Table 2

Statistical methods

Table2(a). Example of calculation of O-E and its variance: hypothetical data

	Allocated treatment	Allocated control	Both together
Dead	Obs = 25 Exp = 32.5	Obs = 40 Exp = 32.5	65
Alive			135
Total	100	100	200

O = "Observed" number of deaths in the treatment group = 25

If a total of 65 die and treatment has no effect, then
E = "Expected" no. of deaths in treatment group = half of 65 = 32.5

Statistical calculation (treatment group only): O-E = 25 - 32.5 = -7.5
N.B **Minus** denotes **benefit**, and **-7.5** suggests about **15** deaths avoided.

Finally. the "variance" of O-E = 32.5 x (100/200) x 135/(200-1) = 11.O

Table 2(b). Principle of unbiased combination of randomized trial results

Trial 1	Result 1
Trial 2	Result 2
Trial 3	Result 3
Sum of **separate*** results	Overview result = **grand total,** i.e. Result 1 + Result 2 + Result 3

*If treatment had no effect on outcome in any trial then each of the results, considered separately, would differ only randomly from zero, and so too would their grand total [5, 31]. (An overall test of whether the grand total differs from zero does not depend on the unjustified assumption that any real effects in different trials must be of similar size.)