Are there other mechanisms or requirements funders should consider to foster full and immediate Open Access of research outputs?

The COMPare project monitored a cohort of clinical trials for a systemic source of bias in the medical literature: outcome switching. For every misreported trial, a correction letter was sent to the relevant journal editor, with the aim of identifying the reasons outcome switching persists despite commitments from trial authors and journal editors to address the issue. Through our analyses and the responses we received to correction letters, we identified several key features common to trials containing discrepancies between prespecified and misreported outcomes. These included, but are not limited to, the following:

- References to pre-specified trial information in inaccessible protocols
- References made to “pre-specified” trial information posted after trial commencement
- Vague or insufficient detail in pre-specified trial outcomes. (e.g. “glycaemic control”)
- Inaccurate statements about outcome pre-specification and reporting. e.g. secondary outcomes need not be pre-specified, or that reporting an outcome at a different time-point to that pre-specified without disclosure is acceptable.

Requirement from the funders of the following steps will allow readers knowledge of the full context of the trial results, and will reveal any discrepancies between pre-specified and reported trial outcomes, where previously they have remained hidden.

- Trials must be fully registered on an open registry such as ct.gov, including full pre-specification of trial outcomes.
- All trial information must be registered *before trial commencement*.
- Changes to the trial registry and protocol that occur after trial commencement must be tracked in a version history, with all versions of the trial registry entry and trial protocol publicly available.

- No trial information can be pre-specified in documents that are not publicly available.
- Trial outcomes must be fully prespecified according to CONSORT.
- Any changes to trial pre-specification must be declared *in the published report of the trial*, with reasons given for the changes. This includes pre-specified outcomes not reported, novel outcomes added after trial commencement, and primary outcomes misreported as secondary outcomes (or vice versa).

Our two main peer-reviewed publications on the results of the COMPare project are due to be published within the next week. The first paper reports the main quantitative results of the project, as well as the responses to our correction letters from journal editors. The second Paper focuses on responses to our correction letters from trialists. In the meantime, feel free to refer to our blog on the COMPare project (http://compare-trials.org/blog/), or to contact me directly at henry.m.drysdale@gmail.com for further discussion.

What metadata is required for the COMPare analyses to become automated? (Henry added)

- Date of trial commencement, defined as date first patient is recruited.
- Date of latest version of trial protocol (preferred) or trial registry (if protocol not available) from before trial commencement
- For all outcomes in latest version of trial pre-specification from before trial commencement: variable, method of measurement, time-point of measurement, and whether reported as primary or secondary
- For all outcomes in the published trial report: variable, method of measurement, time-point of measurement, and whether reported as primary or secondary
- Any declaration in the trial report of changes to specific pre-specified outcomes, and any reasons given