel comes to a consensus on projects that are fundable or not fundable. Fundable projects are ranked in order of priority for funding by the panel. The rank ordering process for similarly scored applications was potentially risky. It is an environment in which unconscious bias can flourish and impact the outcomes. Introducing a more systematic scoring process across a greater number of competencies with a clear prioritisation process being enforced would prevent this situation from arising.

1. **Empowering the funding stakeholders to identify and challenge bias.**

Sources of unconscious bias were observed in panel meeting discussions, although this was no more likely when discussing women than men. However, as bias was observed on occasion, funding stakeholders need to trained how to prevent, spot and challenge bias, to further improve the quality of decisions being made.

Representatives from HRB are present to clarify procedural aspects for the panel/Chair and to take notes. Panels are attended by different Chairs and panel members, and the HRB presence will help to provide some consistency in the panel process between sessions. From the processes, it appears that input from the HRB representative is mostly given when requested by the Chair. To support consistency between panels, it is recommended that a formal part of the HRB representative’s role is to intervene when required to ensure that the process is followed, and to maintain consistency.

**Conclusions**

This review has focussed both on the policies and procedures that drive funding decision making, as well as the practice of doing it. The review has found good practice in both aspects. From a policy perspective there are very clear rules governing the selection of international reviewers and this good practice should be extended to panel members as well. In addition, there are clear rules around conflicts of interest and the new gender policy. From a practice perspective, HRB staff and the external contributors were seen to act professionally, diligently and with a strong intention to get the right result.

However, the focus of this report is on improvement and the steps that can be taken to safeguard the decision making from bias. The live bias reviews identified that unconscious bias in different forms is present in the decision-making environments. The review did not uncover a clear bias from a gender perspective. Instead it showed that decisions were being taken in relation to borderline applications that on occasion appeared subjective. This is the environment in which bias, including gender bias, can have an impact.

An aim of the review was to determine how the peer-review process incorporates consideration of gender dimension in HRB funded research proposals. Whilst applicants were asked to report on this in their proposals, there was no measurement of it and it did not feature in the scoring of the proposals.

For the HRB to meet its objective to strive for gender balance in Irish health research there needs to be improvements in funding decision making. This report has offered a variety of very specific recommendations but key to achieving the Gender Policy’s objective the following should be prioritised:

1. Clear and readily assessable criteria need to be provided so that they are central to all decision-making. All funding decisions need to be justifiable in relation to the criteria. Gender considerations to be part of the decision making criteria.
2. A consistent process for rank ordering needs to be designed and importantly enforced.
3. Staff and reviewers need to be fully aware of assessment best practice and unconscious bias. They should be confident to challenge when risks are identified.

As the Gender Policy states, achieving the objective of gender balance requires a persistent and long-term effort.

**Implementation of Recommendations**

HRB staff members are addressing the recommendations made by Pearn Kandola. An internal workshop identified the documentation changes required. The following actions have taken place:

* The HRB gender policy and call guidance documents have been updated to include a statement of fairness
* The HRB have included this statement on unconscious bias and a short training video into the GEMS peer and panel review form: *The HRB request that peer reviewers and panel members consider unconscious bias in their decision making. Please watch this short video (3 minutes) from the Royal Society, UK, explaining unconscious bias.* [*https://royalsociety.org/topics-policy/publications/2015/unconscious-bias/*](https://royalsociety.org/topics-policy/publications/2015/unconscious-bias/)*.*
* Various criteria and guidance documents for panel members and Chairs have been reviewed and updated or created new.

A second workshop has been scheduled with Pearn Kandola for January 2018. Pearn Kandola will work with HRB staff to:

* Advise how to improve our assessment mechanisms and introduce behaviourally anchored rating scales as a scoring system
* Equip HRB staff with skills to identify and challenge risk of bias during panel meetings.
1. http://www.hrb.ie/research-strategy-funding/policies-guidelines-and-grant-conditions/policies-and-position-statements/gender-policy/ [↑](#endnote-ref-1)