

**11.4. RECOMMENDATION:**

**Should AUXILIARY NURSE MIDWIVES administer antihypertensives for severe high blood pressure in pregnancy?**

**Problem:** Poor access to treatment

**Option:** Auxiliary nurse midwives administering antihypertensives for severe high blood pressure during pregnancy

**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>	<b><i>We suggest considering the option with targeted monitoring and evaluation</i></b>	<i>We recommend the option</i>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	We suggest considering the option with targeted monitoring and evaluation. We suggest evaluating this intervention where auxiliary nurse midwives are already an established cadre; in an acute context prior to referral; and where following a standard protocol.		
<b>Justification</b>	There is insufficient evidence on the effectiveness of auxiliary nurse midwives administering these drugs. However, this is probably acceptable, and they have the necessary clinical skills. The intervention may also reduce inequalities in settings where access to more highly trained providers is limited.		
<b>Implementation considerations</b>	<p>The following should be considered when using auxiliary nurse midwives to (a) administer intravenous fluid for resuscitation, (b) perform internal bimanual uterine compression, and (c) suture genital lacerations:</p> <ul style="list-style-type: none"> <li>- The relevant professional bodies should be involved in the planning and implementation of the intervention to ensure acceptability among affected health workers</li> <li>- The distribution of roles and responsibilities between auxiliary nurse midwives and other health workers needs to be made clear, including through regulations and job descriptions</li> <li>- Changes in regulations may be necessary to support any changes in auxiliary nurse midwives' scope of practice</li> <li>- Implementation needs to be in the context of a comprehensive remuneration scheme, in which salaries or incentives reflect any changes in scope of practice. Giving incentives for certain tasks but not for others may negatively affect the work that is carried out</li> <li>- Referral systems need to function well, i.e. financial, logistical (e.g. transport) and relational barriers need to be addressed. Specifically, local health systems need to be strengthened to improve quality of care at the first referral facility</li> <li>- Supplies of drugs and other commodities need to be secure</li> <li>- Responsibility for supervision needs to be clear and supervision needs to be regular and supportive</li> <li>- Auxiliary nurse midwives and their supervisors need to receive appropriate initial and ongoing training</li> </ul>		
<b>Monitoring and evaluation</b>	Monitoring and evaluation should focus on adherence to clinical protocols and potential harms of antihypertensives on the mother and the baby.		
<b>Research priorities</b>	<ul style="list-style-type: none"> <li>- Studies assessing the effects and the acceptability of using auxiliary nurse midwives to administer (a) antihypertensives for high blood pressure and (b) corticosteroids to pregnant women are needed</li> </ul>		

11.4. EVIDENCE BASE:

Should AUXILIARY NURSE MIDWIVES administer antihypertensives for severe high blood pressure in pregnancy

**Problem:** Poor access to treatment  
**Option:** Auxiliary nurse midwives administering antihypertensives for severe high blood pressure during pregnancy  
**Comparison:** Care delivered by other cadres or no care  
**Setting:** Community/primary health care settings in LMICs with poor access to health professionals

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. <b>We are therefore unable to draw any conclusions about the desirable or undesirable effects of this intervention.</b></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><b>Main resource requirements</b></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. 2 weeks of practice-based training in diagnosing and managing hypertension in pregnancy</td> </tr> <tr> <td>Supervision and monitoring</td> <td>Regular supervision by midwife or doctor</td> </tr> <tr> <td>Supplies</td> <td>Antihypertensives, blood pressure measurement device</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 auxiliary nurse midwives already provide other care	Training	E.g. 2 weeks of practice-based training in diagnosing and managing hypertension in pregnancy	Supervision and monitoring	Regular supervision by midwife or doctor	Supplies	Antihypertensives, blood pressure measurement device	Referral	Transportation to a centre where comprehensive emergency obstetric care (CeMOC) is available	
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	CRITERIA	JUDGEMENT	EVIDENCE	COMMENTS AND QUERIES
	Is the incremental cost small relative to the benefits?	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"/>	Uncertain as there is no direct evidence on effectiveness	
ACCEPTABILITY	Is the option acceptable to most stakeholders?	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>We are not aware of any systematic reviews that considered the acceptability of auxiliary nurse midwife interventions. <b>We are therefore uncertain about the acceptability of this intervention to key stakeholders.</b></p> <p><b>Indirect evidence:</b> A systematic review (Rashidian 2012) exploring factors that influence the success of <u>doctor-nurse substitution</u> suggests that the acceptability of this intervention to key stakeholders may be mixed:</p> <ul style="list-style-type: none"> <li>• Nurses may be motivated to take on new tasks by increased recognition and job satisfaction (moderate certainty evidence).</li> <li>• 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).</li> <li>• 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).</li> <li>• 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).</li> </ul> <p><b>Annex:</b> page 43 (Rashidian 2012)</p>	
FEASIBILITY	Is the option feasible to implement?	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>The intervention requires some supplies (drugs and simple diagnostic tools). Also, adequate referral to a higher level of care for further management may also be necessary. While training, clinical experience and supervision are needed, 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 administer drugs.</p> <p><b>Annex:</b> page 26 (Glenton, Colvin 2012); page 20 (Colvin 2012); page 43 (Rashidian 2012)</p>	