Benchmarking research related complaints in Australia - an exercise to increase transparency and build public trust

Dr Rebecca Halligan, Dr Rebecca Griffin and Dr Anna Vo
Research Integrity and Ethics Administration
What is the Research Integrity Benchmarking Report?

Participating universities attract over two-thirds of Australian Commonwealth competitive research funding and spent over $6 billion per year on research.

Acknowledgement: the Research Integrity Offices at each of the participating universities invested considerable resources in contributing data and contributing to analysis.
## How big is Australia compared to other countries for academic research?

### Summary of 2011 Expenditure on R&D in tertiary institutions

<table>
<thead>
<tr>
<th>Country</th>
<th>Population (millions)</th>
<th>Land size</th>
<th>Expenditure on R&amp;D at tertiary institutions as a % of GDP</th>
<th>Expenditure on R&amp;D in tertiary institutions in USD billions</th>
<th>Number of Universities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>22.8</td>
<td>7.7M km²</td>
<td>0.61%</td>
<td>5.7</td>
<td>41</td>
</tr>
<tr>
<td>US</td>
<td>312</td>
<td>9.8M km²</td>
<td>0.30%</td>
<td>46.6</td>
<td>164</td>
</tr>
<tr>
<td>UK</td>
<td>62.7</td>
<td>0.24M km²</td>
<td>0.31%</td>
<td>7.2</td>
<td>?</td>
</tr>
</tbody>
</table>

1. Source: OECD 2014, Education at a Glance, Table B2.4
3. [www.universitiesaustralia.edu.au](http://www.universitiesaustralia.edu.au) [www.universitiesuk.ac.uk](http://www.universitiesuk.ac.uk)
Why benchmark?

– To increase transparency about our management of research related complaints. Previously available data included;
  – Occasional cases with media coverage
  – Reporting from funding agencies on proportion of matters
– To build confidence in the complaint management process
  – A high proportion of the matters we manage are managed efficiently and outcomes are accepted by complainants and respondents
– To identify common issues impacting researchers and institutes and work together to improve their management
## Number of complaints received and managed

### Summary of Research Integrity matters managed by participating universities from 2014-17

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Median</th>
<th>Range</th>
<th>Interquartile range</th>
<th>% of total complaints</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Complaints and allegations received</strong></td>
<td>626</td>
<td>64.5</td>
<td>23 - 166</td>
<td>74</td>
<td>--</td>
</tr>
<tr>
<td><strong>No. of preliminary assessments conducted</strong></td>
<td>396</td>
<td>26.5</td>
<td>13 - 147</td>
<td>41.25</td>
<td>64.4%</td>
</tr>
<tr>
<td><strong>No. of formal investigations conducted</strong></td>
<td>68</td>
<td>8</td>
<td>2 - 18</td>
<td>7.5</td>
<td>10.76%</td>
</tr>
</tbody>
</table>
Number of complaints received and managed

Average number of RI complaints managed by year per institution

- Complaints and allegations received
- No of preliminary assessments conducted
- Number of formal investigations conducted

<table>
<thead>
<tr>
<th>Year</th>
<th>Complaints and Allegations Received</th>
<th>Preliminary Assessments Conducted</th>
<th>Formal Investigations Conducted</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>20</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>2015</td>
<td>15</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>2016</td>
<td>10</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>2017</td>
<td>25</td>
<td>20</td>
<td>10</td>
</tr>
</tbody>
</table>
Categories of issues

Category of issues managed by RI offices, 2014-2017

- Plagiarism: 19%
- Authorship: 18%
- Breach of protocol: 15%
- Falsification and fabrication: 12%
- Research without necessary approvals: 8%
- Grant-related: 9%
- Other: 19%
Categories of complaints

Yearly number of complaints by category (2014-2017)
Complaints by discipline

- Medical and medical-related fields: 45%
- Science, technology and engineering: 36%
- Humanities, education, arts and social science: 12%
- Business and law: 7%

*One institution only provided 2016 & 2017 data*
## Outcomes

Summary of complaint outcomes at participating universities for 2014-2017

<table>
<thead>
<tr>
<th>Findings</th>
<th>Total</th>
<th>Median</th>
<th>Range</th>
<th>Interquartile range</th>
<th>% of total complaints</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breaches (or sub-optimal research practices that were found not to be research misconduct)</td>
<td>145</td>
<td>18.5</td>
<td>3-32</td>
<td>18.75</td>
<td>23.16%</td>
</tr>
<tr>
<td>Research misconduct</td>
<td>41</td>
<td>4.0</td>
<td>2–12</td>
<td>2.25</td>
<td>6.55%</td>
</tr>
<tr>
<td>NHMRC/ARC Sanctions</td>
<td>11</td>
<td>1.5</td>
<td>0–3</td>
<td>2.25</td>
<td>1.76%</td>
</tr>
</tbody>
</table>
Summary of Actions

Types of response to findings of breaches and research misconduct (2014-2017)
Limitations of the data

- Differences in culture and process
- Training/awareness of researchers
- Activities of Research Integrity Advisers
- Changes to practices during the reporting period
International benchmarking?

Limitations due to:
- Variations in policy
- Variations in reporting frameworks
- Limited data available

Challenges are explained in more detail here:
https://protect-au.mimecast.com/s/RJ-xC4QZ1RFm7M1GCxWGfV?domain=natureindex.com
Conclusions

– No evidence to suggest that numbers of complaints are increasing
– The number of complaints received appears to be proportional to research effort
– More consistency for findings of research misconduct than for breaches