Appendix 2

Guidelines & Checklist for Critical Appraisal of Article[i]
Review: Trauma Scores in LMICs

| Article ID: |
| Full citation: |

Please complete *all* empty fields using the following:

++ = Major problem   0 = No problem
+ = Minor problem   N/A = Not applicable

Guideline   *Checklist*

(1) Study design appropriate to objectives?

[b]Good = 8-12; Average = 4-7; Poor = 0-3

Table 1. Design assessment[ii]

Study objective:

Design Criteria[a]	Score[b]
Randomized controlled study with comparable groups	10
Randomized controlled study with noncomparable groups, with statistical adjustment	9
Nonrandomized controlled study with comparable groups	8
Nonrandomized controlled study with noncomparable groups, with statistical adjustment	7
Randomized controlled study with noncomparable groups, without statistical adjustment	6
Nonrandomized controlled study with noncomparable groups, without statistical adjustment	5

[a]Comparable groups defined as those with number of patients and injury severity in each group within 20% of each other.

Study design:

Sample population; size:

Objective:	Common design:
Prevalence	Cross sectional (CS)
Prognosis	Cohort (Coh)
Treatment	Controlled trial
Cause	Coh, case-control, CS

Table 1 Score

(2) Study sample representative?

Source of sample
Sampling method
Sample size
Entry criteria/exclusions
Non-respondents

(3) Control group acceptable (if applicable)?

Table 2. Methodological assessment[ii]

Methodological Criteria	Score[a]
Suitable choice of reference group	8
All trauma patients included	3
Sample size (>100 patients)	5
Selection bias accounted for	6
Objective criteria for eligibility of subjects (inclusion and exclusion)	5
Comparability of groups under comparison demonstrated (n within 20%)	10
Comparable severity of injury (ISS within 20%)	15
Any method to attempt comparability between groups, other than randomization (except logistic regression)	8

[a]Excellent = 45-60; Good = 30-44; Average = 15-29; Poor = 0-14.

Definition of controls
Source of controls
Matching/randomization
Comparable characteristics

Table 2 Score

| **(4) Quality of measurements and outcomes?** | Validity
Reproducibility
Blindness
Quality control |

| **(5) Completeness?** | Compliance
Dropouts
Deaths
Missing data |

| **(6) Distorting influences?** | Extraneous treatments
Contamination
Changes over time
Confounding factors
Distortion reduced by analysis |

(7) Judgment

a. Bias – Are the results erroneously biased in a certain direction? This may not necessarily negate the value of a study as long as the direction and magnitude of the bias are known.

b. Confounding – Are there any serious confounding or other distorting influences? Often these cannot be adequately accounted for in the analysis and may have a substantial effect on results.

c. Chance – Is it likely that the results occurred by chance? The answer depends primarily on appraisal of the statistical content, and help from a statistician may be required.

If the answer to each question is categorically "No", the research is probably quite sound.

Please complete Yes/No. If yes, please describe.

(8) Final Quality Assessment

Poor ☐   Average ☐   Good ☐

Comments:

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[i]Adapted from Fowkes, F. G., & Fulton, P. M. (1991). Critical appraisal of published research: introductory guidelines. *BMJ: British Medical Journal*, *302*(6785), 1136.
[ii] Liberman, M., Mulder, D., & Sampalis, J. (2000). Advanced or basic life support for trauma: meta-analysis and critical review of the literature. *Journal of Trauma and Acute Care Surgery*, *49*(4), 584-599.