



## IMPROVING PERFORMANCE OF COMMUNITY MIDWIVES IN LOW-RESOURCE SETTING SUDAN

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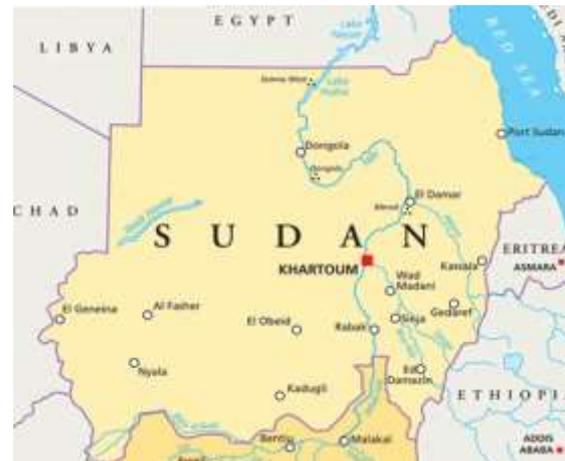
### Background

Achieving universal health coverage, designing people-centred health systems, and meeting SDG3 represent some of modern-day's most pressing global health challenges. Indeed, the performance of health care providers is one of the main reasons why many low-income countries failed to reach the health-related MDGs ([WHO, 2015](#)). The performance of the health workforce is listed as a top priority to address these challenges. Despite the momentum, global efforts are still short of addressing the estimated shortage of 18 million health workers (Buchan et al. 2017). The global shortage of health workers threatens the achievement of most of the SDGs, and in particular, SDG 3 on good health and wellbeing (UN, 2017). This projected shortfall, therefore, acts as one of the most pressing obstacles preventing the attainment of universal health coverage (UHC) ([WHO, 2016a, 2016b](#)). This shortage is especially felt in rural, remote, and socio-economically deprived areas ([WHO,](#)

[2014, 2016a](#)). The most affected region will likely remain sub-Saharan Africa, which with its population growth and change in morbidity and mortality profile, is poised to experience a projected shortfall of 3.7 million health workers by 2030 ([WHO, 2014, 2016a](#)).

### Argument of importance of issue

Like many other LMICs, Sudan faces a severe health workforce shortage and a skewed geographical distribution of its health workforce: nearly 70% of health workers



serve only 30% of Sudan's population.

The case is best illustrated among physicians, where 62% of specialists practice



in Sudan's capital, Khartoum, leaving the remaining 38% to serve Sudan's other 17 states (FMoH, 2006). The ratio of doctors, nurses, and midwives stands at 0.314 per 1000 population, well below the WHO's threshold for the critical shortage, defined as 2.3 per 1000 (WHO, 2006, 2017). Also, Sudan faces a skill-mix imbalance ratio of 4:1 doctors to nurses, the inverse of the recommended benchmark of 1:4 doctors to nurses (FMoH, 2017c; WHO, 2006). Performance measurement identified as the weakest area in human resource management in Sudan. As a result, performance measurement is a National Health sector strategic objective targeted for improvement: 'Strategic Objective 6.3 HRH management systems, including individual performance systems, are improved' (FMoH, 2012a). It is one of the strategic objectives of the national HRH strategy 'Strategic Objective 3: Improve individual performance management' (FMoH, 2012b) and a research priority on the national HRH priority research list (FMoH, 2015).

Unlike other LMICs, however, Sudan's health workforce shortage is not due to a lack of production. The country possesses more than 60 medical schools with an annual graduation rate of over 4000 doctors. More than 5000 residents are undergoing specialist training within the Sudan Medical Specialisation Board at any given time, and the Academy of Health Sciences has an

annual intake of over 5000 allied health professions.

Table Key Health Indicators for Sudan

Key Health Indicator	
Human Development Index (HDI)	165th
per capita gross domestic product (GDP)	\$1,940 in 2014
annual economic growth rate	2.3 %
Population	40,782,742 million
Settled population	88% where 32.7% are urbanised
Nomadic population	8% of the (CBS, 2008)
Internally displaced	2.2 million
Refugees	2 million
Population growth rate	2.8%
Population age	mainly young with 45.6% below the age of 15 years (CBS, 2008)
Total Fertility rate	5.2
Average family size	5-6 persons
life expectancy	59 years
Crude birth rate	31.2
Crude death rate	16.7 Per 1000 people

The complexity of the health workforce landscape, the country's volatile geopolitical climate, and an unfavorable health labor market marked by weak absorption capacity within the public sector, poor retention policies, and a significant migration of health workforce, all contribute to the estimated 60% of Sudan's doctors choosing to practice outside of the country. Moreover, current trends suggest that mass migration of the health workforce is not limited to doctors, with nurses, midwives, and allied health professionals all increasingly seeking work



outside the country ([AbuAgla et al., 2013](#); [AbuAgla, 2013](#); [FMoH, 2017c, 2018](#)).

Main Maternal Health Indicators
Proportion of women receiving antenatal care (at least one visit) 74.3%
Coverage by 4 visits 57%
Coverage by family planning 9%
Unmet need for family planning 29.0%
Deliveries attended by skilled birth attendants 80% (with 70% of deliveries taking place at home)
Prevalence of low birth weight Urban 27.9% and rural areas 33%.

Source: National Health Policy 2017-2030

In an attempt to address this shortage, the Sudan Federal Ministry of Health, primary health care (PHC) expansion programme was launched in 2013. Under this programme, the coverage of the population with PHC facilities was to increase from 86% to 100%, and an increase in the coverage of a minimum package of PHC services to increase from 24% to 100%. The programme has since reached over 90% of its coverage target indicators, mainly through building health facilities and producing three new cadres of frontline health workers: community health workers (CHWs), medical assistants (MAs), and community midwives (CMWs). Although Sudan failed to reach its health-related millennium development goals (MDGs) targets, significant progress has been made. The maternal mortality rate declined by 42% between 1990- 2017, down to 311 per 100,000 from 537 per 100,000 live births, at an annual national reduction rate of 2.8% ([FMoH,](#)

[2010, 2014, 2017a, 2017b](#)). In the context of Sudan, CMWs are responsible for providing preventive, promotive, and curative care for women and children individually and in the community through delivering RMNCH services and the integrated PHC package to every village throughout Sudan.

A total of 14,000 CMWs were produced to fill in the gap if the country were to reach maternal health goals to achieve SDG-3. Applying an implementation research approach, mixed-methods were used to develop a measure the performance of a representative sample of the 2 states (Algadarrif and White Nile states). Both knowledge, competence and compliance were found to construct performance. Overall scores however, were quite poor, which could have important implications for maternal and foetal morbidity and mortality in the context of Sudan. Furthermore, scales measuring determinants of performance: Job Satisfaction, Motivation, and Perceived Supervision showed low measures among CMWs too.

Sudan's unique context, marked by civil conflict, natural disasters, displacement, administrative and political instability, has had significant implications for its health system. Decentralised health systems, scarcity of resources, and poor working environments continue to pose a challenge for the performance and retention of health workers within hard-to-reach and rural areas. Also, capital and state cities continue



to attract the majority of health workers, where they can train and work in facilities that are better managed and equipped.

Despite all efforts, the implementation of maternal, newborn and child health programmes in Sudan is confronted by many challenges, including: (i) unclear policies concerning practice regulation and inadequate financial resources, (ii) inadequately functioning health system, with weak referral systems, especially during obstetric and neonatal emergencies, (iii) suboptimal logistics system for management of drugs, family planning commodities and equipment, and (iv) lack of co-ordination amongst partners. The reality for CMWs operating in a low-resource setting such as Sudan is often much worse: most frontline personnel do not receive a basic salary, or consumables to perform their duties. These factors also impact on the performance of health workers in Sudan.

### **Policy-alternatives**

Along these lines, several recommendations are suggested to improve RMNCH service delivery and CMW performance in Sudan based on the results of this study. Initially, attention should focus on the future of all three UHC cadres: the community health worker (CHW), medical assistant (MA) and community midwife (CMW), regarding the CMW:

#### **1. Support-system payment of incentives:**

- Deployment Policy: Firstly, and while production rate reached >90% of the targeted need, these cadres remain unemployed, unevenly distributed, disincentivised and ill-equipped to deliver the integrated PHC package of health services. Although Presidential decrees have been announced and deployment encouraged, no clear federal policy exists to date. Therefore, immediate policy development, enforcement, and action to map, re-distribute, and deploy these cadres are needed to ensure that the health workforce produced are deployed to achieve their duty in providing health care services, and to meet the pre-requisite factors of availability and accessibility.
  - Decreasing CMW workload is also recommended, as CMWs are expected to co-lead immunisation campaigns, nutrition, malaria, and tuberculosis outreach activities in many communities. Also, a performance-based incentive scheme based on their actual performance should be initiated.
- #### **2. Job-related interventions, including continuing education, improved supervision:**
- CPD courses: CMWs should be exposed to refresher courses and regular, continuous professional



development (CPD) to refresh, maintain and enhance their level of knowledge, competencies, and compliance, to enhance their job satisfaction and to improve their performance.

- Supportive supervision: regular supportive supervision visits should be initiated and maintained. Many of the CMWs were never supervised nor given constructive feedback, potentially explaining the absence of a correlation found between these factors. This is due to many factors, including the scarcity of health visitors that are meant to supervise them and the unavailability of resources, including vehicles, petrol, roads, and incentives for the supportive supervision visits to take place with the CMWs in their respective villages. The Performance Measurement tool developed if and when enrolled within the community will be of great benefit in determining weak areas of supervision, and developing CPD courses to address the shortcomings and tailor relevant solutions for weak areas of performance.

### **3. Creation of an enabling environment by decentralisation of human resource management (HRM) functions and by regulations**

- CMW Career pathway: a clear career pathway should be set for the CMWs to manage their expectations. So far, many initiatives to upgrade the CMWs to assistant health visitors have been discussed and semi-developed. The matter is of rising concern among ambitious CMWs who are already seeking alternative jobs, increasing the drop-out rate, and threatening the continuity of the programme and cadre.

### **4. Interventions addressing all three levers of the micro, meso and macro factors**

- Health System Strengthening: many of the CMWs could not perform neonatal resuscitation, nor take vital signs correctly as either they were never given an Ambu bag, thermometer or sphygmomanometer, or those that had been given had broken equipment that was never replaced. Furthermore, the essential equipment, consumables, and life-saving drugs are scarce and unavailable in many instances. Their availability differs substantially across states, districts and villages, depending on the availability of a health facility and its status. Therefore, the need to provide all of the necessary resources for the



CMW to carry out her work is essential for her performance.

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