

8.2. RECOMMENDATION:

Should LAY HEALTH WORKERS deliver antibiotics for neonatal sepsis using a compact, prefilled, autodisable device (CPAD) such as Uniject?

Problem: Poor access to treatment for neonatal sepsis
Option: LHWs delivering antibiotics for neonatal sepsis using CPAD
Comparison: Care delivered by other cadres or no care
Setting: Community/primary health care settings in LMICs with poor access to health professionals

Recommendation	<i>We recommend against the option</i>	<i>We suggest considering the option only in the context of rigorous research</i>	<i>We recommend the option</i>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	We suggest considering this option only in the context of rigorous research. We suggest evaluating this intervention where a well-functioning LHW programme already exists and where referral to more specialised cadre is in place or can be put in place.		
Justification	There is insufficient evidence on the effectiveness of this intervention. However, it is probably acceptable, may be feasible and may reduce inequalities by extending care to underserved populations.		
Implementation considerations	Not applicable		
Monitoring and evaluation			
Research priorities	Studies are needed to assess the effects and the acceptability of using lay health workers using CPAD to deliver antibiotics for neonatal sepsis.		

8.2. EVIDENCE BASE:

Should LAY HEALTH WORKERS deliver antibiotics for neonatal sepsis using a compact, prefilled, autodisable device (CPAD) such as Uniject?

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CRITERIA	JUDGEMENT	EVIDENCE	COMMENTS AND QUERIES										
BENEFITS & HARMS OF THE OPTIONS	<p>Are the anticipated desirable effects large?</p> <p>No <input type="checkbox"/> Probably no <input type="checkbox"/> Uncertain <input checked="" type="checkbox"/> Probably yes <input type="checkbox"/> Yes <input type="checkbox"/> Varies <input type="checkbox"/></p>	<p>A systematic review (Glenton, Khanna 2012) assessed the effect of drug delivery by LHWs using a CPAD device. This review did not identify any eligible studies. We are therefore unable to draw any conclusions about the desirable or undesirable effects of this intervention.</p> <p>Indirect evidence: Another systematic review (Lewin 2012) identified a number of trials from LMIC settings where packages of care were delivered by LHWs. In one of these trials, the packages included LHWs injecting procaine penicillin and gentamicin to treat sick neonates, apparently using a standard syringe. The trial did not report any adverse effects of LHWs using injectable antibiotics. Overall, the trials suggest that these packages of care may lead to a reduction in neonatal (moderate certainty evidence) and child mortality (low certainty evidence).</p> <p>Annex: page 10 (Lewin 2012 – Table 2)</p>											
	<p>Are the anticipated undesirable effects small?</p> <p>No <input type="checkbox"/> Probably no <input type="checkbox"/> Uncertain <input checked="" type="checkbox"/> Probably yes <input type="checkbox"/> Yes <input type="checkbox"/> Varies <input type="checkbox"/></p>												
	<p>What is the certainty of the anticipated effects?</p> <p>Very low <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> No direct evidence <input checked="" type="checkbox"/> Varies <input type="checkbox"/></p>												
	<p>Are the desirable effects large relative to the undesirable effects?</p> <p>No <input type="checkbox"/> Probably no <input type="checkbox"/> Uncertain <input checked="" type="checkbox"/> Probably yes <input type="checkbox"/> Yes <input type="checkbox"/> Varies <input type="checkbox"/></p>												
RESOURCE USE	<p>Are the resources required small?</p> <p>No <input type="checkbox"/> Probably no <input checked="" type="checkbox"/> Uncertain <input type="checkbox"/> Probably yes <input type="checkbox"/> Yes <input type="checkbox"/> Varies <input type="checkbox"/></p>	<p>Main resource requirements</p> <table border="1"> <thead> <tr> <th>Resource</th> <th>Settings in which LHW programmes already exist</th> </tr> </thead> <tbody> <tr> <td>Training</td> <td>1-2 weeks of practice-based training in injection techniques and in diagnosing and managing neonatal sepsis</td> </tr> <tr> <td>Supervision and monitoring</td> <td>Regular supervision by midwife or nurse</td> </tr> <tr> <td>Supplies</td> <td>Antibiotic CPAD, sterile solution, robust supply chain</td> </tr> <tr> <td>Referral</td> <td>Transportation, adequate referral centre offering neonatal care</td> </tr> </tbody> </table>	Resource	Settings in which LHW programmes already exist	Training	1-2 weeks of practice-based training in injection techniques and in diagnosing and managing neonatal sepsis	Supervision and monitoring	Regular supervision by midwife or nurse	Supplies	Antibiotic CPAD, sterile solution, robust supply chain	Referral	Transportation, adequate referral centre offering neonatal care	
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	CRITERIA	JUDGEMENT	EVIDENCE	COMMENTS AND QUERIES												
RESOURCE USE	Is the incremental cost small relative to the benefits?	<table border="0"> <tr> <td>No</td> <td>Probably no</td> <td>Uncertain</td> <td>Probably yes</td> <td>Yes</td> <td>Varies</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table>	No	Probably no	Uncertain	Probably yes	Yes	Varies	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Uncertain as there is no direct evidence on effectiveness.	
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<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>											
ACCEPTABILITY	Is the option acceptable to most stakeholders?	<table border="0"> <tr> <td>No</td> <td>Probably no</td> <td>Uncertain</td> <td>Probably yes</td> <td>Yes</td> <td>Varies</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table>	No	Probably no	Uncertain	Probably yes	Yes	Varies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>In a systematic review (Glenton, Khanna 2012), one study in Nepal explored the use of LHWs who used CPAD to deliver antibiotics for neonatal sepsis. This study suggests that LHWs find the device easy to use, carry, store and dispose of and are generally confident in their ability to use the device safely and correctly, although the importance of training and supervision is emphasised. This study also suggests that LHWs are motivated by positive responses from the community and increased social respect; and that recipients and other health workers find LHW delivery acceptable. In the same systematic review, similar findings were also seen in studies of LHWs using CPAD to deliver other drugs and vaccines, including Hep B vaccines and tetanus toxoid vaccines (low certainty evidence).</p> <p>Some LHWs voiced concerns about possible social consequences if something went wrong. These concerns were at least partly addressed through support and supervision. Similar findings were also seen in other studies in the same systematic review (low certainty evidence).</p> <p>Activities that demand that the LHW is present at specific times, for instance during labour and birth, lead to irregular and unpredictable working conditions. Another review suggests that this may have direct implications for LHWs' expectations regarding incentives (low certainty evidence). LHWs may also be concerned about personal safety when working in the community and some LHWs were reluctant to visit clients at night because of safety issues (moderate certainty evidence) (Glenton, Colvin 2012).</p> <p>While LHW involvement in deliveries requires an effective referral system, the review also pointed to a number of challenges with referral of women in labour, including logistics and poor treatment of trained TBAs and women at facilities (moderate certainty evidence) (Glenton, Colvin 2012).</p> <p>Annex: page 33 (Glenton, Khanna 2012); page 26 (Glenton, Colvin 2012)</p>	
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FEASIBILITY	Is the option feasible to implement?	<table border="0"> <tr> <td>No</td> <td>Probably no</td> <td>Uncertain</td> <td>Probably yes</td> <td>Yes</td> <td>Varies</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table>	No	Probably no	Uncertain	Probably yes	Yes	Varies	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>While this intervention is simpler to deliver than injectable antibiotics, significant additional work may be required to add the intervention to an existing LHW programme. It is likely to need changes in regulations; significant changes to drug supplies and training; and development of appropriate treatment algorithms. Also, implementation would require access to a referral system with trained and equipped healthcare professionals and facilities. Implementation may additionally require consideration of factors affecting referral by LHWs (see under 'Acceptability').</p> <p>Significant training and supervision provided by skilled health cadres would likely be needed. However, a systematic review (Glenton, Colvin 2012) suggests that ongoing support, training and supervision was often insufficient in LHW programmes (moderate certainty evidence).</p> <p>Annex: page 26 (Glenton, Colvin 2012)</p>	
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