

11.7 and 11.14. RECOMMENDATIONS:
Should ADVANCED LEVEL ASSOCIATE CLINICIANS perform (a) vacuum extraction during childbirth and (b) manual removal of the placenta?
Problem: Poor access to obstetric care

Option: Advanced level associate clinicians performing vacuum extraction and manual removal of the placenta

Comparison: Procedure delivered by other cadres or no care

Setting: Health care facilities in LMICs

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 type="checkbox"/>	<input checked="" type="checkbox"/>
	We recommend this option. We suggest implementing this intervention where advanced level associate clinicians with obstetric skills 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 advanced level associate clinicians performing vacuum extraction during childbirth or performing manual removal of the placenta and acceptability is uncertain. However, advanced level associate clinicians are likely to have the necessary obstetric skills, the intervention is probably feasible and it may also reduce inequalities by extending care to underserved populations.		
Implementation considerations	The following should be considered when using advanced level associate clinicians to vacuum extraction or manual removal of the placenta: <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 associate 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 - Associate clinicians and their supervisors need to receive appropriate initial and ongoing training 		
Monitoring and evaluation			
Research priorities	Studies are needed to assess the effects of advanced level associate clinicians performing vacuum extraction or manual removal of the placenta.		

11.7 and 11.14. EVIDENCE BASE:

Should ADVANCED LEVEL ASSOCIATE CLINICIANS perform (a) vacuum extraction during childbirth and (b) manual removal of the placenta?

Problem: Poor access to obstetric 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 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>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 associate clinicians already provide other care</th> </tr> </thead> <tbody> <tr> <td>Training</td> <td>Training would need to include obstetric care such as delivering the baby, vacuum extraction procedures, understanding the physiology of the 3rd stage of labour and the manual removal technique</td> </tr> <tr> <td>Supervision and monitoring</td> <td>Some monitoring and supervision by an obstetrician or a medical doctor with obstetric experience would be needed</td> </tr> <tr> <td>Supplies</td> <td>Antiseptic cleansing and antibiotics, vacuum extraction device</td> </tr> <tr> <td>Referral</td> <td>Referral to a higher facility (including for caesarean section in the case of vacuum extraction complications) essential since the procedures may fail</td> </tr> </tbody> </table>	Resource	Settings in which advanced level associate clinicians already provide other care	Training	Training would need to include obstetric care such as delivering the baby, vacuum extraction procedures, understanding the physiology of the 3 rd stage of labour and the manual removal technique	Supervision and monitoring	Some monitoring and supervision by an obstetrician or a medical doctor with obstetric experience would be needed	Supplies	Antiseptic cleansing and antibiotics, vacuum extraction device	Referral	Referral to a higher facility (including for caesarean section in the case of vacuum extraction complications) essential since the procedures may fail	
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			regardless of manual skill	
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	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	
No	Probably no	Uncertain	Probably yes	Yes	Varies											
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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 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>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>	
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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 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>Vacuum extraction: may be feasible after practical training. The intervention requires a vacuum extraction device and equipment for neonatal resuscitation. Adequate referral to a higher level of care for further management may also be necessary</p> <p>Manual removal of the placenta: may be feasible after theoretical and practical training. The intervention requires antiseptic cleansing. Adequate referral to a higher level of care for further management may also be necessary</p>	
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