Table A: Screening and treatment probabilities by screening strategy

Baseline values are emphasised in bold; values used in sensitivity analyses are given in brackets

Letters refer to chance nodes in Figure 1

<table>
<thead>
<tr>
<th>Parameter value</th>
<th>Clinical screening alone</th>
<th>Universal ultrasound</th>
<th>Selective ultrasound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Probability of</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Being screeneda</td>
<td>1.0</td>
<td>0.98</td>
<td>1.0</td>
</tr>
<tr>
<td>[A]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive screening result</td>
<td>0.021(^a)</td>
<td>0.078(^b)</td>
<td>0.081(^c)</td>
</tr>
<tr>
<td>[B]</td>
<td>(0.011; 0.03)(^b)</td>
<td>(0.060; 0.210)(^d)</td>
<td>(0.048; 0.130)(^f)</td>
</tr>
<tr>
<td>Abduction splinting treatment given a positive screening result</td>
<td>0.198(^g)</td>
<td>0.068(^i)</td>
<td>0.087(^k)</td>
</tr>
<tr>
<td>[C]</td>
<td>(0.396)(^h)</td>
<td>(0.574)(^j)</td>
<td>(0.044; 0.174)(^l)</td>
</tr>
<tr>
<td>Surgical treatment given not screened</td>
<td>0.0012(^m)</td>
<td>0.0012(^m)</td>
<td>0.0012(^m)</td>
</tr>
<tr>
<td>[D]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surgical treatment given a negative screening result</td>
<td>0.00080(^a)</td>
<td>0.00029(^b)</td>
<td>0.00053(^c)</td>
</tr>
<tr>
<td>[E]</td>
<td>(0.00025)(^a)</td>
<td>(0.00019; 0.00033)(^i)</td>
<td>(0.00037; 0.00067)(^i)</td>
</tr>
<tr>
<td>Surgical treatment given unconfirmed positive screening result</td>
<td>0.014(^c)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>[F]</td>
<td>(0.007; 0.028)(^u)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surgical treatment given abduction splinting treatment</td>
<td>0.024(^c)</td>
<td>0.024(^c)</td>
<td>0.024(^c)</td>
</tr>
<tr>
<td>[G]</td>
<td>(0.012; 0.052)(^w)</td>
<td>(0.012; 0.052)(^w)</td>
<td>(0.012; 0.052)(^w)</td>
</tr>
</tbody>
</table>

\(^a\) baseline assumption that all newborns are examined clinically and are assessed for recognised risk factors, but that 2% miss ultrasound screening in a universal ultrasound programme (as cited in reference 7) giving rise to two cases of DDH
References in table A are cited in Appendix as follows:

a  references: 1-5
b  baseline x 0.5; baseline x 2.0
c  references: 6-10
d  low estimate7; high estimate11
e  references: 12-18
f  low estimate12; high estimate19
  references: 1;5;20;21
h  baseline x 2.0
i  references: 7;8;10;14;22
j  references: 11;14;23
k  references: 14;18;24
l  references: low estimate; high estimate:18
m  taken as mid-point prevalence of DDH as cited in reference 25
n  references: 1;4;26;30
o  references: 31;37
p  references: baseline as median of studies8;14;38;39; zero false negative rate cited in studies7;9;11
q  lower estimate;8; higher estimate:39
r  references: 12;14;16;18;24
s  references: low estimate12;16; high estimate18
t  reference: 1
u  baseline x 0.5; baseline x 2.0
v  references: 1-4;29;31;33;40-43
w  references: low estimate29; high estimate40
**Web-only Tables: Probabilities used in the model**

**Table B  Favourable\(^1\) and unfavourable treatment outcomes**

*Baseline values are emphasised in bold; values used in sensitivity analyses are given in brackets*

<table>
<thead>
<tr>
<th>Probability of</th>
<th>Parameter Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Favourable outcome(^1) following abduction splinting</td>
<td>(0.98062^a)</td>
</tr>
<tr>
<td></td>
<td>(0.76744)(^b)</td>
</tr>
<tr>
<td>Favourable outcome(^1) following surgery</td>
<td>(0.74916^c)</td>
</tr>
<tr>
<td></td>
<td>(0.49595)(^d)</td>
</tr>
<tr>
<td>Avascular necrosis following abduction splinting</td>
<td>(0.00939^e)</td>
</tr>
<tr>
<td></td>
<td>(0.07225)(^f)</td>
</tr>
<tr>
<td>Avascular necrosis following surgical closed reduction(^2)</td>
<td>(0.1228^g)</td>
</tr>
<tr>
<td>Avascular necrosis following surgical open reduction</td>
<td>(0.2210^h)</td>
</tr>
</tbody>
</table>

**References in table are cited in Appendix as follows:**

\(^a\) references: 44,45

\(^b\) probability used in sensitivity analysis using Severin grades 1 and 2 only as favourable outcomes

\(^c\) references: 46-48

\(^d\) probability used in sensitivity analysis using Severin grades 1 and 2 only as favourable outcomes

\(^e\) references: 49-52

\(^f\) references: high estimate includes studies reported in 44,45,53,54

\(^g\) references: 56,55-64

\(^h\) references: 48,65

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\(^1\) Favourable outcome refers to radiological appearances at skeletal maturity of Severin grades 1, 2 or 3 (see text)

\(^2\) assuming 70% receive closed reduction initially of whom 20% require open reduction by 3 years of age
Reference List


