11.9 and 11.11. EVIDENCE BASE:

Should MIDWIVES deliver a maintenance 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 initial and ongoing treatment for eclampsia
***Option**:* Midwives delivering loading dose and maintenance 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 midwives, in improving the delivery of health care services (Lassi 2012). However, this review did not identify any studies that assessed the effects of midwives administering magnesium sulphate. **We are therefore unable to draw any conclusions about the desirable or undesirable effects of this intervention.** **Indirect evidence:** The review (Lassi 2012) did identify a number of other studies, all from high income settings, in which midwives delivered antenatal, intrapartum and postpartum care, although it is not clear precisely what services this care included. The review suggests that midwife-led care may improve several health outcomes while it may make no difference to other outcomes. However, the certainty of this evidence varies. Similar findings were seen in another systematic review on the effects of midwife care (Hatem 2008) **Annex**: page 4 (Lassi 2012)	**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 anticipated 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 midwives already provide other care
Training	E.g. less than 1 week of training for midwives 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 systematic review of task-shifting in midwifery programmes (Colvin 2012) did not identify any studies that evaluated the acceptability of using midwives to deliver the loading dose or maintenance dose of magnesium sulphate for eclampsia. **We are therefore uncertain about the acceptability of this intervention to key stakeholders.** **Indirect evidence:** For other midwife-delivered interventions, the same review suggests the following: • Mothers and midwives are more likely to accept task-shifting initiatives if they increase the midwives' ability to provide more holistic and continuous care (moderate certainty evidence) • Midwives and their supervisors and trainers generally felt midwives had no problem learning new medical information and practicing new clinical techniques (moderate certainty evidence). Midwives may also be motivated by being "upskilled" as it can potentially lead to increased status, promotion opportunities and increased job satisfaction (moderate certainty evidence). • However, midwives may not readily accept a mode of care that views pregnancy as risky and uncertain (moderate certainty evidence).They may also be less likely to accept tasks that increase the involvement of others in the clinical care (moderate certainty evidence). In addition, midwives may be concerned about the increased liability that may accompany new tasks and may be wary of new tasks that increase their workload (moderate certainty) • Doctors may be skeptical about the extension of midwifery roles in obstetric care, although doctors who worked closely with midwives tended to have better attitudes towards them (low certainty evidence). • A lack of clarity in roles and responsibilities between midwives and other health worker cadres, as well as status and power differences may also lead to poor working relationships and 'turf battles' (moderate certainty evidence) **Annex**: page 20 (Colvin 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 small amount of training. Regular supervision needs to be in place, and adequate referral to a higher level of care for further management may also be necessary. However, a systematic review (Colvin 2012) suggests that ongoing support, training and supervision was often insufficient in midwife taskshifting programmes (moderate certainty evidence). In some settings, changes to norms or regulations may be needed to allow midwives to prescribe and deliver magnesium sulphate. **Annex**: page 20 (Colvin 2012)	