

6.3. RECOMMENDATION:

Should LAY HEALTH WORKERS manage puerperal sepsis using antibiotics, delivered through a compact, prefilled, autodisable device (CPAD) such as Uniject, before referral?

Problem: Poor access to treatment for puerperal sepsis
Option: LHWs delivering antibiotics 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 care is available or can be put in place.			
Justification	There is insufficient evidence of the effectiveness of this intervention, although the use of Uniject by LHWs is probably acceptable. In addition, the intervention 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 puerperal sepsis.		

6.3. EVIDENCE BASE:

Should LAY HEALTH WORKERS manage puerperal sepsis, using intramuscular antibiotics delivered through a compact, prefilled, autodisable device (CPAD) such as Uniject, before referral?

Problem: Poor access to treatment for puerperal sepsis
Option: LHWs delivering antibiotics using CPAD
Comparison: Care delivered by other cadres or no care
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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>A third systematic review that assessed the effects of TBAs specifically (Sibley 2012) identified one study from Pakistan where trained TBAs were compared to untrained TBAs. The TBAs were trained for three days on antepartum, intrapartum, and postpartum care; clean delivery; use of the disposable delivery kit; when to refer women for emergency obstetrical care; and care of the newborn. They were asked to visit each woman at least three times during the pregnancy to check for danger signs and to encourage women with such signs to seek emergency obstetrical care. They do not appear to have delivered drugs. The trial suggests that trained TBA care had significant effects on several maternal and neonatal outcomes. However, the certainty of this evidence is low.</p> <p>Annex: page 10 (Lewin 2012 – Table 2); page 16 (Sibley 2012)</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 puerperal 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 to a centre where comprehensive emergency obstetric care (CeMOC) is available</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 puerperal sepsis	Supervision and monitoring	Regular supervision by midwife or nurse	Supplies	Antibiotic CPAD, sterile solution, robust supply chain	Referral	Transportation to a centre where comprehensive emergency obstetric care (CeMOC) is available	
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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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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>A systematic review of LHWs and CPADs (Glenton, Khanna 2012) did not identify any studies that evaluated the acceptability of antibiotics for puerperal sepsis when delivered by LHWs using CPADs.</p> <p>However, the review did identify studies of LHWs using a CPAD device to deliver other types of drugs, including antibiotics for neonatal sepsis, Hep B vaccines and tetanus toxoid vaccines. These studies suggest 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. These studies also suggest 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, although the importance of training and support is emphasised (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 26 (Glenton, Colvin 2012); page 33 (Glenton, Khanna 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 intravenous 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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