13.4. RECOMMENDATION:

Should AUXILIARY NURSE MIDWIVES maintain antiretroviral prophylaxis among pregnant women for prevention of HIV infection in infants?

***Problem**:* Poor access to antiretroviral prophylaxis for pregnant women
***Option**:* Auxiliary nurse midwives maintaining antiretroviral prophylaxis
***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 suggest considering the option with targeted monitoring and evaluation. We suggest evaluating this intervention 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.		
Justification	There is insufficient evidence on the effectiveness of auxiliary nurse midwives maintaining antiretroviral prophylaxis. However, this intervention is probably acceptable and feasible, may increase continuity of care and may reduce inequalities by extending care to underserved populations. In addition, maintaining antiretroviral prophylaxis is less complex than maintaining antiretroviral treatment.		
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	Studies are needed to assess the effects and the acceptability of using auxiliary nurse midwives in delivering antiretroviral prophylaxis		

13.4. EVIDENCE BASE:

Should AUXILIARY NURSE MIDWIVES maintain antiretroviral prophylaxis among pregnant women for prevention of HIV infection in infants?

Problem: Poor access to antiretroviral prophylaxis for pregnant women
Option: Auxiliary nurse midwives maintaining antiretroviral prophylaxis
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 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.** **Indirect evidence:** A systematic review (Lewin 2012) searched for studies that assessed the effects of lay health worker programmes for maternal and child health. The review identified three studies in which patients on antiretroviral treatment (ART) supported by LHWs had similar or better outcomes compared to patients helping themselves or managed by professionals (low to moderate certainty evidence). Specifically: • In Uganda, LHWs provided clinic and home-based counselling and support but did not dispense medication. Compared to usual care, the patients in the LHW group had better outcomes. • In Kenya, LHWs dispensed monthly maintenance ART, gave treatment support and referred clients where necessary. The patients in the LHW group had similar outcomes to patients managed by professionals. • In the USA, a study compared LHW-led directly observed therapy; self-supervision; and usual care. The patients in all three groups had similar outcomes.	
	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* — E.g. 1 to 2 weeks of training for auxiliary nurse midwives on treatment regimens, timing of treatment *Supervision and monitoring* — Regular supervision by senior nurse *Supplies* — Drugs *Referral* — Transport to referral facilities in case of adverse reactions	

	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:** A systematic review (Rashidian 2012) exploring factors that influence the success of doctor-nurse substitution suggests the following: • Nurses may be motivated to offer advanced care by increased recognition and job satisfaction (moderate certainty evidence) • Recipients may regard nurses as more accessible and better at listening and caring than doctors (moderate certainty evidence). Recipients may also prefer nurses for services that require more attention and time (low certainty evidence). However, in some settings, recipients may experience nurses as too overworked to explain things to their recipients (low certainty evidence). In addition, some recipients may have concerns about nurses' competence and willingness to provide high quality care compared to doctors (low 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). Doctors may welcome the contribution of nurses where it reduces doctors' workloads (moderate certainty evidence). Doctors may also be comfortable with nurse prescribing, believing that it improves the continuity of care that patients receive (low certainty evidence) • In addition, doctors may also welcome the transfer of certain repetitive tasks to nurses (e.g. pap smears) and nurses seem to be happy with these tasks. Nurses may be willing to provide preventive and health promotional care that is not usually prioritised by doctors (low 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 to relinquish final responsibility for patient care • 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* ☐	Significant additional work may be needed to add this intervention to the tasks of auxiliary nurse midwives. It is likely to require changes in regulations and significant changes to drug supplies, and adequate referral to a higher level of care for further management may be necessary. Significant training and supervision provided by skilled health cadres would also likely be 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). and adequate referral to a higher level of care for further management may be necessary. **Annex**: page 26 (Glenton, Colvin 2012); page 20 (Colvin 2012); page 43 (Rashidian 2012)	