

## **EASE Conference**

**Parallel session 2b: Saturday 11 June, 15:30-17:30**

### **Reducing waste in research and publishing**

*Moderated by Joan Marsh, The Lancet, UK*

#### **Programme**

4 talks of c.20 minutes with c.5 minutes for questions, finished with short panel discussion (c.15 minutes) to close

**1. The *Lancet* REWARD (REduce research Waste and Reward Diligence) Campaign (Joan Marsh)**

The REWARD campaign is based on a Series of papers published in 2014 with one added last year. It encourages research related to six themes: Priorities, Design, conduct and analysis, Regulation and management, Accessibility, Complete and usable reporting, and Action and recommendations. The Lancet group journals endeavor, in particular, to reduce waste from incomplete or unusable reports of biomedical research, by ensuring that research is set in the context of previous studies, that clinical trials report all pre-specified outcomes, that results are accurately described and not over-interpreted, and that appropriate statistical analyses are used.

**2. *Reducing waste from incomplete or unusable reports of biomedical research* (Paul Glasziou)**

Without accessible and usable reports, research cannot help patients and their clinicians. Reporting guidelines such as CONSORT, STARD, PRISMA, and ARRIVE aim at improving the quality of research reports, but are poorly adhered to. Though best documented for clinical trials, inadequate reporting is widespread—in animal and other preclinical studies, diagnostic studies, epidemiological studies, clinical prediction research, surveys, and qualitative studies. Evidence for some immediate actions are clear: change the current system of research rewards and regulations to encourage better and more complete reporting, and fund the development and maintenance of infrastructure to support better reporting, linkage, and archiving of all elements of research.

**3. *Register reports: a new form of peer review publications* (Pia Rotshtein)**

Modern science practices generate a tension between the interest of individuals and the common good, i.e. progressing the knowledge base. Individual researchers are evaluated based on their publications and publications are primarily concerned with exciting novel findings. This leads to two problems: the first is a bias in the type of data that is reported, toward positive results. The second is that the reliability of findings is rarely challenged as replication studies are not favoured by many journals. Register reports addresses this problem. This format is inspired by common practices used in clinical trials. Register report requires the authors to submit an introduction and a methods section prior to data collection. Replication studies are also invited. These go through in-depth editing and review by experts, as a complete study would. Special attention is given to the statistical power of the study and to measures of data quality. If approved, the study is in

principle accepted (IPA) for publication. Importantly, IPA status is granted prior to data collection and independent of the findings. This shifts the focus of the editorial and review process from the findings to the hypothesis and methods. When the study is published, the authors are obliged to make their data fully accessible to increase transparency. The journal Cortex has been accepting register reports since 2013. So far, we have published more than a dozen papers using this framework, and many more are registered with us. This format has been adapted with variations by another 20 peer-reviewed journals. Register report serves as a platform to counter biases in the way scientific work is reported and conducted and improves the quality of studies through a review process that precedes data collection.

#### **4. *How freelance publication professionals help avoid waste (Karen Shashok and Pamela Waltl)***

Authors may waste editors' time by submitting material that does not meet journals' content and documentation requirements. Even with good editorial quality control, some peer-reviewed articles are later found to be flawed enough to need retraction. This requires time and work by editors and publishers that could have been saved with better pre-submittal quality control. Retractions also mean that resources used for review and publication have been wasted. We will use examples from our work to show how freelance publication professionals help reduce waste by training researcher-authors in writing and reporting, and by educating them about publication ethics.

#### **5. *The Experimental Design Assistant: helping authors to follow guidelines (Nathalie Percie du Sert)***

The reproducibility of biomedical research using animals has come under scrutiny in recent years, and quality standards in the design, analysis and reporting of in vivo research have been flagged as concerns. The NC3Rs (UK National Centre for the Replacement, Refinement and Reduction of Animals in Research) has been working in this area over the last ten years and led the development of two key resources to support researchers. The ARRIVE guidelines summarise the minimum information necessary to describe a study and make recommendations on the reporting of the study design, experimental procedures, animal characteristics, housing and husbandry, and statistical analysis. The Experimental Design Assistant is a free online resource, which helps researchers design animal experiments, generating an explicit representation of the experimental plan, as well as providing feedback and dedicated support for randomisation, blinding and sample size calculation. The objective of these resources is to maximise the output of research using animals. Wide dissemination and uptake are essential to ensure the science emerging from animal research is fully exploited.

### **Speaker biographies**

**Professor Paul Glasziou**, who was director of Oxford University's Centre for Evidence-Based Medicine from 2003 to 2010, is an international leader in evidence-based medicine. His research focuses on improving the clinical impact of publications by reducing the more than \$85 billion annual loss from unpublished and unusable research (Chalmers, Glasziou, Lancet 2009). As a family practitioner this work has particularly focused on the applicability and usability of published clinical trials and reviews.

**Dr Joan Marsh** is Deputy Editor of The Lancet Psychiatry and a member of the team running The Lancet's REWARD (REduce research Waste And Reward Diligence) Campaign. Joan was President of the European Association of Science

Editors from 2009 to 2015 and still sits on Council, with a strong interest in helping editors worldwide to raise the standards of science publication.

**Dr Nathalie Percie du Sert** is a Programme Manager at the NC3Rs, and leads the Centre's work on experimental design and reporting of animal studies. She holds a PhD from St George's University of London and worked as a post-doctoral researcher in the field of nausea and emesis at the University of California, San Francisco and at the Chinese University of Hong Kong, where she developed expertise in *in vivo* research and systematic reviews and meta-analysis of animal models.

**Pia Rotshtein** is a cognitive neuroscientist scientist working in the School of Psychology, University of Birmingham, UK. In her research she uses primarily neuropsychological, neuroimaging and behavioural methods working with both healthy and neurological patients. She has been part of the Triage Editorial board for Register Report in *Cortex* since 2013, and an Action Editor in *Cortex* since 2009.

**Karen Shashok** has been a science-technical-medical translator and editorial consultant since the mid-1980s. She has written about translation, author's editing, peer review and editorial ethics, and has provided training for researchers and editors in Spain, the Eastern Mediterranean and Latin America. Through professional development organizations for journal editors, Karen has tried to explain the perspectives and experiences of researchers and editors from emerging and resource-limited research communities to western, English-speaking gatekeepers and experts in research ethics. In 2009 she founded the volunteer project AuthorAID in the Eastern Mediterranean.

**Dr Elizabeth (Liz) Wager** is a freelance publications consultant and trainer who has worked with scientists, editors and writers on six continents. Before setting up her own company, she worked in the publishing and pharmaceutical industries (for Blackwell Scientific, Janssen Cilag and GlaxoSmithKline). She is Editor-in-Chief of *Research Integrity & Peer Review*, chaired the Committee on Publication Ethics (2009-12) and is a member of ethics committees for *The BMJ* and World Association of Medical Editors. She is Visiting Professor at the University of Split School of Medicine. In 2010 she was awarded a PhD for a thesis entitled '*Peer review and editorial processes for improving the quality of research reporting*'.

**Pamela Waltl** is a freelance medical writer and volunteer manuscript editor with AuthorAID in the Eastern Mediterranean. Previously, she worked in contract research organizations and pharmaceutical companies writing and editing a variety of documents, mainly related to the regulatory side of clinical research. Clinical study protocols and reports are still her 'bread and butter', but she also enjoys translation and editing work, in particular working with non-native English speakers and helping them to communicate their message clearly and accurately.