Background

- Tuberculosis (TB) is the leading cause of death from an infectious disease worldwide.
- Timely initiation of TB treatment is critical to reduce disease transmission and improve patient outcomes.
- Pediatric cases account for 10% of all TB cases in the African region.

Objective

- The purpose of this study was to determine patient- and systems-level barriers to TB treatment initiation for children and youth in sub-Saharan Africa through systematic review of the literature.

Methodology

- Review was conducted in October 2015 in accordance with preferred reporting items for systematic reviews and meta-analysis (PRISMA) guidelines.
- Inclusion criteria: primary or secondary objectives of the study related to barriers to TB treatment initiation; included children or youth (0-24 years); and written in English.
- 1490 manuscripts met screening criteria; 152 reviewed in full-text; 47 included for analysis.

Barriers to TB treatment initiation by type

<table>
<thead>
<tr>
<th>Barrier</th>
<th>Definition</th>
<th>Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>Direct or indirect economic burden related to family, guardian and/or patient costs associated with initiating TB treatment.</td>
<td>7</td>
</tr>
<tr>
<td>Health seeking behavior</td>
<td>Navigation of the health system, including types and number of providers sought prior to TB diagnosis and treatment. Also includes knowledge, attitudes, and beliefs regarding TB.</td>
<td>19</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Policies (centralization of treatment), facility procedures (DOTS implementation, lab capacity), health system errors (initial default), and geography (distance to clinic).</td>
<td>29</td>
</tr>
</tbody>
</table>

Results

- Of the 47 studies, 14 countries were represented and 16 were conducted in South Africa.
- 11 studies evaluated only patient-level barriers, 14 evaluated only system-level barriers; and 22 evaluated both patient- and system-level barriers.
- Patient-level barriers included limited knowledge, attitudes and beliefs regarding TB, and economic burden.
- System-level barriers included centralization of services, health system delays, and geographic access to healthcare.

Conclusion

- Only four studies primarily assessed child or youth cohorts, yet barriers to TB treatment initiation are common among adults, children, and youth in sub-Saharan Africa.
- Both patient- and system-level barriers must be addressed together to improve patient outcomes.
- Increasing treatment initiation and expanding research of child and youth TB in sub-Saharan Africa is critical.
- Clear goals with specific targets will garner greater understanding, attention, and support for TB in sub-Saharan Africa, especially for children and youth.

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