11.8 and 11.10. EVIDENCE BASE:

Should 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 if appropriate?

***Problem**:* Poor access to treatment for eclampsia
***Option**:* 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

	CRITERIA	JUDGEMENT	EVIDENCE	COMMENTS AND QUERIES
BENEFITS & HARMS OF THE OPTIONS	**Are the anticipated desirable effects large?**	No ☐ / Probably no ☐ / Uncertain ☑ / Probably yes ☐ / Yes ☐ / Varies ☐	A systematic review searched for studies that assessed the effects of midlevel providers, including 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 associate clinicians for these interventions. **We are therefore unable to draw any conclusions about the desirable or undesirable effects of this intervention.** **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. **Annex**: page 18 (Wilson 2011)	**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 reccommendation 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.
	Are the undesirable effects small?	No ☐ / Probably no ☐ / Uncertain ☑ / Probably yes ☐ / Yes ☐ / Varies ☐		
	What is the certainty of the anticipated effects?	Very low ☐ / Low ☐ / Moderate ☐ / High ☐ / No direct evidence ☑ / Varies ☐		
	Are the desirable effects large relative to the undesirable effects?	No ☐ / Probably no ☐ / Uncertain ☑ / Probably yes ☐ / Yes ☐ / Varies ☐		
RESOURCE USE	**Are the resources required small?**	No ☐ / Probably no ☐ / Uncertain ☐ / Probably yes ☑ / Yes ☐ / Varies ☐	***Main resource requirements***	

Resource	Settings in which associate clinicians already provide other care
Training	I month of training for associate 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

	CRITERIA	JUDGEMENT	EVIDENCE	COMMENTS AND QUERIES
	Is the incremental cost small relative to the benefits?	*No* ☐ *Probably no* ☐ *Uncertain* ☑ *Probably yes* ☐ *Yes* ☐ *Varies* ☐	Uncertain as there is no direct evidence on effectiveness	
ACCEPTABILITY	**Is the option acceptable to most stakeholders?**	*No* ☐ *Probably no* ☐ *Uncertain* ☑ *Probably yes* ☐ *Yes* ☐ *Varies* ☑	A rapid review of literature on associate clinician / advanced level associate clinician programmes suggests that: - 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 associate clinicians 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 The certainty of this evidence is unclear as the quality of the contributing studies and the generalisability of the findings are unclear. **Annex**: Page 25 (Daniels 2012)	
FEASIBILITY	**Is the option feasible to implement?**	*No* ☐ *Probably no* ☐ *Uncertain* ☐ *Probably yes* ☐ *Yes* ☑ *Varies* ☐	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. Changes to norms, regulations and scopes of practice may be needed to allow associate clinicians to perform these procedures. Regular supervision is also necessary, and adequate referral to a higher level of care for management may be required.	