

TESTING TREATMENTS

Chapter 8, 8.4

ALL THE RELEVANT, RELIABLE EVIDENCE

that were more likely to be relevant to identifying improvements in treatments for the condition. And this is far from an isolated example.¹⁹

REPORTS OF NEW RESEARCH SHOULD BEGIN AND END WITH SYSTEMATIC REVIEWS

The report of a study²⁰ to assess the effects of giving steroids to people with acute traumatic brain injury shows how to address all of Bradford Hill's four questions. The researchers explained that they had embarked on the study because their systematic review of all the existing evidence, as well as evidence of variations in clinical use of the treatment, showed that there was important uncertainty about the effects of this widely used treatment. They reported that they had registered and published the protocol for

INSTRUCTIONS TO AUTHORS TO PUT RESEARCH RESULTS IN CONTEXT BY THE EDITORS OF THE MEDICAL JOURNAL *THE LANCET*

Systematic Review

This section should include a description of how authors searched for all the evidence. Authors should also say how they assessed the quality of that evidence – ie, how they selected and how they combined the evidence.

Interpretation

Authors should state here what their study adds to the totality of evidence when their study is added to previous work.

'We ask that all research reports – randomised or not – submitted from Aug 1 . . . put the results into the context of the totality of evidence in the Discussion.'

Clark S, Horton R. Putting research in context – revisited. *Lancet* 2010;376:10-11.

TESTING TREATMENTS

their study, when it started.

They described the measures they had taken to minimize biases and to achieve adequate control of the play of chance by studying a sufficiently large number of patients. They reported that their study had shown that steroids given to patients with serious brain injury increased the likelihood that these patients would die.

Finally and importantly, they provided readers of their report with all the evidence needed for action to prevent thousands of deaths from this widely used treatment because they updated their original systematic review of previous studies by incorporating the new evidence generated by their study.

KEY POINTS

- A single study rarely provides enough evidence to guide treatment choices in healthcare
- Assessments of the relative merits of alternative treatments should be based on systematic reviews of all the relevant, reliable evidence
- As in individual studies testing treatments, steps must be taken to reduce the misleading influences of biases and the play of chance
- Failure to take account of the findings of systematic reviews has resulted in avoidable harm to patients, and wasted resources in healthcare and research