

4.1. RECOMMENDATION:

Should AUXILIARY NURSE MIDWIVES diagnose preterm pre-labour rupture of membranes (pPROM) and deliver initial treatment of injectable antibiotics, using a standard syringe, before referral?

Problem: Poor access to injectable antibiotics for preterm PROM
Option: Auxiliary nurse midwives delivering injectable antibiotics
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 the option in the context of rigorous research. We suggest evaluating this intervention where auxiliary nurse midwives are already an established cadre and where a well-functioning referral system is in place or can be put in place.		
Justification	There is insufficient evidence on the effectiveness of auxiliary nurse midwives diagnosing preterm pre-labour rupture of membranes (PROM) and delivering initial treatment of injectable antibiotics using a standard syringe before referral. Possible harms include the overuse of antibiotics and misdiagnosis. Possible benefits include earlier access to treatment for preterm PROM, but it is unclear whether slightly earlier treatment, prior to referral, would have benefits. This intervention may be acceptable and feasible and may reduce inequalities by extending care to underserved populations.		
Implementation considerations	Not applicable		
Monitoring and evaluation			
Research priorities	Studies assessing the effects and the acceptability of using auxiliary nurse midwives to delivering an initial dose of injectable antibiotics to treat preterm PROM prior to referral.		

4.1 EVIDENCE BASE:

Should AUXILIARY NURSE MIDWIVES diagnose preterm pre-labour rupture of membranes (pPROM) and deliver initial treatment of injectable antibiotics, using a standard syringe, before referral?

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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 searched for studies that assessed the effects of midlevel providers, including auxiliary nurse midwives, in improving the delivery of health care services (Lassi 2012). However, this review did not identify any studies that assessed the effects of using auxiliary nurse midwives for this intervention. We are therefore unable to draw any conclusions about the desirable or undesirable effects of this intervention.</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 type="checkbox"/> Uncertain <input type="checkbox"/> Probably yes <input checked="" 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 auxiliary nurse midwives already provide other care</th> </tr> </thead> <tbody> <tr> <td>Training</td> <td>e.g. two weeks of training for auxiliary nurse midwives to diagnosis and manage, including diagnosis of amniotic fluid volume by ultrasound where available. This assumes proficiency in diagnosing pregnancy, assessing gestational age, and assessing leakage of amniotic fluid through observation and simple pH testing</td> </tr> <tr> <td>Supervision and monitoring</td> <td>Regular supervision by a midwife or doctor</td> </tr> <tr> <td>Supplies</td> <td>Antibiotics, equipment needed for diagnosis, e.g. litmus paper. Ultrasound equipment in some settings</td> </tr> <tr> <td>Referral</td> <td>Transportation, adequate referral centre</td> </tr> </tbody> </table>	Resource	Settings in which auxiliary nurse midwives already provide other care	Training	e.g. two weeks of training for auxiliary nurse midwives to diagnosis and manage, including diagnosis of amniotic fluid volume by ultrasound where available. This assumes proficiency in diagnosing pregnancy, assessing gestational age, and assessing leakage of amniotic fluid through observation and simple pH testing	Supervision and monitoring	Regular supervision by a midwife or doctor	Supplies	Antibiotics, equipment needed for diagnosis, e.g. litmus paper. Ultrasound equipment in some settings	Referral	Transportation, adequate referral centre	
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	CRITERIA	JUDGEMENT	EVIDENCE	COMMENTS AND QUERIES
	<p>Is the incremental cost small relative to the benefits?</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>Uncertain as there is no direct evidence on effectiveness</p>	
ACCEPTABILITY	<p>Is the option acceptable to most stakeholders?</p>	<p>No <input type="checkbox"/> Probably no <input type="checkbox"/> Uncertain <input type="checkbox"/> Probably yes <input checked="" type="checkbox"/> Yes <input type="checkbox"/> Varies <input type="checkbox"/></p>	<p>We are not aware of any systematic reviews that considered the acceptability of auxiliary nurse midwife interventions. We are therefore uncertain about the acceptability of this intervention to key stakeholders.</p> <p>Indirect evidence: A systematic review (Rashidian 2012) exploring factors that influence the success of doctor-nurse substitution suggests that the acceptability of this intervention to key stakeholders may be mixed:</p> <ul style="list-style-type: none"> • Nurses may be motivated to take on new tasks by increased recognition and job satisfaction (moderate certainty evidence). • Recipients may regard nurses as more accessible and better at listening than doctors (moderate certainty evidence), but may prefer doctors for some medical tasks (low certainty evidence). • Doctors may welcome the contribution of nurses where it reduces doctors' workloads (moderate certainty evidence) and may be comfortable with nurse prescribing, believing that it improves continuity of care (low certainty evidence). • However, doctors and other health workers may be unwilling to relinquish final responsibility for patient care (low certainty evidence). Also, a lack of clarity about nurse roles and responsibilities in relation to other health workers may be a challenge (low certainty evidence). <p>Annex: page 43 (Rashidian 2012)</p>	
FEASIBILITY	<p>Is the option feasible to implement?</p>	<p>No <input type="checkbox"/> Probably no <input type="checkbox"/> Uncertain <input type="checkbox"/> Probably yes <input checked="" type="checkbox"/> Yes <input type="checkbox"/> Varies <input checked="" type="checkbox"/></p>	<p>The intervention requires relatively few supplies (antibiotics and simple diagnostic tools). In addition, it is simple to deliver and requires only a relatively small amount of training.</p> <p>Regular supervision needs to be in place, and adequate referral to a higher level of care for further management may also be necessary. However, systematic reviews of lay health worker, nurse and midwife programmes suggest that sufficient training and supervision is often lacking (Glenton, Colvin 2012; Rashidian 2012; Colvin 2012).</p> <p>In some settings, changes to norms or regulations may be needed to allow auxiliary nurse midwives to prescribe and deliver injectable antibiotics.</p> <p>Annex: page 26 (Glenton, Colvin 2012); page 20 (Colvin 2012); page 43 (Rashidian 2012)</p>	