11.1, 11.2 and 11.3. RECOMMENDATION:

Should AUXILIARY NURSE MIDWIVES (a) administer intravenous fluid for resuscitation as part of postpartum haemorrhage treatment, (b) perform internal bimanual uterine compression for postpartum hameorrhage, and (c) perform suturing for minor perineal / genital lacerations?

***Problem**:* Poor access to treatment for post-partum haemorrhage
***Option**:* Auxiliary nurse midwives delivering a range of interventions to treat haemorrhage
***Comparison**:* Care delivered by other cadres or no care
Setting: Community/primary health care settings in LMICs with poor access to health professionals

Recommendation	*We recommend against the option*	***We suggest considering the option with targeted monitoring and evaluation***	***We recommend the option***
	☐	☐	☑
	We recommend these options. We suggest implementing these interventions where auxiliary nurse midwives are already an established cadre and where a well-functioning referral system is in place or can be put in place. These interventions should be operationalised in the context of the WHO PPH guidelines, which outline a comprehensive approach to managing PPH.		
Justification	There is insufficient evidence on the effectiveness of auxiliary nurse midwives delivering these interventions. However, the panel considered these interventions to be part of the core skills of auxiliary nurse midwives. In addition, they may be acceptable, are probably feasible and may also reduce inequalities by extending care to underserved populations.		
Implementation considerations	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: - The relevant professional bodies should be involved in the planning and implementation of the intervention to ensure acceptability among affected health workers - 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 - Changes in regulations may be necessary to support any changes in auxiliary nurse midwives' scope of practice - 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 - 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 - Supplies of drugs and other commodities need to be secure - Responsibility for supervision needs to be clear and supervision needs to be regular and supportive - Auxiliary nurse midwives and their supervisors need to receive appropriate initial and ongoing training		
Monitoring and evaluation	-		
Research priorities	-		

11.1, 11.2 and 11.3. EVIDENCE BASE:

Should AUXILIARY NURSE MIDWIVES (a) administer intravenous fluid for resuscitation as part of postpartum haemorrhage treatment, (b) perform internal bimanual uterine compression for postpartum haemorrhage, and (c) perform suturing for minor perineal / genital lacerations?

Problem: Poor access to treatment for post-partum haemorrhage
Option: Auxiliary nurse midwives delivering a range of interventions to treat haemorrhage
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	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 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. **We are therefore unable to draw any conclusions about the desirable or undesirable effects of this intervention.**	
	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 auxiliary nurse midwives already provide other care
Training	3-4 weeks training in emergency obstetric care
Supervision and monitoring	Regular supervision by midwife or nurse
Supplies	IV fluids and sets, sutures, antiseptic solution
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* ☑	We are not aware of any systematic reviews that considered the acceptability of auxiliary nurse midwife interventions. **We are therefore uncertain about the acceptability of this intervention to key stakeholders.** **Indirect evidence:** One systematic review (Rashidian 2012) explored factors that influence the success of task-shifting to nurses. This review suggests that: • Recipients may regard nurses as more accessible and better at listening and caring than doctors (moderate certainty evidence). However, some recipients may have concerns about nurses' competence and willingness to provide high quality care compared to doctors (low certainty evidence) • Nurses themselves may be motivated to offer advanced care by increased recognition and job satisfaction (moderate certainty evidence). • Doctors were generally satisfied with the contribution of nurses to maternal and child health care, although some concerns were raised (low certainty evidence). Doctor acceptance appears to be influenced by level of nurse experience (low certainty evidence). Doctors may welcome the contribution of nurses where it reduces doctors' workloads (moderate certainty evidence). However, an increase in nurse autonomy may negatively affect or produce negative reactions among other professions, including doctors and midwives, who for instance may be unwilling relinquish final responsibility for patient care. A lack of clarity about nurse roles and responsibilities in relation to other health workers may also be a challenge (low certainty evidence). **Annex**: page 43 (Rashidian 2012)	
FEASIBILITY	**Is the option feasible to implement?**	*No* ☐ *Probably No* ☐ *Uncertain* ☐ *Probably yes* ☑ *Yes* ☐ *Varies* ☐	These interventions require some supplies. Adequate referral to a higher level of care for further management may be necessary. In addition, these interventions are likely to require changes to norms or regulations. Some training and supervision is needed. However, 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). **Annex**: page 26 (Glenton, Colvin 2012); page 20 (Colvin 2012); page 43 (Rashidian 2012)	