Reviewer’s report

**Title:** The Global Evidence Mapping Initiative: Scoping research in broad topic areas

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**Reviewer:** marcel dijkers

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The authors set out to describe the approach taken by the global evidence mapping (GEM) initiative to evidence mapping. Unfortunately, it is never described what an evidence map is. We can infer from the description that it is either something like table 3: a count of the number of studies that have been published in a particular area, by design and intervention type (and within a diagnostic grouping such as SCI or TBI), or like table 4: a listing of all entries in table 3, with tabular entry of design, clinical population, intervention and outcome measures used. (but NOT the outcomes themselves!!) The manuscript tries to pour the description of evidence mapping (with some minimally illustrative results from the SCI or TBI mapping effort) in the IMRaD format, which of course does not work well. It would make more sense to call this a “special communication” and abandon the pretense that this is a traditional research study.

It is clear from the description that evidence mapping, at least as committed by GEM, is a very subjective undertaking, but the authors never even bring up that issue. Maybe the comparisons drawn to systematic reviews (SRs) are expected to lull us asleep. But once the clinical question to be answered has been formulated, a SR is fairly objective, at least one performed using the template by e.g. Cochrane is. And even then there are complaints in the literature that two or more reviews on the same question come to different conclusions. The authors of this paper never indicate what guarantees (or suggestions, or reasonable expectations) there are that when mapping of the evidence in SCI is done by two independent groups, their maps will have a modicum of similarity. This paper would certainly be stronger if this issue were addressed.

Another basic problem, with the result of GEM evidence mapping, is that the quality of the evidence (i.e. the quality of the primary studies) is never addressed. If through all the gyrations of patients, clinicians, field researchers and GEM staff a question has been developed and prioritized, how do we know that the evidence map shows that there is evidence to answer the question? Obviously, poor studies need to be discarded in answering questions, but without an assessment of study quality we don’t know which ones are poor. Listing the study type in table-3- or table-4-like tables will not go far to address quality. And the SR experience has shown that even well-done studies may come up with contradictory answers, and even meta-analysis of a fairly large number of quality studies addressing the same question may not give us an answer.
Of course, all the things that are claimed that can be done with an evidence map in hand, e.g. reducing duplication of research effort, depend crucially on the map covering only good quality evidence. Even if we assume that a map shows what questions have been answered using high-quality studies, the authors seem to be very optimistic that researchers and grant makers and others will fall in line and only do and fund the research that needs to be done. And trusting that clinicians will consult a map and then follow the bread crumbs to the primary studies – most of them will hardly have time to read the SRs that are prepared for them.

In their (presumed) effort to keep the paper to a reasonable length, the authors fail to describe many steps in the GEM process clearly, or at least they fail to put themselves in the shoes of someone who knows nothing about evidence mapping (which is true for most of the potential readers) and make clear statements of the how and why of all core tasks, steps and substeps. For instance, this reviewer is not clear on how scoping studies and evidence mapping (compared in table 1) are same and different. The authors’ tendency to omit in their writing apparently duplicative prepositions and other sentence components adds to the problems. For instance, on page 5 (well, in my book it is page 5. Why would one number the pages of a manuscript? And numbering lines – what a concept!) “searching and selection of relevant studies”. Is this searching FOR and selection of? Or is something completely different meant?

Linking to the ICF is described as a step in the GEM process, but there seems to be no awareness that the ICF may be limited in scope, and as such will lead to a narrowing of the questions that are asked. For instance, it has no codes for quality of life, very poor codes for mood disorders, and no or very gross codes for interventions, or for outcomes that are not at the impairment-activity limitation-participation level. For instance, how would one code the outcome of a study of an intervention resulting in reduced hospitalizations after SCI?

One step in the GEM process apparently involves coding questions in terms of novelty and controversy – which are never defined for the reader. One only can hope they were defined for the survey respondents!

On top of page 15, it is suggested that feasibility may be the most important determinant of which GEM-produced questions to pursue. It is not clear whether this refers to answering a question by doing an SR, by doing a primary study, or the feasibility of implementing the intervention (or diagnostic study, or …) in clinical practice, once it has been determined that there is supporting evidence.

The writing could stand some attention; we get such gems as: “some decisions relate to questions are narrowly focused”; “years experience / a patient”; “entering and data”; “frequency all codes”

some details:

page 8: medline, pubmed: these are not two databases, just the same database with different names and/or vendors (Ovid)
Page 8: what are key reviews? How does one identify them just reading Medline abstracts?

Page 8: Information further developed: what is all this complaining about the GEM process being so labor intensive – the materials do all the work. Ditto

Page 21: An evidence map can avoid duplication of research

Page nine: Mapping workshops: how many of what duration for SCI, for TBI?
Page 9 and passim: PICO and comparator: this seems to drive the mapping process to intervention questions (and then specifically interventions with a comparator, which in many people’s books does NOT include “nothing” or “usual care”)

Page 10: Feasibility: of what?
Page 11: What is primary searching?
Page 11: Why were EM staff blinded to the mailing list? And: wouldn’t it make it difficult to send out mail with your eyes closed?
Page 11: Brief outline: of what?
Page 11: The ideas were more aligned: which ideas?
Page 12: I am surprised to see that the linking rules for the ICF were not used.
Page 14: Line 3 “mapped”: so step 1 of the process is not mapping?
Page 17: Further database searching: how so?
Page 17: Template of search: what is that?
Page 19: The yield: what is that?
Page 21: Aid in funding: funding what?
References: These lack the proper format. Throughout. Plus, it seems that the reference manager had the hiccups. Too many titles starting with “In book …”

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests