Appendix 2

**Guidelines & Checklist for Critical Appraisal of Article**

Review: Trauma Scores in LMICs

Please complete all empty fields using the following:

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

**Guideline**

(1) Study design appropriate to objectives?

Table 1. Design assessment

<table>
<thead>
<tr>
<th>Design Criteria</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Randomized controlled study with comparable groups</td>
<td>10</td>
</tr>
<tr>
<td>Randomized controlled study with noncomparable groups, with statistical adjustment</td>
<td>9</td>
</tr>
<tr>
<td>Nonrandomized controlled study with comparable groups</td>
<td>8</td>
</tr>
<tr>
<td>Nonrandomized controlled study with noncomparable groups, with statistical adjustment</td>
<td>7</td>
</tr>
<tr>
<td>Randomized controlled study with noncomparable groups, without statistical adjustment</td>
<td>6</td>
</tr>
<tr>
<td>Nonrandomized controlled study with noncomparable groups, without statistical adjustment</td>
<td>5</td>
</tr>
</tbody>
</table>

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

(2) Study sample representative?

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

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

(3) Control group acceptable (if applicable)?

Table 2. Methodological assessment

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.

(8) Final Quality Assessment

Poor □ Average □ Good □

Comments:
