Outcome assessment after traumatic brain injury – Authors' reply

Lindsay Wilson, Nicole von Steinbuechel, David K Menon, Andrew I R Maas

We thank Thomas McMillan and colleagues for their thoughtful comments on assessment of outcomes, with many of which we fully agree. As with many outcome assessments in traumatic brain injury (TBI), the Glasgow Outcome Scale (GOS) is open to a wide variety of influences other than brain injury: factors related to acute TBI appear to explain at best 35% of the variance.(1) The predictors, moderators, and mediators of outcome after TBI are incompletely understood. There is thus much progress to be made in identifying confounding covariates for the effects of interventions. The current approach has many strengths, as pointed out by McMillan and colleagues. However, the GOS as originally proposed was quickly recognised to have limitations, and consequently has been adapted and improved over the years. The Extended Glasgow Outcome Scale (GOSE) structured interview was originally intended to help standardise assessment of outcomes, but there is still work to be done.

As stressed in the Commission,(2) there is a need to go beyond the idea that only a single outcome is needed to assess individuals after a TBI. There have been increasing calls for more detailed descriptions of outcome than can be provided by the GOSE alone.(3) Initiatives such as the Common Data Elements and the recommendations from Honan and colleagues(4) provide useful advice on assessments. As McMillan and colleagues make clear, challenges exist in incorporating such outcomes in clinical studies. Practical constraints in clinical practice and in research mean that simple solutions are needed in some contexts, whereas in others, a more comprehensive assessment is feasible. However, we believe that the challenges need to be addressed if the field is to progress.(5) A 29% success rate in trials using the GOS or the GOSE is not a good track record, and the absence of positive findings is a widely recognised problem in clinical trials of TBI. Global outcome scales are likely to continue to have a central role, but there is a need for work on how multiple assessments can be included in clinical trials and combined to give a multidimensional description of outcome.

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