

# Survey of macular research in UK

Pamela Royle and Norman Waugh

# Aims of survey

- To review UK research performance in AMD and Stargardt disease
- To see what research is being done
- To identify the main sources of funding
- To assess the impact of MacSoc research grants

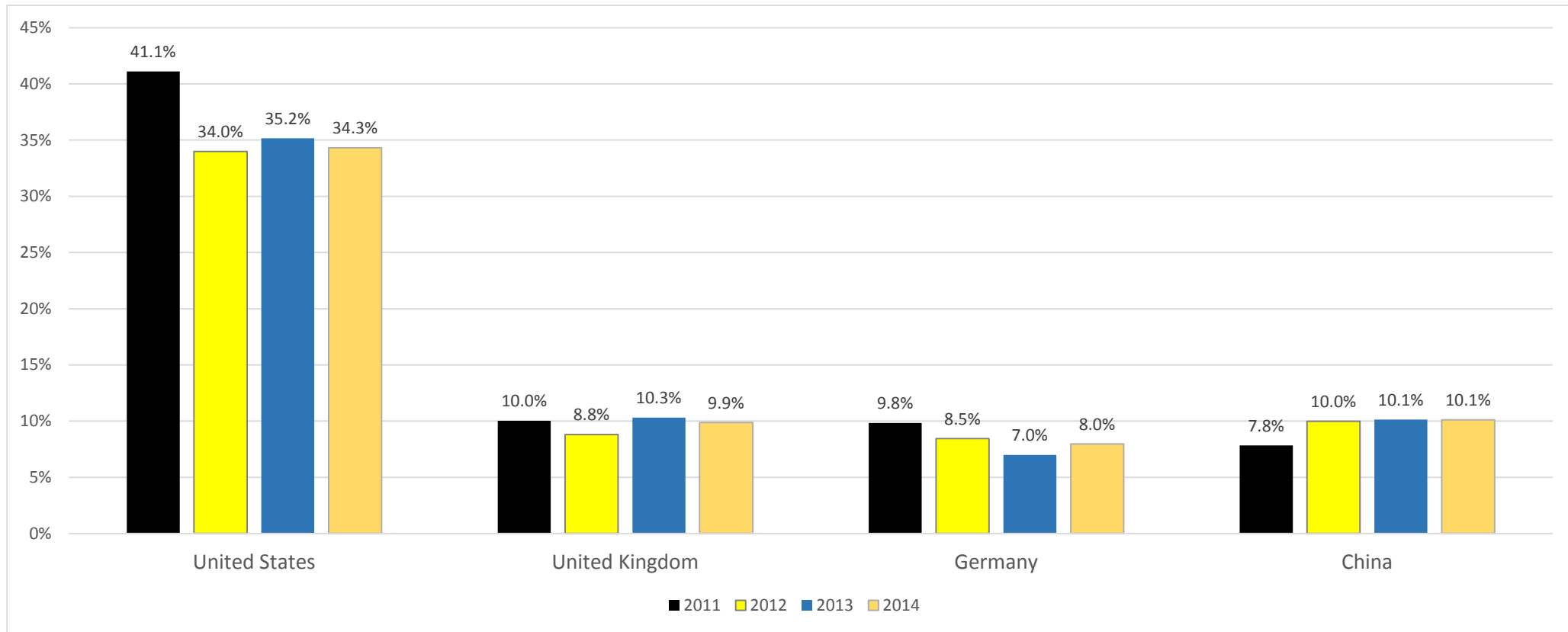
# How do we assess research performance?

## Options

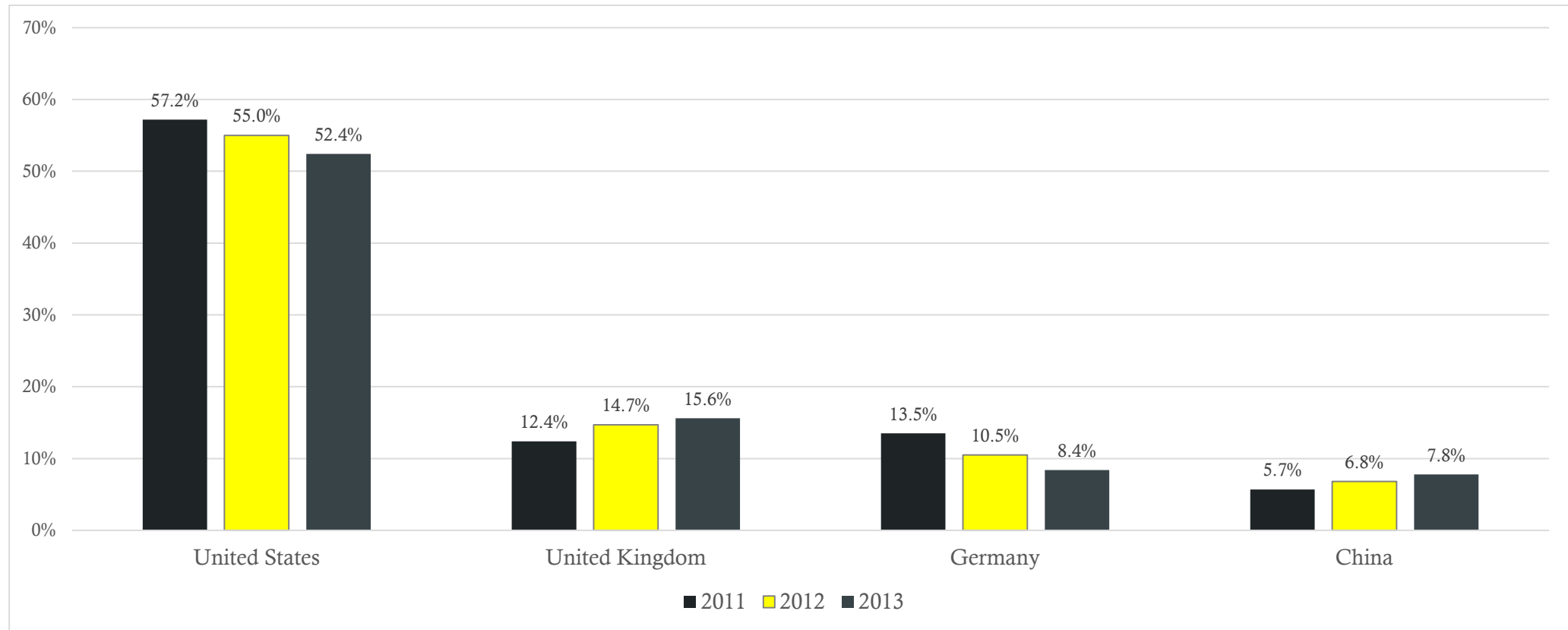
- Publications?
- Journal impact factors?
- **Citations**
- Ideally, improvements in treatment or prevention

Bibliometrics - method of evaluating research performance

# Percentage of world output of macular disease journal articles from the top 4 producing nations



# Percentage of world citations for macular disease for US, UK, China and Germany 2011-2013



# UK performance in an international context

- 2011-13
- 9.8% of world articles but 13.8% of citations
- Mean citations per article – UK ahead of USA, Germany and China in 2012 and 2013
- “Highly cited publications” – top 10% most cited - HCPs

# Proportion of HCPs from UK authors

	2011	2012	2013
UK Authors - HCPs	13.7%	16.5%	18.3%
UK overall article share	10.0%	8.8%	10.3%

# Topics of UK Authors' HCPs: 2011-2013

<b>Primary research</b>	<b>41</b>
Treatment	16
Pathophysiology	11
Genetics	7
Diagnostics	3
Epidemiology	3
Health economics	1
<b>Reviews</b>	<b>13</b>



# The Research Excellence Framework

Regular review of research performance of UK universities - affects income

- Papers scored as;

4\* - Quality that is world-leading in terms of originality, significance and rigour.

3\* - Quality that is internationally excellent but which falls short of the highest standards of excellence.

2\* - Quality that is recognised internationally.

1\* - Quality that is recognised nationally.

# Macular disease in the REF

- Realities – university research has to score well
- Departments can close!
- Impact case studies – research that affects patient care or national policies.
- The emphasis on impact will help patients by affecting university priorities

# Macular disease in the REF

- 68 papers with “macular” in title (UoA 1, 2 and 3)

So some missed, but an indicator

- 0.23% of all UoA 1-3 papers
- Only 6 impact statements
- Nearly all AMD – very few on Stargardt

## REF entries – most cited

- IVAN trial 223
- SUSTAIN trial 131
- SERPING 1 gene 93
- Mutations in AMD 85
- Macular hole trial 54
- Polymorphisms in AMD 53
- BOLT trial DMO 52
- Complement study 46
- Uveitis trial 43

# Sources of funding acknowledgements

## UK Government

- NIHR 46%
- MRC 28%

## UK Charities – 77 charities acknowledged

- Fight for Sight 14.9%
- Wellcome 14.6%
- MacSoc 10.2%

**Industry:** Novartis, Pfizer, Allergan, Bayer, Alcon

# Priorities for AMD research

JLS Rowe 2014

1. Stop dry AMD progressing
2. The cause of AMD
3. Prevention of AMD
4. Restoration of sight loss in AMD
5. Can the development of AMD be predicted?
6. Diagnostics - monitoring the progression of early AMD
7. What factors influence the progression of AMD?
8. Non-invasive treatment wet AMD
9. Non-drug treatments to slow the progression of AMD?
10. Enablement strategies for people with AMD

# What topics are researched in UK?

Wide range

- Basic science
- Epidemiology
- Treatments and trials
  - new drugs, stem cells, radiotherapy, nutrition
- Diagnostics
- Health services research
- Primary research and systematic reviews

# Impacts of MacSoc research

- Most research grants followed by publications
- 59 publications 2008-2015 acknowledged MacSoc funding – average JIF 5.3
- 10 articles in REF acknowledged MacSoc



# Summary

---

- UK produces high quality research
- Most done in a few centres
- Wide range of research areas

# Competing priorities?

- Patients
- Researchers
- Funders
- Universities
- Industry
- Tensions: e.g. “blue sky” versus REF Impact