



“MIDWIVES ARE HEROES OF THE COUNTRY”:

A mixed methods study on International Medical Corps-supported midwifery education in South Sudan

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“You see in the context of South Sudan, when you train a midwife, the life challenges that they go through are not comparable to our neighboring countries because we live in a resource-constrained country. ... For [the midwives] to live year in year out ... providing services out there—for me, they are heroes. They are heroes of the country.” *(Teacher)*



1. Introduction

Countries affected by conflict have higher maternal mortality than stable settings. As the world's newest country, South Sudan has one of the highest maternal mortality ratios in the world, with an estimated 789 maternal deaths per 100,000 live births. South Sudan has endured several decades of conflict and political instability, which have had catastrophic impacts on the economy and the health system. For instance, childbirth and pregnancy are the leading causes of death among women and girls in South Sudan, due to the limited availability of quality services and skilled birth attendants. Estimates show only 17% of births in the country are attended by trained health personnel.

Investing in midwifery could prevent two-thirds of maternal and newborn deaths globally, as midwives are trained to provide a range of sexual and reproductive health (SRH) services, including management of uncomplicated pregnancies and deliveries, antenatal and postnatal care, and contraceptive services. International Medical Corps has sought to contribute to reductions in maternal, neonatal, and child morbidity and mortality in South Sudan by increasing the number of trained midwives in the country.

Since 2008, International Medical Corps has co-managed and supported three midwifery schools in South Sudan: Juba College of Nursing and Midwifery (JCONAM), Kajo Keji Health Sciences Institute (KKHSI) and Wau Health Sciences Institute (WHSI).

The schools offer a 30- to 36-month midwifery diploma program that meets the standards established by the International Confederation of Midwives and includes basic emergency obstetric and newborn care. International Medical Corps provides educational resources, support for faculty and scholarships for students. To date, 472 midwives have graduated from these three schools.

International Medical Corps has worked to deliver healthcare, healthcare-related services and training through integrated interventions that strengthen the capacity of the public health system. International Medical Corps currently has active field sites in Canal Pigi, Juba, Koch, Leer, Malakal, Mayendit, Panyijar and Wau, supporting 67 health facilities to provide primary healthcare—including comprehensive SRH services—and conduct programming to improve health, nutrition and protection against gender-based violence. In collaboration with the Reproductive Health Access, Information and Services in Emergencies (RAISE) Initiative at Columbia University, International Medical Corps conducted a cross-sectional mixed-methods evaluation of the midwifery education program to determine its strengths and weaknesses in 2022. The evaluation sought to understand perceptions of midwife graduates and their current supervisors, key stakeholders and South Sudanese women who received care from midwifery school graduates.

2. Methodology

A cross-sectional mixed-methods study was conducted to assess the midwifery education program at the three schools receiving support from International Medical Corps in South Sudan. Methods included the following:

1. **Rapid assessments** of the three midwifery schools to provide snapshots using five educational inputs: students, curriculum, infrastructure and management, teachers/tutors/clinical preceptors, and clinical practice sites.
2. **Quantitative survey** of 314 midwifery graduates to determine where they are working, which services they feel prepared to provide and their satisfaction with their education.
3. **Key informant interviews** (n=12) with key stakeholders involved in the midwifery schools, including individually with principals and Ministry of Health (MOH) officials, as well as in dyads or triads with teachers and clinical preceptors.
4. **In-depth interviews** with selected midwifery school graduates currently working as midwives and their supervisors (five each in Juba, Malakal and Wau).
5. **Focus group discussions** with female clients of the graduates (three each in Juba, Malakal and Wau).
6. **Clinical practice data** from selected midwives working in 11 International Medical Corps-supported health facilities, who completed a daily task register for one week, as well as obstetric and/or family planning registers over three to four months.

The Institutional Review Board of Columbia University and the Ministry of Health for the Republic of South Sudan determined the study to be exempt.



3. Main Findings

3.1 Rapid assessments of schools

Infrastructure and management

- All schools had adequate classroom facilities and equipment for teaching, including classrooms, skills labs, libraries, computers with intermittent internet and sufficient light and ventilation.

Teachers, tutors and clinical preceptors

- All schools maintained a teacher-to-student ratio of one teacher to 40 students.
- All teachers had at least two years of teaching experience at KKHSI and WHSI, while four of six JCONAM teachers had the same. The majority reported having completed an instruction skills course and had at least two years of clinical practice as a midwife.
- Teachers largely reported using lectures, group work and skills demonstration as teaching methods.

Clinical practice sites (MOH hospitals and health centers)

- Although clinical preceptors mostly reported that they had their own cases to manage in addition to those of their students, they largely reported that their workload was adjusted when they had students.
- While a handful reported receiving training from UNFPA on clinical precepting, the majority said they received no formal training for the role.
- While the clinical sites generally had the necessary equipment, clinical guidelines were not seen in any of the four sites.
- There was a high student-to-preceptor ratio at Juba Hospital—often 10 to 12 students per preceptor per shift—which outnumbered the midwives present. This high ratio suggests that some students may not receive sufficient oversight.

3.2 Survey of midwifery school graduates

Phone interviews were completed with 314 of the 348 graduates of the three midwifery programs—a response rate of 90%.

Socio-demographics of school graduates

- Graduates had a mean age of 32 years, and 59.2% of the surveyed graduates were female.
- Among graduates, 17.2% currently identified as internally displaced persons (IDP) in South Sudan, and 13.1% were refugees from outside the country.

Midwifery education

- Nearly half (46.2%) of respondents were graduates of KKHSI, followed by WHSI (30.9%) and JCONAM (22.9%).
- International Medical Corps had provided 93% of the surveyed graduates with scholarships.
- The majority (55.4%) reported registering with the South Sudan Nurses and Midwives Association (SSNAMA), with 40.8% registering with the Nurses and Midwives Council.

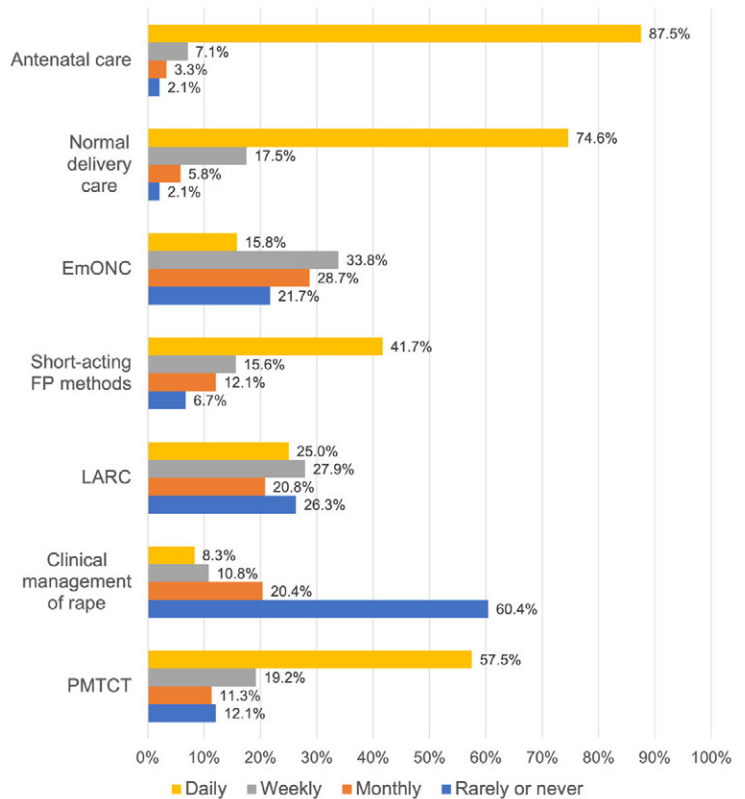
Current employment

- The vast majority (90%) of graduates found employment within one year of graduation, and 76.4% were currently working as midwives in a clinical capacity.
- Most of the graduates (88.7%) worked in facilities receiving NGO support.
- Nearly half (47.5%) worked in rural areas and 39.2% in towns.
- More than half of those working in a non-clinical role (such as a program manager) said their jobs were SRH related.

Frequency of providing SRH services in current practice (Figure 1)

- Most graduates reported providing antenatal care (87.5%), safe delivery care (74.6%), and prevention of mother-to-child transmission of HIV (PMTCT) (57.5%) daily in their current practices.
- While 41.7% reported providing short-acting family planning (FP) methods daily, about a quarter reported providing long-acting reversible contraceptives (LARC) daily (25.0%) or weekly (27.9%).
- Clinical management of rape was the service provided the least often, with 60.4% reporting that they rarely or never provided it.

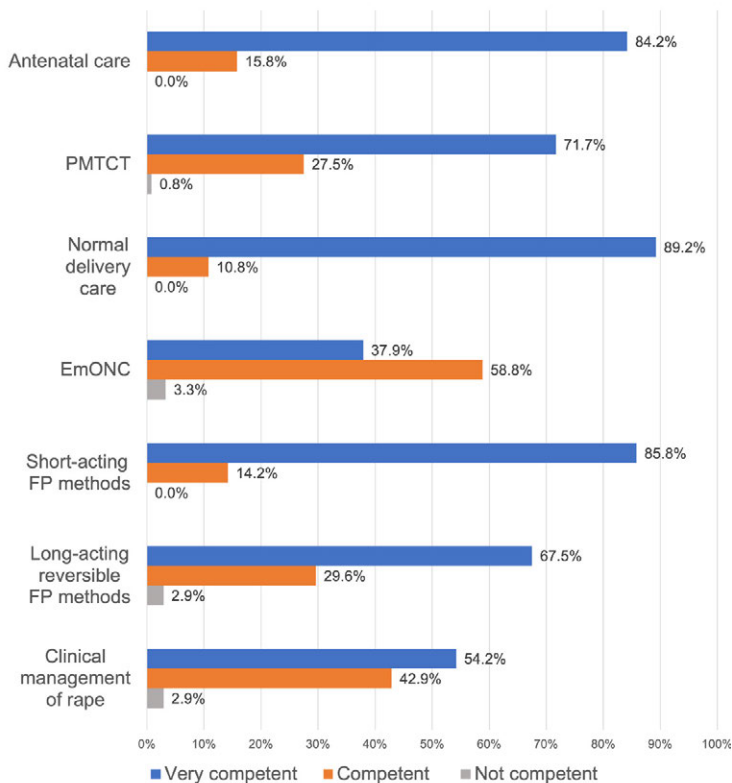
Figure 1: Frequency of providing SRH services in current practice (n=240)



Perceived competency to provide SRH services (Figure 2)

85% of graduates reported feeling very competent in antenatal care, normal delivery and short-acting FP methods, but less competent to provide emergency obstetric and newborn care (EmONC) and LARC.

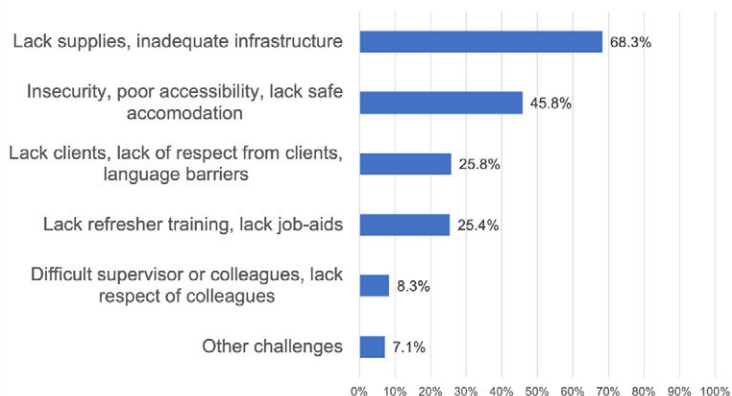
Figure 2: Perceived competency to provide SRH services (n=240)



Main challenges at work (Figure 3)

The most commonly reported challenge midwives faced in their work after graduation was inadequate infrastructure, including a lack of supplies (68.3%), followed by insecurity due to unsafe housing and poor accessibility to the health facility (45.8%).

Figure 3: Main challenges faced by graduates midwives in their work (n=240)



Perceptions of the education

- Overall, 100% of the surveyed graduates reported the quality of education received as good or very good, and 99.4% said they felt well prepared to begin work as midwives.
- Clinical placements (60.1%) were most often reported as the element that best prepared them for work.

3.3 Interviews and focus group discussions

3.3.1 Strengths of the midwifery education program

Well-equipped schools with trained and competent teaching staff

- Participants described the schools as well-equipped to train competent and skilled midwives, given the high quality and standards of the faculty.
- Teachers were described as skilled and confident in their abilities and were known to not only teach but to also shape students’ attitudes through mentorship.
- Clinical preceptors explained the process of successful practical training, which involves close monitoring and providing step-by-step guidance.

Competency-based curriculum and practical skills application

- Many respondents referred to the competency-based approach to teaching and the practical component of the curriculum as a strength of the midwifery education program.
- Practice at clinical sites gave midwifery students the opportunity to refine their knowledge and attitudes, while practicing their skills.
- Graduates reported feeling prepared to provide a range of midwifery services upon graduation, with family planning, antenatal and labor/delivery care the most frequently mentioned. Most supervisors agreed, indicating that their midwives were well prepared for the work after their formal training.

“What made me a successful midwife was the practical clinical attachment that I had. They gave me exposure and much experience, even when I was still a student, plus the tutorship that I had. So, the combination of the two made me the midwife I am today.” *(Male midwife)*

Scholarship support

- For a select number of students who could not afford schooling, International Medical Corps provided financial support (with donor funds) for tuition and accommodation. Several faculty mentioned this support as a strength.

3.3.2 Areas identified for strengthening

Dependence on donor funding

- Key informants described the midwifery education program's dependence on donor support and funding issues over the past few years as a substantial weakness.
- Budget cuts impacted all three schools, resulting in decreased financial support and scholarships, reduced number of staff and fewer students recruited into the program.
- The staff pointed out that the government and other stakeholders had no clear plans for sustainability, nor sufficient political will to sustain the school once donor funds were depleted.

Inadequate mentorship and number of tutors

- Although overall satisfaction with the faculty was high, some participants identified the need for additional and better-trained clinical preceptors and tutors.
- Several graduates discussed weaknesses with some tutors and preceptors who supported their studies, primarily when they were too few, there was high turnover or the tutors and preceptors had limited skills.
- Teachers also suggested that there were too few preceptors at clinical sites to guide the many students for practical training.

Insufficient practice in some services

- While the practical component of their training was consistently identified as a critical strength, graduates reported some gaps, including insufficient time and mentorship and too few clients to practice on.
- Supervisors also mentioned that the practical components of the midwifery program were insufficient at times, as the midwives did not always have the opportunity to put theory into practice during their training.
- Several supervisors mentioned that graduates had insufficient practice with some skills, such as intrauterine device (IUD) insertion and removal, manual vacuum aspiration (MVA), complicated deliveries and proper management of clinical registers and data.

Conflict-related challenges

- During periods of political unrest and insecurity, students and staff are unable to come to school, and the schools often cannot operate.
- Although violence in 2016 temporarily closed all three schools, KKHSI property and equipment were destroyed, forcing the entire school, including staff and students, to relocate to Juba for their safety. KKHSI shared space with JCONAM until mid-2022.

3.3.3 Effects of the midwifery education program

Perceived decrease in maternal and newborn morbidity and mortality

- Teachers partly attributed South Sudan's considerable decrease in maternal and newborn mortality in the last few decades to the education program and the increased number of midwives deployed across the country.

- Several participants also noted increasing numbers of women delivering in health facilities and fewer referrals to hospitals.

Increased skilled birth attendant coverage in remote regions in South Sudan

- Teachers and clinical preceptors explained that midwife graduates work all over South Sudan, even reaching remote villages to provide much-needed services to underserved communities.

"The most important thing about this program is the fact that these mothers are being attended to by skilled, trained midwives. Skilled ones. And, when these mothers are being attended to, it means a lot. You find that she has less chances of getting in this kind of risk during pregnancy and so forth. So, you find that this program, it has been positive in the community—especially for mothers." (Teacher)

Community impact

- Nearly all supervisors described that the midwives were respected by community members who understood the importance of the work that midwives do.
- New midwives were seen to bring updated knowledge from their training that they could teach to current staff at facilities.
- Due to an increase in both quality of care and community education, supervisors indicated that more women were now delivering in facilities, as well as coming for antenatal care and family planning services.
- As more men are training to become midwives, both they and community women mentioned that the community is becoming more comfortable with the presence of a male midwife.

"Actually, there is great improvement compared to the time before those midwives were working. After the graduation, these new students start coming in to practice; there is a lot of changes in every area. Sepsis has gone down, antenatal [care] has increased, deliveries have increased, family planning has increased." (Supervisor, female midwife)

"My two hands as a midwife would not have reached the whole country of South Sudan, but through the training of the students, my two hands are almost reaching all states of South Sudan. Meaning, it is helping women in almost the whole country, so that makes me very proud. I feel so good because if the mother who is deep in the village there can be attended to by my own students, that is my pride." (Principal)

3.3.4 Service delivery challenges

Lack of equipment and supplies

- Both supervisors and graduate midwives described barriers to providing good quality care including commodity stockouts, lack of equipment, insufficient staff and a lack of dedicated rooms for services such as family planning and post-abortion care.

Low client load

- Supervisors suggested that midwife graduates may lose competency in some skills due to lack of practice when they have few clients.

Low salaries

- Among the midwives, low salaries and insufficient compensation were frequently mentioned as a challenge.
- Some graduates expressed concern that low compensation may force them to move into other career paths.
- Key informants indicated that there were not always enough jobs, and those that were available—especially with the government—paid little to no salary.

Insecurity due to conflict

- Insecurity due to conflict was a common challenge mentioned by respondents in all groups, affecting both midwives' and clients' ability to access health facilities.
- In times of conflict, midwives and other health workers did not work in insecure areas due to fear, leaving these areas without vital services.

3.3.5 Community women's views

Improved pregnancy-related care and contraception access

- Female clients in all focus groups described positive experiences with their midwives, especially with pregnancy-related care.
- Women also described how the contraceptive services provided by the midwives helped them to space their births, helping them to better provide for their families and educate their children.
- Overall, women recognized that they and their babies are safer with the midwife's presence, so they encouraged other women in the community to visit facilities.

Reports of system issues creating negative experiences with the midwives

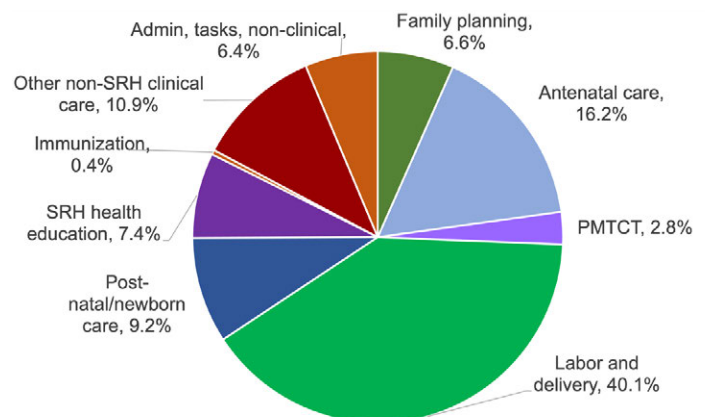
- While participants were mostly satisfied with the care received from the midwives, a few participants across groups described negative experiences with them, often related to factors such as distance to the health facility, lack of materials such as maternity kits, stockouts of medication at the health facility, or the limited capacity for nighttime deliveries.

“Or when you are sick also, they must treat you before you are discharged. You cannot be discharged into the community while the baby is sick and you are also sick. The midwife does all these before they discharge you so that there is no complication in your body and no complication in the baby's when you go to the community. The midwife does them all; there is nothing she does not do.” (Community woman)

3.4 Clinical practice data from selected graduate midwives in International Medical Corps-supported health facilities

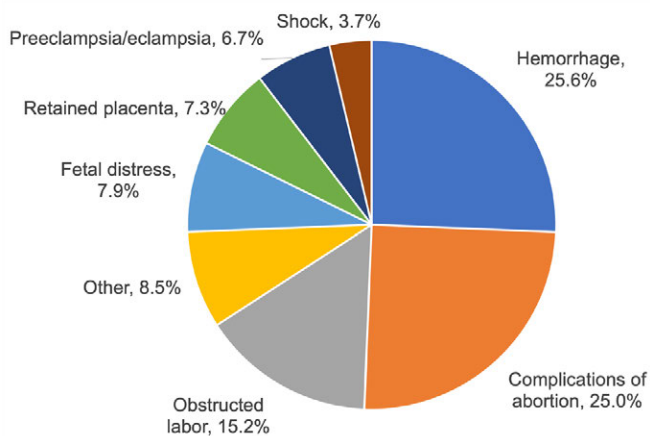
Midwife task data for 274 total work days were recorded. Overall, midwives reported spending 82% of their time on SRH-specific tasks (Figure 4), with the most time spent on labor and delivery (40.1%), followed by antenatal care (16.2%). Just over 10% of their time was spent on other clinical services, such as immunization or outpatient care. This means the midwives spend the majority of their time on the SRH services they are trained to provide.

Figure 4. Percentage of midwife time spent on services/tasks



The selected midwives recorded 1,356 obstetric clients, 87.8% of whom had normal deliveries. The most common obstetric complications recorded were hemorrhage (25.6%) and complications of abortion (25.0%) (Figure 5). The midwives managed 75.9% of the women with complications and referred 24.1% of cases to a higher-level facility. Midwives managed more than 90% of cases with retained placenta, complications of abortion and preeclampsia/eclampsia, while they referred the majority of cases of obstructed labor (72.0%) and fetal distress (53.8%).

Figure 5: Obstetric complications



The midwives recorded 2,959 family planning clients: 46.9% were new and 53.1% were returning clients. The majority (87.5%) used short-acting methods, while 12.5% used LARC, nearly all of which were implants. Injectables, including the self-injectable DMPA-SC (brand name Sayana Press), were the most popular method (Figure 6). More than half (57%) of all contraceptive clients and 60% of LARC clients were under age 25 (Figure 7). Women with parity of six or higher were least likely to use a LARC (14.3%), compared to 29.9% of women who were nulliparous. This suggests that older and higher parity women, who may be nearing the end of their childbearing years, should receive additional counselling on LARCs—methods with which they may be less familiar.

Figure 6: Contraceptive method mix (n=2959)

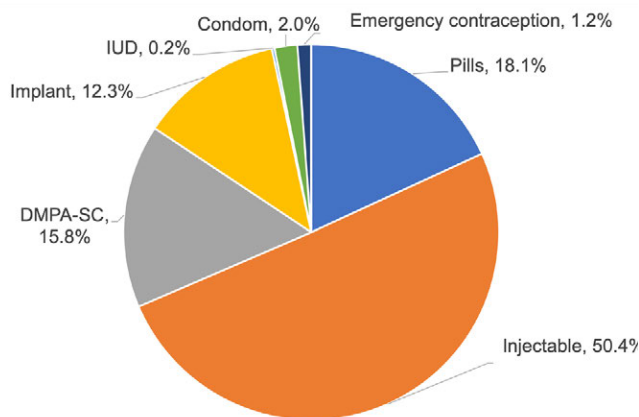
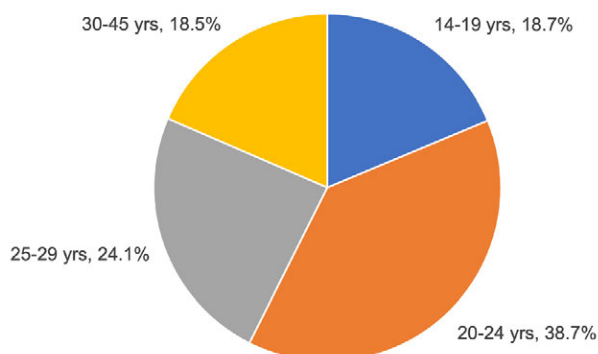


Figure 7: Age of contraceptive clients (n=2959)



4. Recommendations

4.1 Midwifery school program recommendations

- Develop a strategy for sustainable funding of the midwifery education program to reduce dependence on donors, and include this in government budgets.
 - Advocate to Ministry of Health and other relevant Ministries for more government-allocated funds to sustain midwifery education program.
 - Consider asking students to contribute to tuition and seeking buy-in from the community for cost sharing.
- Integrate midwifery education program into the MOH to encourage sustainability and monitoring of the program.
- Review teacher salaries and incorporate annual cost-of-living increases into the budget.
- Review number of teachers per school and teacher-to-class ratio. Consider recruitment of additional teachers to reduce teaching burden and ensure teachers have sufficient time for lesson planning.
- Develop contingency plans—remote learning, for example—for continuation of education during outbreaks of violence and infectious diseases. Ensure consideration of student internet access in order to attend online classes.
- Incorporate training on monitoring and evaluation and data use, including how to complete and maintain SRH registers.

4.2 Clinical site recommendations

- Establish standards and protocols to ensure clinical practice meets global standards.
- Recruit clinical preceptors with a minimum of two years of practice to meet global standards and provide training to ensure good teaching and mentoring skills.
- Review clinical preceptor-to-student ratio and ensure sufficient numbers of trained clinical preceptors for the numbers of students.
- Ensure clinical training sites have adequate staffing, equipment and supplies to demonstrate good quality care. Ensure sufficient caseload for students to gain practical experience.
 - Address shortages of instruments, equipment, resources (e.g., gloves and other personal protective equipment, maternity delivery sets and uniforms) in clinical sites.
- Address low caseloads to make sure all students can adequately practice all skills, e.g., IUD insertion and removal, MVA and complicated deliveries.

4.3 Recommendations for government/NGOs hiring midwives

- Support midwives to maintain competency in all skills, especially those they rarely practice due to low patient volume, low demand for certain services and negative community attitudes toward some services.
 - Provide routine supportive supervision.
 - Provide refresher trainings for graduates.

4.4 Health system/MOH recommendations

- Collaborate with MOH and partners to increase job opportunities and ensure hiring for new graduates and unemployed previous graduates. This should include discussion of midwife salaries, as many midwives are paid little to no salary. This will improve morale and reduce the number of midwives leaving the profession.

- Reduce dependency on volunteer midwives to staff maternities.
- Increase the number of midwife positions in high-volume maternities.
- Develop a health workforce distribution plan to allow equitable allocation of midwives in remote and hard-to-reach areas.
- Address shortages of critical medications, equipment and other supplies to ensure midwives can practice their midwifery skills.
- Establish continuing professional development opportunities for midwives to update their skills according to changing global guidance.





A pre-eminent first responder since 1984, International Medical Corps delivers emergency medical and related services to those affected by conflict, disaster, and disease, no matter where they are, no matter what the conditions. We also train people in their communities, providing them with the skills they need to recover, chart their own path to self-reliance, and become effective first responders themselves.

International Medical Corps is headquartered in Los Angeles, CA, and has offices in Washington, DC; London, UK; and Split, Croatia. For contact information, visit InternationalMedicalCorps.org/contact.

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