Interventions to improve pediatric adherence to ART: A summary of the evidence

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Introduction
Achieving and maintaining high levels of medication adherence are required to realize the full benefits of ART. Suboptimal adherence to antiretroviral medications among children is common in both developed and developing countries.

Objective
To conduct a systematic review of the literature of evaluations of interventions for improving pediatric (age <18) ART adherence.

Methods
• Electronic databases and conference abstracts were searched through September 2009.
• Randomized (RCT) and non-randomized controlled trials were included.
• Data were extracted independently by two authors.

Results
Of 5 studies that met the inclusion criteria, 3 were conducted in low- and middle-income countries; 2 were RCTs, 3 were non-randomized trials.

Conclusions
• Electronic databases and conference abstracts were searched through September 2009.
• Randomized (RCT) and non-randomized controlled trials were included.
• Data were extracted independently by two authors.

<table>
<thead>
<tr>
<th>Study</th>
<th>Intervention</th>
<th>Target population (N)</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Berrien, 2004</td>
<td>Eight home-based nursing visits</td>
<td>Children age 1.5-20 years (N=37)</td>
<td>Positive effect of the intervention on knowledge and medication refills, but no effect on CD4 count and viral load</td>
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<td>Wamalwa, 2009</td>
<td>Caregiver medication diaries</td>
<td>Children and youth [age IQR 2.3-6.2] (N=115)</td>
<td>No effect on CD4% and viral load</td>
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<td>Funck-Brentano, 2005</td>
<td>Peer support group therapy over a two-year period</td>
<td>Adolescents 12-17 years (N=38)</td>
<td>Drop in viral load among the intervention group compared to two control groups (p=0.06)</td>
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<td>Müller, 2009</td>
<td>LPV/r-containing regimen compared to NNRTI-containing regimen</td>
<td>Children under 10 years (N=78)</td>
<td>Virologic suppression was greater among children receiving LPV/r regimen (p=0.002)</td>
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<td>Omo-Ighionimwanhia, 2004</td>
<td>Directly observed therapy (DOT)</td>
<td>Children [age not reported] (N=50)</td>
<td>Improvement of CD4% for children on DOT compared to those who were not (no p-values reported)</td>
</tr>
</tbody>
</table>

Note: One study, Naar-King 2006, was excluded because only 38% of the study sample was on ART.

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