Item 6a. Completely defined pre-specified primary and secondary outcome measures, including how and when they were assessed

Example—“The primary endpoint with respect to efficacy in psoriasis was the proportion of patients achieving a 75% improvement in psoriasis activity from baseline to 12 weeks as measured by the PASI [psoriasis area and severity index] Additional analyses were done on the percentage change in PASI scores and improvement in target psoriasis lesions.”

Explanation—All RCTs assess response variables, or out‑ comes (end points), for which the groups are compared. Most trials have several outcomes, some of which are of more interest than others. The primary outcome measure is the pre-specified outcome considered to be of greatest importance to relevant stakeholders (such a patients, pol‑ icy makers, clinicians, funders) and is usually the one used in the sample size calculation (see item 7). Some trials may have more than one primary outcome. Having several primary outcomes, however, incurs the problems of interpretation associated with multiplicity of analyses (see items 18 and 20) and is not recommended. Primary outcomes should be explicitly indicated as such in the report of an RCT. Other outcomes of interest are secondary outcomes (additional outcomes). There may be several secondary outcomes, which often include unanticipated or unintended effects of the intervention (see item 19), although harms should always be viewed as important whether they are labelled primary or secondary. All outcome measures, whether primary or secondary, should be identified and completely defined. The principle here is that the information provided should be sufficient to allow others to use the same outcomes. When outcomes are assessed at several time points after randomisation, authors should also indicate the pre-specified time point of primary interest. For many non-pharmacological interventions it is helpful to specify who assessed outcomes (for example, if special skills are required to do so) and how many assessors there were. Where available and appropriate, the use of previously developed and validated scales or consensus guidelines should be reported, both to enhance quality of measurement and to assist in comparison with similar studies. For example, assessment of quality of life is likely to be improved by using a validated instrument. Authors should indicate the provenance and properties of scales. More than 70 outcomes were used in 196 RCTs of nonsteroidal anti-inflammatory drugs for rheumatoid arthritis,108 and 640 different instruments had been used in 2000 trials in schizophrenia, of which 369 had been used only once. Investigation of 149 of those 2000 trials showed that unpublished scales were a source of bias. In non-pharmacological trials, a third of the claims of treatment superiority based on unpublished scales would not have been made if a published scale had been used. Similar data have been reported elsewhere. Only 45% of a cohort of 519 RCTs published in 2000 specified the primary outcome; this compares with 53% for a similar cohort of 614 RCTs published in 2006.