

11.8 to 11.10. RECOMMENDATION:

Should ADVANCED LEVEL ASSOCIATE CLINICIANS deliver a loading dose of magnesium sulphate to (a) prevent eclampsia and refer to a higher facility; and (b) treat eclampsia and refer to a higher facility?

Problem: Poor access to treatment for eclampsia
Option: Advanced level associate clinicians delivering loading dose of magnesium sulphate
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 with targeted monitoring and evaluation</i>	<i>We recommend the option</i>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
We suggest considering the use of advanced level associated clinicians to deliver the <u>loading dose</u> of magnesium sulphate to prevent and treat eclampsia with targeted monitoring and evaluation.			
Justification	There is insufficient evidence on the effectiveness of advanced level associated clinicians delivering a loading dose of magnesium sulphate to prevent or treat eclampsia and refer to a higher facility. However, a World Health Organization guideline recommends that for settings where it is not possible to administer the full magnesium sulphate regimen, the use of magnesium sulphate loading dose, followed by immediate transfer to a higher-level health facility, is recommended for women with severe pre-eclampsia and eclampsia (very low quality evidence, weak recommendation) (WHO, 2011).		
Implementation considerations	<p>The following should be considered when using advanced level associated clinicians to vacuum extraction or manual removal of the placenta:</p> <ul style="list-style-type: none"> - The relevant professional bodies should be involved in the planning and implementation of the intervention to ensure acceptability among affected health workers - Clear scopes of practice are needed, and these need to be implemented at all levels of the health system. Linked to this, the distribution of roles and responsibilities between advanced level associated clinicians and other health workers needs to be made clear - 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 - Career progression may be an important motivator - Referral systems need to function well, i.e. financial, logistical (e.g. transport) and relational barriers need to be addressed - Supplies of surgical instruments and other commodities need to be secure - Responsibility for supervision needs to be clear and supervision needs to be regular and supportive - Advanced level associated clinicians and their supervisors need to receive appropriate initial and ongoing training 		
Monitoring and evaluation			
Research priorities	Studies of the effects and acceptability of advanced level associated clinicians delivering magnesium sulphate for the prevention and treatment of eclampsia		

11.8 and 11.10. EVIDENCE BASE:

Should **ADVANCED LEVEL ASSOCIATE CLINICIANS** deliver a **loading dose of magnesium sulphate** to (a) **prevent eclampsia and refer to a higher facility**; and (b) **treat eclampsia and refer to a higher facility**?

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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 advanced level associate clinicians, in improving the delivery of health care services (Lassi 2012). However, this review did not identify any studies that assessed the effects of using advanced level associate clinicians for these interventions. We are therefore unable to draw any conclusions about the desirable or undesirable effects of this intervention.</p> <p>Indirect evidence: A systematic review compared clinical officers (unclear what level of training they had) with medical doctors for caesarean section (Wilson 2011). The review identified 6 studies from low and middle income countries, but the evidence is of very low certainty and we are therefore unable to draw conclusions on the effects of using clinical officers for caesarean section.</p> <p>Annex: page 18 (Wilson 2011)</p>	<p>Note: A World Health Organisation guideline recommends that for settings where it is not possible to administer the full magnesium sulphate regimen, the use of magnesium sulphate loading dose, followed by immediate transfer to a higher-level health facility, is recommended for women with severe pre-eclampsia and eclampsia (very low quality evidence, weak recommendation) (WHO, 2011). The guideline makes no recommendation regarding (a) which cadre should deliver the loading or maintenance doses for preventing and treating eclampsia, and (b) what should be done when immediate transfer to a higher-level facility is not possible following the loading dose.</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 advanced level associated clinicians already provide other care</th> </tr> </thead> <tbody> <tr> <td>Training</td> <td>1 month of training for advanced level associated clinicians to diagnosis and manage eclampsia and pre-eclampsia</td> </tr> <tr> <td>Supervision and monitoring</td> <td>Regular supervision by senior midwife or doctor</td> </tr> <tr> <td>Supplies</td> <td>Magnesium sulphate, calcium gluconate, IV equipment</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 advanced level associated clinicians already provide other care	Training	1 month of training for advanced level associated clinicians to diagnosis and manage eclampsia and pre-eclampsia	Supervision and monitoring	Regular supervision by senior midwife or doctor	Supplies	Magnesium sulphate, calcium gluconate, IV equipment	Referral	Transportation to a centre where comprehensive emergency obstetric care (CeMOC) is available	
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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 checked="" type="checkbox"/> Probably yes <input type="checkbox"/> Yes <input type="checkbox"/> Varies <input checked="" type="checkbox"/></p>	<p>A rapid review of literature on associate clinician / advanced level associate clinician programmes suggests that:</p> <ul style="list-style-type: none"> - There may be a lack of acceptance of associate clinicians / advanced level associate clinicians among other professionals and professional bodies in a number of settings, and these bodies may block the development of the cadre or attempt to restrict what they can do. Acceptance appears to vary across procedures that they are trained to deliver - Associate clinicians / advanced level associate clinicians may not be given recognition and respect from doctors and health administrators, despite doing work similar to that done by doctors, and this is seen as problematic - There may be discrepancies between acceptance at national ministry level, existing regulations for registration of associate clinicians / advanced level associate clinicians, the training they receive and clinical practice. Consequently, they may only be able to undertake a proportion of what they were trained to do in relation to emergency and comprehensive obstetric care or may be perform services without regulatory authorisation <p>The certainty of this evidence is unclear as the quality of the contributing studies and the generalisability of the findings are unclear.</p> <p>Annex: Page 25 (Daniels 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 type="checkbox"/> Yes <input checked="" type="checkbox"/> Varies <input type="checkbox"/></p>	<p>The intervention requires relatively few supplies (magnesium sulphate, calcium gluconate and IV equipment). In addition, it is simple to deliver and requires only a relatively small amount of training.</p> <p>Changes to norms, regulations and scopes of practice may be needed to allow advanced level associated clinicians to perform these procedures. Regular supervision is also necessary, and adequate referral to a higher level of care for management may be required.</p>	