Nurse home visits during pregnancy and early childhood improved maternal life course 7 years later

**QUESTION**
Do nurse home visits (NHVs) during pregnancy and early childhood affect maternal fertility and child functioning 7 years later?

**METHODS**

**Design:** randomised controlled trial.

**Allocation:** (concealed).*

**Blinding:** blinded (outcome assessors).

**Follow-up period:** 9 years (7 y after intervention ended).

**Setting:** obstetric clinic in Memphis, Tennessee, USA.

**Patients:** 743 women (64% age <18 y, 92% black) who were <29 weeks pregnant, had no previous live births, no chronic illness that might affect pregnancy outcome, and ≥2 sociodemographic risk factors (unmarried, <12 y education, or unemployed).

**Intervention:** 228 women were allocated to free transportation to prenatal appointments; a mean of 7 NHVs during pregnancy; 1 postpartum hospital visit; child developmental screening at 6, 12, and 24 months of age; and a mean of 26 NHVs until the child’s second birthday. 515 women were allocated to free transportation to prenatal appointments and developmental screening (control).

**Outcomes:** maternal outcomes included interval between first and second births; number of live births and other pregnancy outcomes; length of employment; and use of welfare, Medicaid, and food stamps. Child outcomes included grade point average and achievement test scores in grades 1–3.

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**MAIN RESULTS**

At 9 years, the NHV group had longer intervals between first and second births, fewer live births, and fewer months of using welfare and food stamps than the control group (table). Groups did not differ for use of Medicaid, length of employment, other pregnancy outcomes, or any child outcomes. In a {preplanned}* subgroup analysis of children born to mothers with low psychological resources, the NHV group had better grade point averages and achievement test scores than the control group (table).

**CONCLUSION**

Nurse home visits during pregnancy and the first 2 years of a child’s life improved maternal life course and reduced subsequent births 7 years later.

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**ABSTRACTED FROM**


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*Clinical impact ratings:* Family/General practice 5/7; Health promotion 6/7; Obstetric nursing 7/7; Paediatrics 5/7; Public/Community health 6/7

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**Nurse home visits during pregnancy and early childhood v no home visits (control)**

<table>
<thead>
<tr>
<th>Maternal and child outcomes at 9 years</th>
<th>Least-square mean</th>
<th>Effect size (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interval between first and second birth (mo)</td>
<td>41</td>
<td>34</td>
</tr>
<tr>
<td>Cumulative number of live births/y</td>
<td>0.8</td>
<td>0.9</td>
</tr>
<tr>
<td>Use of welfare (mo)</td>
<td>5.2</td>
<td>5.9</td>
</tr>
<tr>
<td>Use of food stamps (mo/y)</td>
<td>7.0</td>
<td>7.8</td>
</tr>
<tr>
<td>Child’s grade point average*</td>
<td>2.7</td>
<td>2.4</td>
</tr>
<tr>
<td>Child’s achievement test scores*</td>
<td>45</td>
<td>36</td>
</tr>
</tbody>
</table>

*Outcomes are for grades 1–3 reading and math. Results based on a preplanned subgroup analysis of children born to mothers with low psychological resources.

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Olds et al are well known for their extensive research that evaluates the effectiveness of a NHV intervention for young first-time mothers at socioeconomic risk. Nurse Family Partnership (NFP) is an established prevention programme, implemented within health and social service agencies across many US states and several countries. The study showed the long-term effects of a prevention-based NHV intervention on maternal and child health outcomes. It is impressive that an intervention delivered to mothers during pregnancy and the first 2 years of their children’s lives would influence long-term maternal and child outcomes, including enhanced academic achievement in children of mothers with limited psychological resources.

The NFP model has important implications for public health nurses and administrators, nurse managers, and policy makers. First, in contrast to many publicly funded programmes that employ less educated and less costly home visitors, visits were completed by professional registered nurses only. This does, of course, raise questions about its cost and clinical effectiveness.

The critical finding of the study by Olds et al is that when carefully following intervention protocols, prevention programmes can influence long-term physical, cognitive, and psychosocial outcomes in high-risk mothers and children.

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