



The State of the
Midwifery **Workforce**
in the Arab region

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Abbreviations and acronyms

ANC	antenatal care
(B)EmONC	(basic) emergency obstetric and newborn care
CHW	community health worker
CPD	continuing professional development
DSE	dedicated RMNCAH equivalent
FGM	female genital mutilation
HDPN	humanitarian-development-peace nexus
ICM	International Confederation of Midwives
ICPD	International Conference on Population and Development
IDP	internally displaced person
IPV	intimate partner violence
ISCO	International Standard Classification of Occupations
MISP	minimum initial service package
MMR	maternal mortality ratio
MoH	ministry of health
NHWA	national health workforce accounts
NMR	neonatal mortality rate
OECD	Organization for Economic Cooperation and Development
PMN	potential met need
PNC	postnatal care
PPE	personal protective equipment
RMNCAH	Reproductive, maternal, newborn, child and adolescent health
SBA	skilled birth attendance
SDGs	Sustainable Development Goals
SoWMy	State of the World's Midwifery
UAE	United Arab Emirates
UHC	universal health coverage
UN	United Nations
UNFPA	United Nations Population Fund
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
WHO	World Health Organization

Foreword

I am very pleased that this report comes shortly after the launching of the global *State of the World's Midwifery Report 2021* (SoWMy 2021). This provides an opportunity to benefit from the momentum created by the global launch and to contextualize the analysis of the midwifery workforce to the realities and specificities of the Arab region.



Investment in the midwifery workforce has been well documented to yield significant returns in terms of improved maternal health and social outcomes. Yet, the analyses offered in this report show that we have a long way to go to meet the relevant SDG and ICPD targets in the Arab region. The report estimates that the Arab region has 1.9 midwives per 10,000 population. This is far lower than the global average of 4.4. The worst shortages are witnessed in Algeria, Egypt, Iraq, Morocco, Somalia, and Sudan.

In line with the recommendations of the analysis included in SoWMy 2021, the Arab regional report calls for investment in four areas: (i) health workforce planning, management, and regulation, and in the work environment, (ii) high-quality education and training of midwives, (iii) midwife-led improvements to RMNCAH service delivery, and (iv) midwifery leadership and governance. This facilitates stakeholders' work in the Arab region providing guidance on priority areas of investment that are most needed, and provides high-quality evidence and data that can be used to advocate for these investments.

The country profiles and in-depth analysis of the state of midwifery in the region presented here provide an excellent basis and projections for midwifery workforce analyses, targeting health planners and decision makers to identify gaps and respond effectively.

Although much of the evidence and analysis underpinning the report come from the pre-COVID-19 era, the pandemic showed the positive impact of high-quality midwifery care on women and families across the globe during these difficult times. The findings demonstrate the importance and effectiveness of midwives as core members of the sexual, reproductive, maternal, newborn and adolescent health workforce.

Midwives should always be celebrated. Giving birth safely, comfortably and conveniently at home or in clinics should not be a luxury, but a woman's basic human right. Midwife-led reproductive and maternal care should be considered a central element to all health systems at all times, especially during times of emergency and in situations of fragility. Midwives do not only deliver health services, but also serve as agents of change at the community level with high potential to effect positive behaviour change, for example, in fighting harmful practices and correcting unhealthy behaviours.

I encourage all development partners, including governments and other national and regional stakeholders, to use the evidence that the report presents to guide them on how and where to invest and support midwifery workforces as the report reveals a need for the equivalent of 130,000 more full-time midwives in the region and emphasizes the need to improve midwifery education and deployment to meet the escalating demand by 2030.

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Executive summary

Sexual, reproductive, maternal, newborn, and adolescent health (RMNCAH) is an essential component of the Sustainable Development Goals (SDGs) and the Programme of Action of the International Conference on Population and Development (ICPD). Improving RMNCAH requires increased commitment to, and investment in, the health workforce. This report focuses primarily on midwives because a strong midwifery workforce is essential to the success of United Nations Population Fund (UNFPA) strategies for improving RMNCAH and achieving its mandate.

This report provides an up-to-date evidence base to highlight progress since the last regional midwifery workforce report in 2015 and to project forward to 2030. It includes data from 20 countries that are covered by the UNFPA Arab States Regional Office: Algeria, Bahrain, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, United Arab Emirates, and Yemen. It is primarily intended to support policy dialogue at national and regional levels, to assist countries in the region to meet the challenges of the health-related SDGs and the universal health coverage (UHC) agenda. Understanding the current state of the midwifery workforce is necessary to allow individual countries in the region to identify specific challenges, gaps and bottlenecks, and to look for appropriate strategies to overcome them.

The development and launch of this report were led by UNFPA's Arab States Regional Office. This report builds on the approach used for the *State of the World's Midwifery 2021* (SoWMy 2021), jointly led by UNFPA, the World Health Organization (WHO), and the International Confederation of Midwives (ICM).

Context

Over the last two decades, the Arab region has made significant progress in improving RMNCAH outcomes. However, progress has been somewhat uneven, as demonstrated by significant inequity between and within countries. Djibouti, Somalia, Sudan, and Yemen stand out as the four countries with the highest maternal mortality, neonatal mortality and stillbirth rates. All countries in the region have a modern contraceptive prevalence rate below the global average (although among married women the rate is higher), and several have a high unmet need for contraception. Although most countries in the region report high rates of skilled birth attendance (the main exceptions being Somalia and Yemen), there is less use of antenatal and postnatal care which implies poor access to health professionals competent to provide this care. Against this backdrop, RMNCAH outcomes have been further impacted by humanitarian crises and the COVID-19 pandemic.

The need for improved RMNCAH has been recognized at the highest level across the region. The Arab Council of Ministers of Health commissioned the *Multi-sectoral Arab strategy for maternal, child and adolescent health 2019-2030*, which highlights the need to invest in the quality and working environment of the RMNCAH workforce. This workforce consists of midwives and a range of other health workers such as medical doctors, nurses and community health workers.

Availability of midwives and other RMNCAH workers

The region has a total of 1.35 million RMNCAH workers, of whom two-thirds are nurses without formal midwifery training, 16% are “RMNCAH doctors” (general physicians, obstetricians and gynaecologists, and paediatricians), and 6% are midwives or nurse-midwives. Half of the midwives/nurse-midwives are classed as “professional”, and half as “associate professional”.

The 78,200 midwives in the region translates to a density of 2.0 midwives per 10,000 population. This is far lower than the global average of 4.4. In many regions of the world, higher-income countries tend to have a higher midwife density, but this is not true in the Arab region. It is estimated that the region has a shortage of 128,000 midwives, and every country except Saudi Arabia has a shortage. The worst shortages are in Algeria, Egypt, Iraq, Morocco, Somalia, Sudan, and Yemen.

With its current size and composition, the available midwives and other RMNCAH workers could meet a maximum of 79% of the region’s overall need for essential RMNCAH interventions. This is reported as “79% potential met need (PMN)”. In most countries of the region, PMN is above 90%, but the regional figure of 79% is affected by low PMNs in: Djibouti, Egypt, Somalia, Sudan and Yemen. Furthermore, where constraints prevent the workforce from operating effectively (e.g. poor infrastructure, ineffective supply chains, poor-quality education, inequitable geographic distribution), the actual amount of need being met will be far lower than indicated by the PMN.

Some countries achieve a very high PMN despite having a major shortage of midwives: Algeria, Iraq, Libya, Palestine, and Tunisia. This indicates that these countries are relatively well supplied with doctors and/or nurses so that midwifery tasks are allocated to them instead of to midwives. This raises questions about both cost-effectiveness (doctors are relatively expensive to educate and employ) and about whether women, adolescents and newborns are being deprived of the proven benefits of midwifery care.

Most of the region’s midwives and nurses are women, except in Djibouti and Yemen where most nurses are men. The situation is different for doctors. While on average, half of the region’s RMNCAH doctors are women, in countries like Djibouti, Lebanon, Palestine, Qatar, and Yemen, most doctors are men. A reliance on men to provide RMNCAH care has been identified as a barrier to women accessing the care they need, because there is often a preference to consult a woman health worker for RMNCAH needs.

Future projections indicate that, by 2030, four countries (Jordan, Lebanon, Oman, and Tunisia) will have eliminated their current midwife shortage and another four (Algeria, Morocco, Sudan, and Yemen) will have significantly reduced it. However, Egypt, Iraq, and Somalia are predicted to have a larger shortage in 2030 than in the present day.

Midwife education and training

Availability of midwives is important, but so is the quality of the care that they are able to provide. High-quality education and training for midwives is an essential ingredient for quality of care. Most countries in the region offer direct entry pre-service education programmes for midwives, and some offer a post-nursing midwifery education programme or an integrated nursing and midwifery programme. Most midwifery education programmes in the region adhere to the ICM recommendation of at least three years of study for direct entry courses and at least 18 months for post-nursing courses. The exceptions are: Bahrain, Iraq, and Somalia for direct entry, and Egypt and Sudan for post-nursing.

Regardless of whether the programme is direct entry or post-nursing, most countries in the region offer a midwife education programme that leads to a Bachelor's degree or equivalent. However, ten countries offer a qualification below this level either as well as, or instead of, a degree. Only half of countries in the Arab region offer postgraduate qualifications in midwifery.

Challenges to high-quality midwifery education in the region include a lack of education and training facilities and insufficient midwifery educators. In most of the countries providing data on this indicator, all or most of the midwife faculty are qualified midwives, the exceptions being: Djibouti, Iraq, Somalia, and Syria.

Just four countries in the region require their midwives to provide evidence of continuing professional development as part of a periodic relicensing process: Jordan, Morocco, Saudi Arabia, and Sudan.

The policy, regulation, and working environment

A positive policy, regulatory and working environment facilitates the provision of high-quality midwifery care.

Most countries in the region have legislation recognizing midwifery as distinct from nursing. However, there are indications that this legislation is not always reflected in practice. For example, only six countries have a regulatory system with distinct policies and processes for midwifery: Djibouti, Jordan, Libya, Morocco, Palestine, and Syria.



Across the region, most countries also have national policies/guidelines which support high-quality midwife-led care, but policy support for midwifery is weaker in Lebanon, Oman, Somalia, Sudan, and Tunisia. Notably, most Arab countries have midwives in leadership roles at some level of the health system, including at national level. The region's low-income countries are most likely to have midwife leaders at all levels of the health system.

Most countries in the region restrict the range of interventions that midwives are authorized to provide, preventing them from providing interventions that are within the midwife's scope of practise according to global standards. Such limitations prevent midwives in the region fulfilling their potential to provide about 90% of the essential interventions needed across the continuum of RMNCAH care.

Midwifery in humanitarian and fragile settings

Most countries in the region are to some extent affected by humanitarian crises, and several countries are very severely affected. The need for RMNCAH care nevertheless continues, and the RMNCAH needs of women and girls are often overlooked in humanitarian preparedness and response. Midwives have several characteristics which make them uniquely well placed to respond to these specific needs. They are specialists in RMNCAH care, they are nearly all women, and they are more likely than other health professionals to remain in post during a crisis. This report contains several stories from midwives working in humanitarian and fragile settings, which highlight the vital role that midwives can play in supporting and caring for refugees and internally displaced women and girls.

It is vital for all countries – whether or not currently experiencing a crisis – to ensure that the midwifery workforce is equipped and enabled to continue to provide care in a crisis. Crisis-affected countries which did not invest in a strong midwifery profession found that their ability to provide high-quality RMNCAH care was much reduced when crises occurred.

Impact of COVID-19 on RMNCAH and the workforce

In the early stages of the COVID-19 pandemic, many RMNCAH workers were diverted to support the COVID-19 response. This led to significant RMNCAH service disruption, which has started to ease but is still evident in many settings. Like other health workers, midwives often had insufficient personal protective equipment. This meant they had to make or buy their own supplies, go without, or be absent from work. This report contains stories of midwives continuing to provide services despite the personal risks and challenges. This is to be applauded, but it should not have been necessary. All countries should plan for a more effective response should similar pandemics occur in the future.

Reliable data on the number of infections and deaths among the region's health workers are scarce, but it is clear that the pandemic has claimed many lives, and has left the remaining

RMNCAH workforce traumatized and under additional pressure. Additional psychosocial support for health workers will be needed as part of post-COVID-19 recovery plans.

Midwives: a vital investment

Investment in the midwifery workforce has been shown to yield significant returns in terms of improved health and social outcomes. For example, a recent study concluded that universal coverage of midwife-delivered interventions would reduce mortality rates by two-thirds. In the Arab region, this translates to 300,000 lives saved per year by 2035.

The health workforce is often perceived as a net cost to the health system, rather than as an investment which will yield returns. However, there is growing recognition that creating health worker jobs not only improves population health indicators, but also supports sustainable economic growth and progress towards the SDGs. In addition to their clinical duties, midwives can play a broader role in activities such as advancing primary health care and UHC, and addressing sexual and reproductive health and reproductive rights. They can be powerful agents of change, e.g. in promoting women's empowerment and behaviour change on family planning, and also in addressing harmful social and gender norms and practices.

Recommendations for advancing midwifery in the region

The *State of the World's Midwifery 2021* report calls for investment in four areas: (i) health workforce planning, management, and regulation, and in the work environment, (ii) high-quality education and training of midwives, (iii) midwife-led improvements to RMNCAH service delivery, and (iv) midwifery leadership and governance. This regional report can help stakeholders in the Arab region to identify which areas of investment are most needed in their country context, and provides high-quality evidence and data that can be used to advocate for these investments. Recommendations for advancing midwifery include:

- increased production of midwives coupled with demand creation to ensure that the additional midwives can be absorbed into the workforce,
- collaborative staffing models and platforms for inter-disciplinary collaboration and cooperation both in the workforce and in education institutions,
- investment in the quality of midwifery education and training, to ensure that all midwives have the competencies they need to meet the need for midwifery care, including in humanitarian settings,
- investment in strengthening midwifery departments in universities, to equip midwives to take the lead on high-quality education and research,
- consideration of expanding the scope of practise of midwives to align with global standards, taking into account the political and health system context, and
- appointment of midwives to leadership positions at all levels of the health system.

1. Introduction

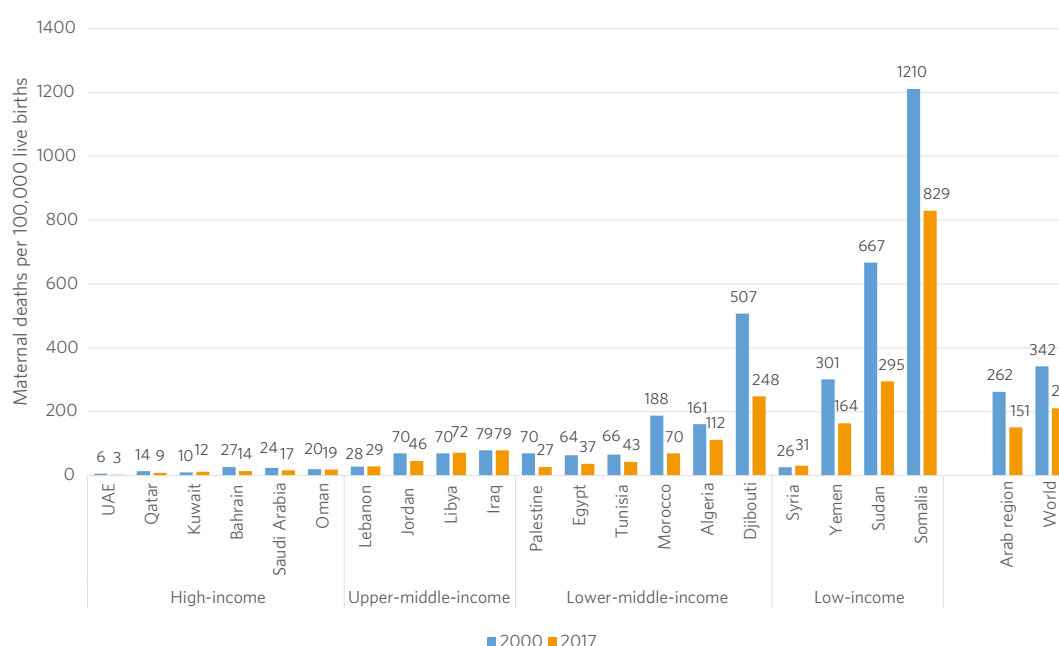


As a whole, the Arab region has made significant progress over the last two decades in reducing maternal and newborn mortality and stillbirths, and in improving the health and well-being of women, newborns and adolescents. However, that progress has been uneven, with the result that major diversity remains. It is likely that emerging evidence will show that this diversity has been exacerbated by the COVID-19 pandemic.

The third sustainable development goal (SDG3) includes a target to reduce the global maternal mortality ratio (MMR) to below 70 maternal deaths per 100,000 live births by 2030, with no country having an MMR of more than twice the global average. [1] Although many countries in the Arab region – and all of the high-income countries – recorded an MMR well below 70 in 2017, the average MMR in the region was 151, i.e. more than double the global target for 2030 (Figure 1.1). This average was largely driven by three countries with MMRs over 200: Djibouti, Somalia, and Sudan.

Between 2000 and 2017, the Arab region achieved a 42% reduction in its MMR, which was slightly better progress than the global average of 38%. Figure 1.1 shows that most countries made significant progress, most notably Morocco (63% reduction), Palestine (61%), Sudan (56%), Djibouti (51%), and United Arab Emirates (UAE) (50%). However, six countries made little progress or recorded an *increase* in their MMR: Iraq, Kuwait, Lebanon, Libya, Oman, and Syria.

Figure 1.1: Maternal mortality ratio by country, 2000 and 2017

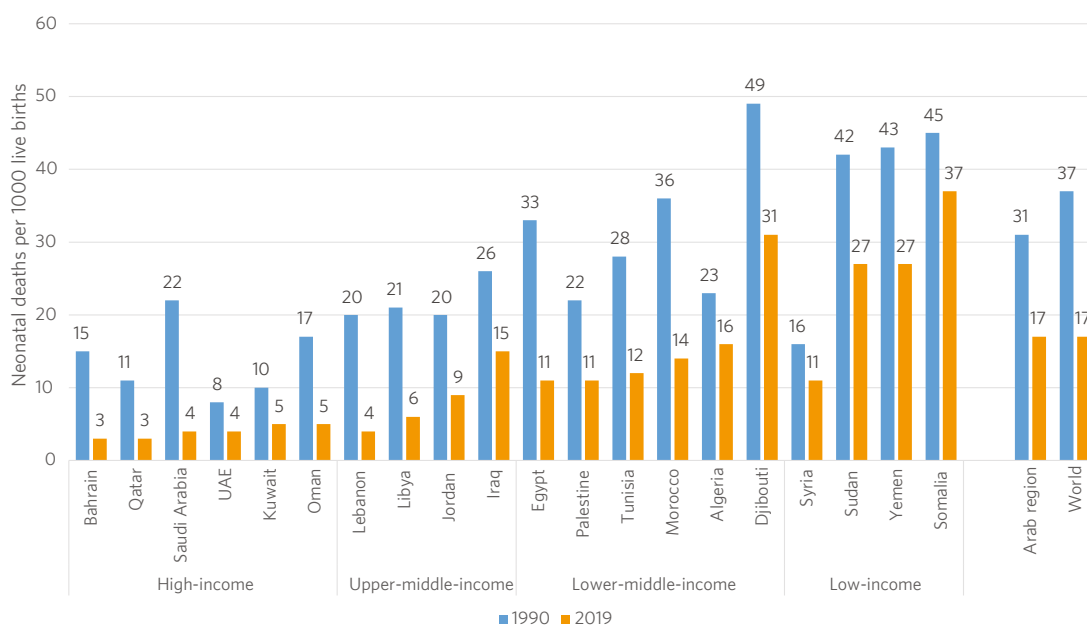


UAE = United Arab Emirates. Source: WHO et al 2019. [2]

Similarly, SDG3 includes a target to reduce the global neonatal mortality rate (NMR) to no more than 12 neonatal deaths per 1000 live births. In 2019, the average for the Arab region was 17 (Figure 1.2). All high-income countries and several low- and middle-income countries recorded an NMR below 12 in 2019. However, four countries had NMRs over 25: Djibouti, Somalia, Sudan and Yemen.

Between 1990 and 2019, the global NMR reduced by 54%, and the NMR for the Arab region reduced by 47%. Figure 1.2 shows that all countries made significant progress, most notably Saudi Arabia (82% reduction), Bahrain (80%), and Lebanon (80%). However, the percentage reduction was below 50% in seven countries (including all four low-income countries): Algeria, Djibouti, Iraq, Somalia, Sudan, Syria, and Yemen.

Figure 1.2: Neonatal mortality rate by country, 1990 and 2019

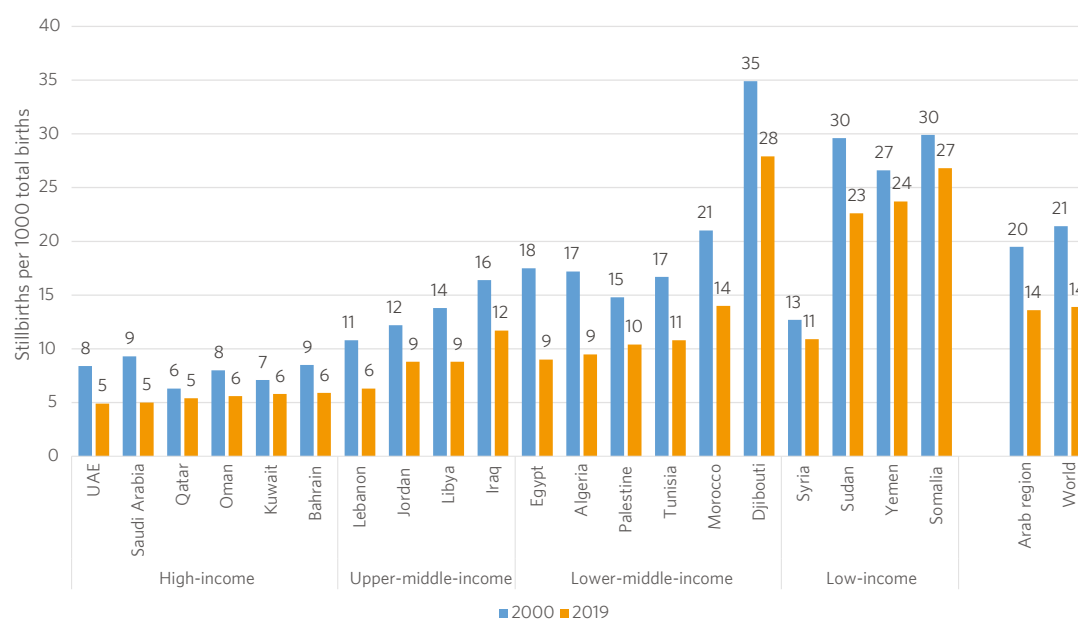


UAE = United Arab Emirates. Source for country and world estimates: UN Inter-agency Group for Child Mortality Estimation 2020. [3] This data source does not include an estimate for the UNFPA Arab region. The regional estimate shown here was calculated from the estimated number of neonatal deaths in the above publication and UN population data.

In 2019, the average number of stillbirths per 1000 total births in the Arab region was 14, equivalent to the global average (Figure 1.3). All high-income and some middle-income countries recorded a stillbirth rate below 10. Four countries had rates over 20: Djibouti, Somalia, Sudan and Yemen.

Between 2000 and 2019, the global stillbirth rate reduced by 35%, and the average reduction for the Arab region was slightly less than this (30%). Figure 1.3 shows that all countries made progress, most notably Egypt (48% reduction), Saudi Arabia (46%), and Algeria (45%). However, much smaller percentage reductions were evident in the region's low-income countries, especially Somalia (10%), Yemen (11%) and Syria (14%).

Figure 1.3: Stillbirth rate by country, 2000 and 2019



UAE = United Arab Emirates. Source for country and world estimates: UN Inter-agency Group for Child Mortality Estimation 2020. [4] This data source does not include an estimate for the UNFPA Arab region. The regional estimate shown here was calculated from the country-specific numbers in the above publication.

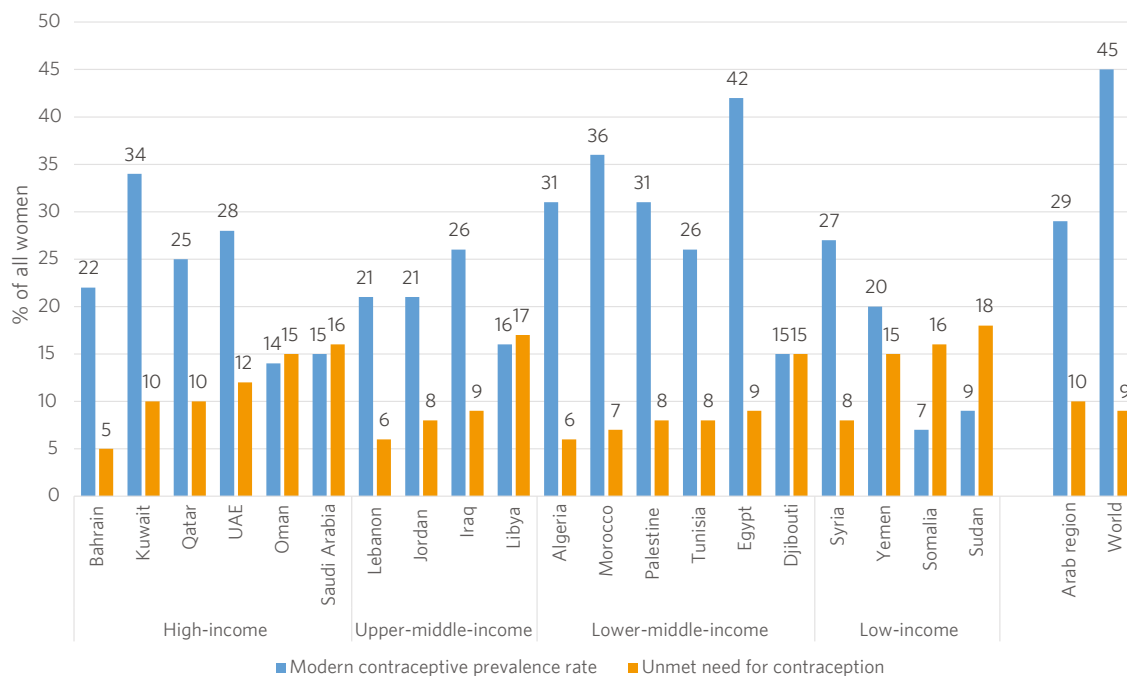
The “survive, thrive and transform” objectives of the *Global Strategy for Women’s, Children’s and Adolescents’ Health* aim, not only to reduce preventable deaths, but also to transform societies so that women, children and adolescents everywhere can realize their rights to the highest attainable standards of health and well-being. [5] Sexual, reproductive, maternal, newborn, and adolescent health (RMNCAH) is an essential component of the SDGs, particularly SDG3 to “ensure healthy lives and promote well-being for all at all ages” and SDG5 to “achieve gender equality and empower women and girls”. [6]

Health and well-being are dependent on access to health services across the life course. In the case of RMNCAH, the continuum of care includes adolescent sexual and reproductive health and reproductive rights, pre-pregnancy, antenatal, childbirth and postpartum.

Figure 1.4 shows that the global average modern contraceptive prevalence rate (all women) is 45%, and that all 20 countries in the region fall below this global average. Only Egypt is close to it (43%). The region’s lowest modern contraceptive rates are in Somalia (7%), Sudan (10%), and Oman (14%), with low levels also in Djibouti, Libya, and Saudi Arabia. Libya, Somalia, and Sudan have the highest levels of unmet need for contraception in the region, with relatively high levels also evident in Djibouti, Oman, Saudi Arabia, and Yemen.

The modern contraceptive prevalence rate is higher among married women in the region (regional average of 45%), but still lower than the global average of 57%. Only Algeria, Egypt, and Morocco exceed this global average. [7]

Figure 1.4: Modern contraceptive prevalence rate and unmet need for contraception (all women), by country, most recent available year

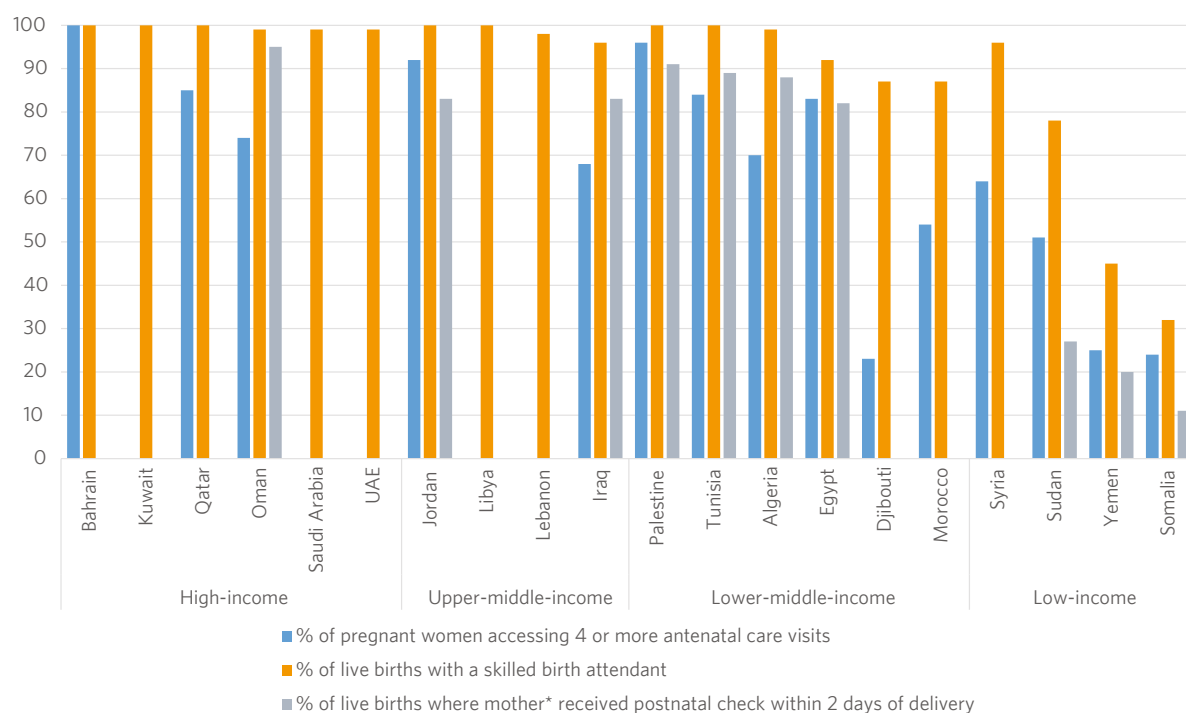


UAE = United Arab Emirates. Source: UNFPA 2021. [7] This data source does not make it clear which year the estimates relate to. Some of the data, especially from high-income countries, may be old.

In the Arab region, the average total fertility rate (average number of children per woman) is 3.2, which is above the global average of 2.4. Rates are highest in Somalia (5.8) and Sudan (4.2), and lowest in UAE (1.4), Qatar (1.8) and Bahrain (1.9). [7] The average adolescent birth rate in the region is 48 per 1000 girls aged 15-19, also slightly above the global average of 41. The adolescent birth rate varies enormously within the region, ranging from 4 per 1000 girls aged 15-19 in Tunisia and 5 in UAE to 123 in Somalia, 87 in Sudan and 82 in Iraq. [7]

Access to antenatal, childbirth and postnatal care for pregnant women and newborns is another vital aspect of ensuring good RMNCAH. Figure 1.5 shows that most countries in the region report high rates of skilled birth attendance (SBA), the main exceptions being Somalia (32%) and Yemen (45%). Three countries in the region report that over 90% of pregnant women access at least 4 antenatal care (ANC) visits: Bahrain, Palestine and Jordan. Rates of postnatal care (PNC) are also very high in Algeria, Oman, Palestine and Tunisia. However, ANC and PNC rates are generally lower than SBA rates, and are especially low in Djibouti, Somalia, and Yemen.

Figure 1.5: Accessing antenatal care, skilled birth attendance, and postnatal care, by country, most recent available year



UAE = United Arab Emirates. * PNC rates for newborns are not shown but are similar to those for mothers, except in Egypt (14%) and Yemen (11%). Source: UNICEF 2021. [8]

Sustainable health systems grounded in primary health care are vital to the health and well-being of every woman, newborn and adolescent. The *Global Strategy on Human Resources for Health* [9] stresses that without an effective health workforce no health system is viable and universal health coverage (UHC) cannot be achieved. High quality RMNCAH care requires a competent, educated, motivated and supported workforce.

The 1994 International Conference on Population and Development (ICPD) shone a light on the importance of sexual and reproductive health as a fundamental human right. It marked a fundamental shift in global thinking on population and development issues by moving away from a focus on reaching specific demographic targets towards a focus on the needs, aspirations and rights of individual women and men. It asserted that the true measure of progress should be the extent to which inequalities are addressed. [10]

At the 2019 global summit to take stock of progress over the 25 years since the first ICPD conference, it was agreed that the principles of the ICPD programme of action are essential to achieving the SDGs. The Nairobi Statement on ICPD25 made 12 global commitments to complete the ICPD agenda, including: (i) zero unmet need for family planning information and services, (ii) zero preventable maternal deaths, (iii) access for all adolescents and youth to comprehensive and age-responsive sexual and reproductive health information and services. [11] None of these commitments can be achieved without investment in the RMNCAH workforce, and especially in the midwifery workforce as specialists in sexual and reproductive health and reproductive rights.

Over the past ten years, several events have acknowledged the importance of the midwifery workforce in the Arab region and contributed to its development. In 2012, the first Arab regional midwifery conference resulted in the “Dubai Declaration” which called upon governments, donors and midwifery associations to commit to strengthening midwifery in the region. [12] A second regional conference took place in Riyadh in 2014, [13] and a regional symposium was held in Prague at the 2014 International Confederation of Midwives (ICM) Triennial Congress. The first Arab regional midwifery workforce report was published by the United Nations Population Fund (UNFPA) in 2015, [14] followed by a 2016 report focusing on the impact of humanitarian crises on the midwifery workforce in the region. [15]

The *Multi-sectoral Arab strategy for maternal, child and adolescent health 2019-2030*, commissioned by the Arab Council of Ministers of Health, identifies a number of challenges to RMNCAH in the region, including gaps in the availability of health workers combined with inequitable distribution of the available workforce. [16] One of the strategic pillars of this strategy is “building and developing the capacities of healthcare workforce through education, training, rehabilitation, and developing communication skills and exchanging of different experiences”. This indicates high-level recognition of the importance of investing in the quality and working environment of the workforce as well as its availability.

The UNFPA strategic plan for 2018-2021 includes three areas of focus, of which one is “strengthening capacities of the health workforce, especially those of midwives, to provide high-quality and integrated sexual and reproductive health services, including in humanitarian settings”. [17] The corresponding UNFPA regional programme action plan for 2018-2021 [18] identifies the midwifery workforce as a priority area for responding to gaps in access to sexual and reproductive health care.

Chief among the challenges for this region are the number and scale of ongoing humanitarian crises, and the effects of the COVID-19 pandemic on the workforce and the services it provides. This report therefore contains a chapter dedicated to these two issues and the intersection between them. It also includes inspiring stories from skilled and committed midwives in the region who are working to provide high-quality and accessible care despite the challenges.

The objectives of this report are to: (i) highlight midwifery workforce issues which are specific to the region, or which affect it more significantly than other regions, (ii) address some of the data gaps in the *State of the World's Midwifery 2021* report (SoWMy 2021), [19] and (iii) feature all 20 countries in the UNFPA Arab region. Where possible, this report highlights progress since the two earlier regional midwifery reports, [14, 15] or points out where progress has stalled and may require additional efforts. It thus contributes to the regional strategic objectives identified by UNFPA and other partners.

This report takes as a basis the data provided for SoWMy 2021. UNFPA country offices were invited to review these data and to consult with relevant national stakeholders to provide updates or fill gaps. The data contained within SoWMy 2021 were validated by the competent national authorities, and these data are shown in bold type in the country profiles. New data provided during the preparation of this regional report may not be validated, and are therefore not emboldened in the country profiles. The data collection and

analysis methods are described in SoWMy 2021 web appendices 2 and 3. [20] Where the methods used in this report deviate from those used in SoWMy 2021, this is noted in the Technical Annex.

It can be challenging to locate and validate health workforce data, and it has been even more challenging at a time when the world continues to struggle with the COVID-19 pandemic. We gratefully acknowledge the significant efforts to provide data in the face of competing priorities, but it is clear that health workforce data systems were a major limitation in some countries, even before the pandemic. Limitations include: lack of data on the private sector, inability to disaggregate data into sub-national administrative areas, and in some cases the data are old and probably out-of-date.

The numeric data in this report are accompanied and supported by stories by and about midwives in the region, to highlight their vital contribution to the health and wellbeing of women and newborns and their families and communities. All of the stories relate to actual events, but some names of service users have been changed to protect anonymity.



2. The state of the midwifery workforce in the region, 2020-2030



This chapter describes and analyses workforce data, to provide a situation analysis. Where data are available, comparisons are made against the 2015 regional midwifery workforce report and future projections are made of the supply of midwives and other RMNCAH workers. The analyses are disaggregated by World Bank income group, [21] but in most cases there is wide variation even within income groups. The data were also disaggregated by Organization for Economic Cooperation and Development (OECD) fragility status [22] and Population Development Composite Index, [23] but this did not reveal any interesting patterns in the data, so these analyses are not shown.

Defining midwives and other RMNCAH workers

This report focuses primarily on midwives in recognition of the critical role that they play in delivering essential RMNCAH services. If available in sufficient numbers and if fully educated, regulated and integrated within an interdisciplinary team, midwives could meet about 90% of the need for essential RMNCAH interventions. [19] To understand their pivotal role it is necessary also to define and consider their place within the RMNCAH workforce.

This report uses international definitions of health occupations to enable comparison between countries and the International Standard Classification of Occupations (ISCO) system [24] to classify the RMNCAH workforce into occupation groups based on their roles and responsibilities (see SoWMy 2021 web appendix 1 [20]). Not all these occupations exist in every country, but where they do exist, and where data are available, they are included in the analysis.

The occupations considered to be part of the RMNCAH workforce in this report (and defined in the Technical Annex) are:

- professional and associate professional midwives and nurses,
- three types of medical doctor: general medical practitioners, obstetricians and gynaecologists, and paediatricians,
- paramedical practitioners, and
- community health workers (CHWs).

Although there is no uniform definition of a CHW and their competencies vary by country, they are included as part of the RMNCAH workforce because they play an important role in many countries in delivering a small number of essential interventions. Traditional birth attendants, however, are not included. Although they attend a significant proportion of births in some countries and can play a role in community engagement and support, [25] many are not formally educated, trained or regulated.

The need for midwives and other RMNCAH workers

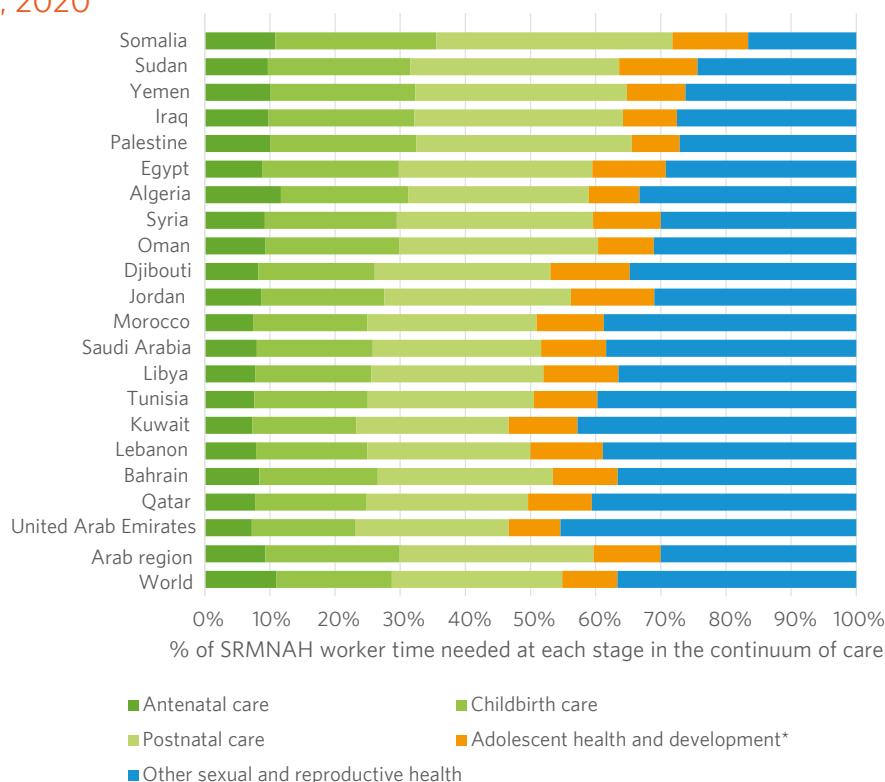
In this report, the need for midwives and other RMNCAH workers is defined as the amount of RMNCAH worker time that would be required to achieve universal, high-quality coverage of the essential RMNCAH interventions which are listed in the *Global Strategy for Women's, Children's and Adolescents' Health*. [5] The 2015 Arab regional midwifery report [14] used a similar definition, but a different list of essential interventions. This variation affects comparability between 2015 and 2021. Specifically, while the increased level of need in 2021 is partly due to population growth, it is mainly attributed to the use of a more comprehensive list of essential interventions to define need.

Across the region as a whole, 425 million RMNCAH worker hours would have been required to meet all the need in 2020, of which 60% were needed for maternal and newborn health interventions (antenatal, childbirth, and postnatal care), 30% for other sexual and reproductive health interventions, and 10% for adolescent and reproductive health interventions.

The two main drivers of need for RMNCAH workers are population size and fertility rate. Variations in fertility rates (along with epidemiological factors such as HIV and malaria prevalence) also influence the skill mix needed within the workforce. In high fertility settings the workforce should contain a higher percentage of RMNCAH workers competent to provide maternal and newborn health care. [26] Figure 2.1 shows the proportions of RMNCAH worker time needed at different stages of the continuum of care for 20 Arab countries. The graph is arranged in order of the total fertility rate, with the highest-fertility countries at the top. In a very high-fertility country such as Somalia, over 70% of the need for RMNCAH worker time is for maternal and newborn health interventions, represented by the green segments on the chart. By contrast, in the region's lowest-fertility country (UAE), over half of the need is for interventions pregnancy and childbirth.



Figure 2.1: % of RMNCAH worker time needed at each stage in the continuum of care, by country, 2020



* The needs of adolescent girls aged 15-19 were included within those of women of reproductive age, so the estimate for adolescent health and development covers the sexual and reproductive health needs of girls aged 10-14 and boys aged 10-19.

Current workforce availability and composition

Number of RMNCAH workers in the region

Across the 20 Arab countries included in this analysis, there are 1.35 million RMNCAH workers. Table 2.1 shows that the majority (67%) are nurses without additional training in midwifery and 16% are doctors (general practitioners, obstetrician/gynaecologists, and paediatricians). Just 6% are professional or associate professional midwives or nurse-midwives. Only two countries reported having nurse-midwives: Egypt and Saudi Arabia¹.

¹ The data received from Syria regarding their midwifery education programme (see later) indicates that Syria is another country with nurse-midwives, but because Syria was not able to provide a nurse-midwife headcount, its nurse-midwives are not counted within Table 2.1.

Table 2.1: Number of RMNCAH workers in the Arab region, 2020

Occupation	Number of reporting countries	Number of workers reported	% of total RMNCAH workforce
Midwifery professionals	13	34,592	3
Midwifery associate professionals	6	25,475	2
Nurse-midwife professionals	1	3,373	*
Nurse-midwife associate professionals	1	14,736	1
Nursing professionals**	16	513,407	38
Nursing associate professionals**	13	394,561	29
Community health workers	4	7,822	1
Paramedical practitioners	7	138,965	10
Medical assistants	4	7,572	1
General medical practitioners	20	163,689	12
Obstetricians and gynaecologists	20	24,354	2
Paediatricians	20	24,335	2
Total		1 352 882	100

* = less than 0.5% but greater than zero. ** Including only nurses without formal midwifery training.

The analysis in the remainder of this chapter attempts to assess the extent to which each country's workforce is of an appropriate size and skill mix, and whether it is adequately supported to meet the need for essential RMNCAH interventions. The main focus is on three key groups of RMNCAH workers: midwives and nurse-midwives (the blue rows in Table 2.1), nurses without formal midwifery training (the yellow rows in Table 2.1) and "RMNCAH doctors" (the red rows in Table 2.1). Few countries reported headcounts for paramedical practitioners, medical assistants and CHWs. When these numbers were provided, they are included in the individual country profiles and used in estimates of the potential of the workforce to meet the need for RMNCAH interventions.

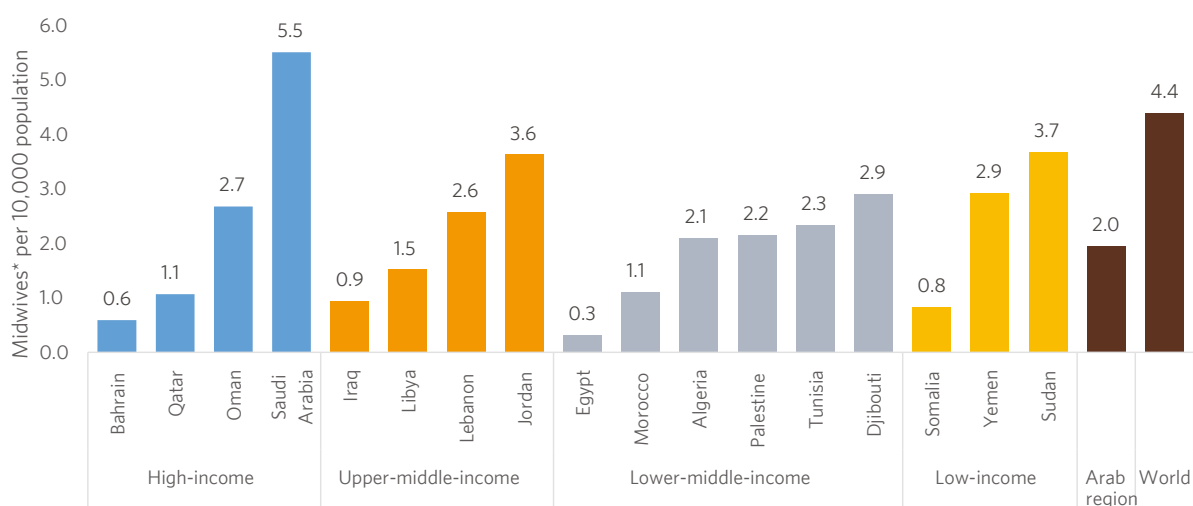
Current availability of midwives, nurses and RMNCAH doctors

Of the 20 countries included in this report, 17 provided the number of midwives in their health workforce (the other three reported numbers of nurses and doctors, but not midwives). The three countries which did not provide a midwife headcount are Kuwait, Syria, and UAE. Across the 17 reporting countries, there are 78,200 midwives, giving a density of 2.0 midwives per 10,000 population. This is far lower than the global average of 4.4 per 10,000 that was reported in SoWMy 2021.

Figure 2.2 shows the midwife density in each of the 17 responding countries. With 5.5 per 10,000 population, Saudi Arabia is the only country in the region to have a midwife density

above the global average. SoWMy 2021 reports that high- and middle-income countries tend to have a higher midwife density than low-income countries. Figure 2.2 shows that this pattern does not apply in the Arab region, where there is huge variety even within income groups. Four countries – one in each income group - have a density below 1.0: Bahrain, Egypt, Iraq, and Somalia. This suggests that decisions about midwife numbers are driven more by the model of care on offer within the national system than by financial considerations.

Figure 2.2: Midwife density by country, 2020



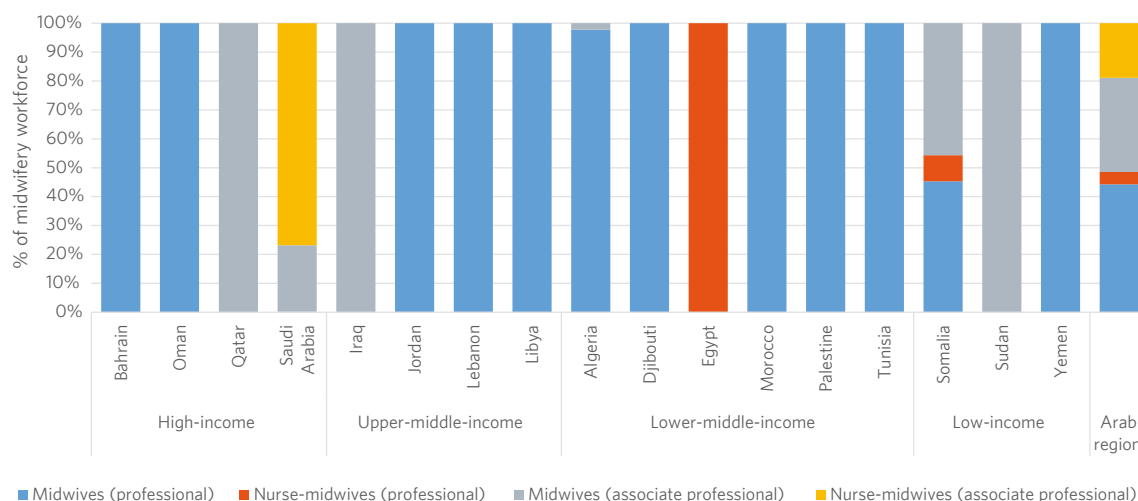
* Including professional and associate professional midwives and nurse-midwives.

Of the 78,200 midwives in the region, fewer than half (35,000, 44% of the total) are categorized as midwifery professionals. Of the remainder, 25,000 (33%) are categorized as midwifery associate professionals, 3000 (4%) as nurse-midwife professionals, and 15,000 (19%) as nurse-midwife associate professionals.

However, these aggregate figures mask the fact that most countries in the region have just one type of midwife in the workforce (Figure 2.3). In ten countries, the midwifery workforce is composed entirely of professional midwives: Bahrain, Djibouti, Jordan, Lebanon, Libya, Morocco, Oman, Palestine, Tunisia, and Yemen. In addition, nearly all of Algeria's midwives are professional midwives. Egypt reports that its entire midwifery workforce consists of professional nurse-midwives.

On the other hand, in Iraq, Qatar, and Sudan the midwifery workforce consists entirely of associate professional midwives. Similarly, the high midwife density reported in Saudi Arabia (Figure 2.2) may overestimate the availability of midwifery skills in the country, because nearly all (99.8%) of its midwives and nurse-midwives are associate professionals. Somalia is the only country with an approximately even mix of professional and associate professional midwives. The heavy dependence on associate professionals in these countries is of concern, because associates tend to have a relatively narrow range of competencies and can therefore provide only some essential RMNCAH interventions.

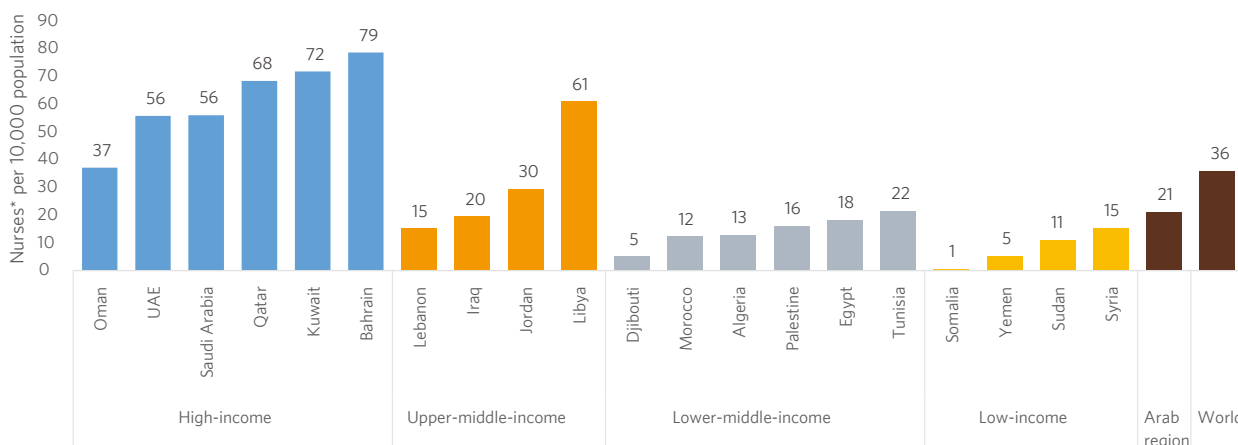
Figure 2.3: Composition of the midwifery workforce, by country, 2020



Like any health professionals, the RMNCAH workforce is most effective when it operates within a fully enabled health system/work environment. Effectiveness is also enhanced when each person is working to their full scope of practice, so that the team collectively possesses all the competencies required to provide high-quality, respectful RMNCAH care. [27] Availability of midwives must therefore be considered in the context of availability of other key RMNCAH workers, especially nurses and doctors.

The Arab region as a whole has 21 nurses per 10,000 population, lower than the global average of 36 per 10,000. Figure 2.4 shows a relationship between income group and numbers of nurses per 10,000 population. With a few exceptions, the higher the income group, the higher the nurse density. The main exceptions are Oman with a low nurse density relative to the other high-income countries, and Libya with a high nurse density relative to the other low- and middle-income countries.

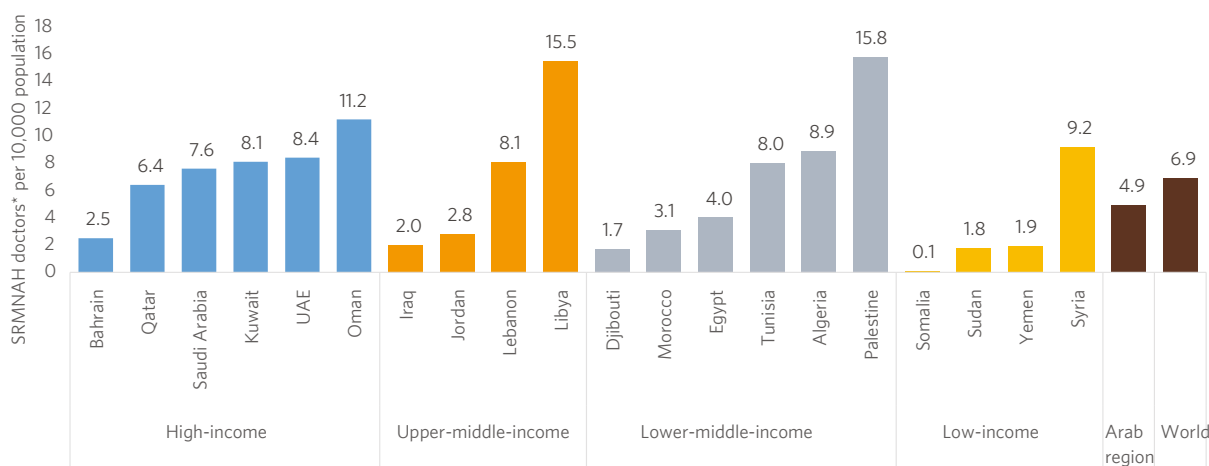
Figure 2.4: Nurse density by country, 2020



* Including professional and associate professional nurses, excluding nurse-midwives and associate nurse-midwives. UAE = United Arab Emirates.

The Arab region has 4.9 RMNCAH doctors per 10,000 population, lower than the global average of 6.9 per 10,000. As with midwives, there is no strong correlation between income group and doctor density. In each income group there is at least one country with a density above the global average and at least one country with a density well below the global average (Figure 2.5). Libya and Palestine stand out as the countries with the most RMNCAH doctors relative to population size, which is perhaps indicative of a highly medicalized RMNCAH care system.

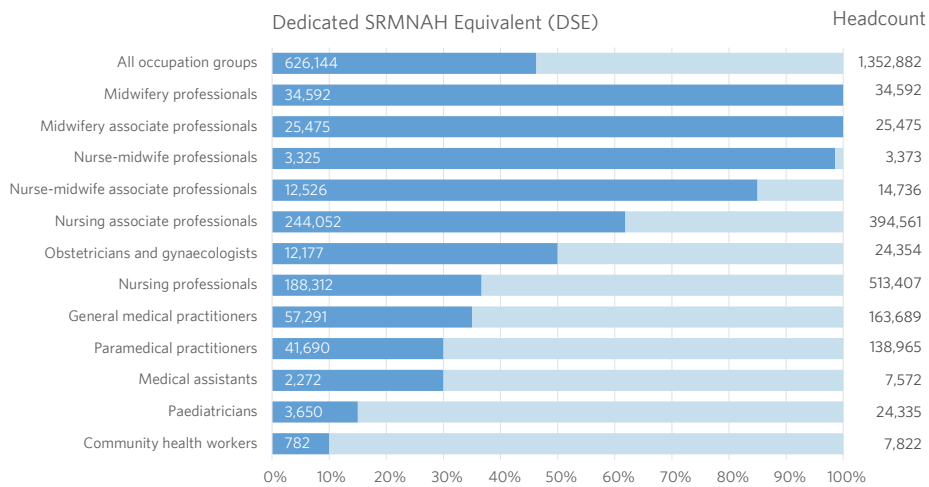
Figure 2.5: RMNCAH doctor density by country, 2020



* General medical practitioners, obstetricians and gynaecologists, paediatricians. UAE = United Arab Emirates.

In addition to RMNCAH worker headcounts, it is important to consider how much of each occupation group's clinical time is available to spend on RMNCAH care. It would be inaccurate to assume that they can all spend all their available working time on RMNCAH. To address this issue, this report uses the concept of a "dedicated RMNCAH equivalent" (DSE) worker. The DSE is calculated using estimates about the average percentage of clinical contact time that each occupation spends on RMNCAH (see Technical Annex). The impact of the DSE adjustment is illustrated in Figure 2.6. This figure shows that the total DSE workforce (dark blue segments) is 626,000, i.e. just 46% of the total headcount of 1.35 million. The number of DSE doctors, nurses, paramedical practitioners and CHWs is much smaller than the headcount, in recognition of the fact that these occupation groups are required to devote some of their time to other types of health care as well as to RMNCAH.

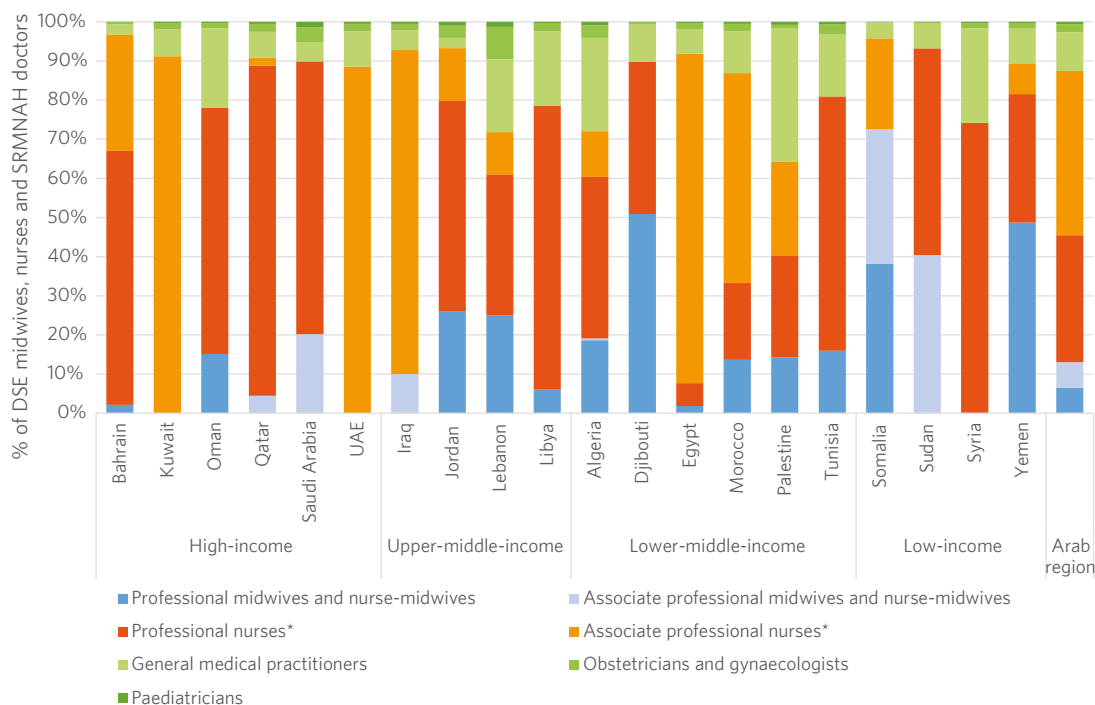
Figure 2.6: RMNCAH workforce: headcount versus dedicated RMNCAH equivalent (DSE) in the Arab region, 2020



Note: The figures for nursing professionals and nursing associate professionals exclude nurse-midwives and associate nurse-midwives.

Figure 2.7 shows the composition of the main occupation groups within the DSE workforce: midwives (blue segments), nurses (red segments) and RMNCAH doctors (green segments). Across the region as a whole, the DSE workforce comprises: 13% midwives, 74% nurses and 13% doctors. Again, however, there is a great deal of variation between countries. There is relatively heavy reliance on midwives in many low- and lower-middle-income countries - especially Djibouti, Somalia, and Yemen, where at least half of the DSE workforce consists of midwives. Doctors comprise a relatively large proportion of the DSE workforce in Algeria, Lebanon, Oman, Palestine and Syria, although in the case of Syria this may be partly due to midwife numbers being unavailable.

Figure 2.7: Composition of midwifery, nursing and RMNCAH doctor workforce, by country, 2020

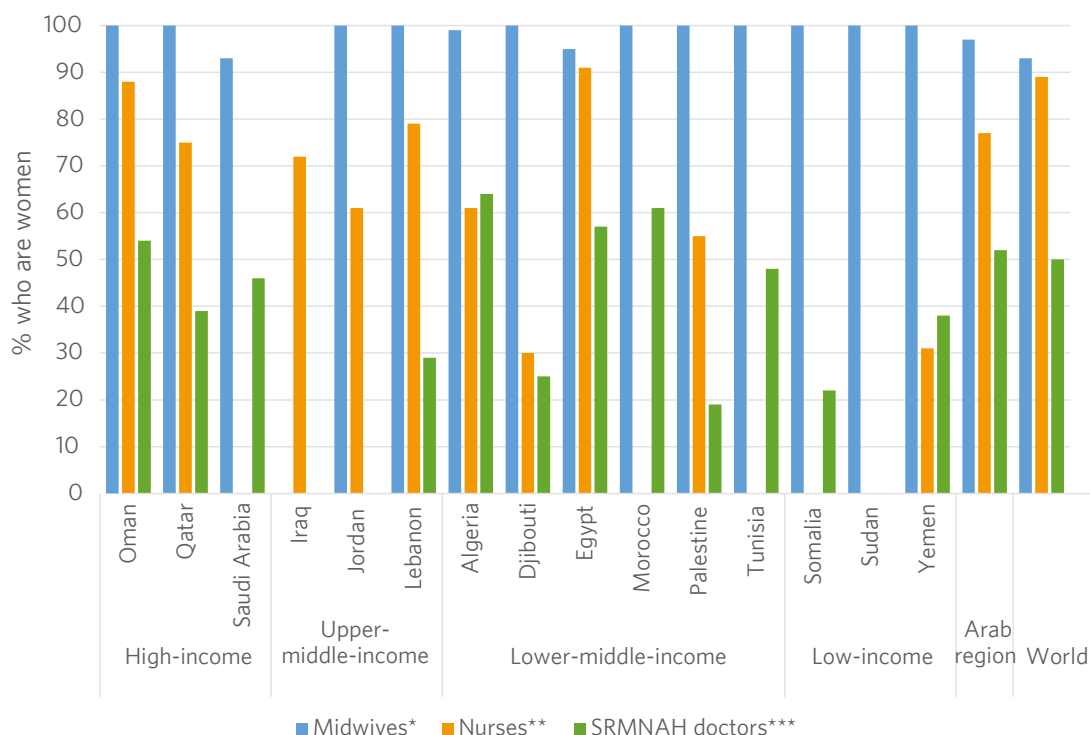


* The figures for nurses exclude nurse-midwives. DSE = dedicated RMNCAH equivalent. UAE = United Arab Emirates. Kuwait, Syria and UAE were not able to provide a midwife headcount.

Some countries in the region were able to provide data on the gender profile of their RMNCAH workforce. Based on these countries, Figure 2.8 shows that nearly all of the region's midwives and about half of its RMNCAH doctors are women. This is in line with the global average. About three-quarters of the region's nurses are women, which is lower than the global average. This is largely due to Djibouti and Yemen, where only one in three nurses are women. Women RMNCAH doctors are relatively scarce in Djibouti, Lebanon, Palestine, Qatar, and Yemen. If there were sufficient midwives, a large number of men in the nursing and medical workforce would not be of great concern. However, the extensive shortage of midwives and consequent reliance on nurses and doctors for the provision of RMNCAH interventions may lead to service users being unable to consult a woman RMNCAH worker.

RMNCAH needs often involve sensitive personal issues, so service users may prefer to consult a health worker of a specific gender. It is therefore important that the RMNCAH workforce includes both women and men, recognizing that an appropriate balance is likely to involve having more women than men.

Figure 2.8: Percentage of RMNCAH workers who are women, by country, 2020



* Including professional and associate professional midwives and nurse-midwives. ** Including professional and associate professional nurses, excluding nurse-midwives and associate nurse-midwives. *** General medical practitioners, obstetricians and gynaecologists, paediatricians.

The accessibility of health workers who are women can be a particular challenge in countries with laws and customs which restrict independent movement of women, or in countries in acute humanitarian settings. [28, 29] For example, Yemen’s 2013 demographic and health survey found that 63% of women were concerned that they would not be able to see a female health worker if the need arose. This was also a concern for 29% of women in Egypt in 2014 and 20% of women in Jordan in 2017. [30]

Potential of the workforce to meet the need for essential interventions

The country profiles in this report show estimates of “potential met need” (PMN) which were calculated for this regional report. PMN measures the extent to which the supply of DSE workers is large enough and has the appropriate skill mix to meet the need for essential RMNCAH interventions. Taking into account each country’s demographic and epidemiological situation, PMN is an estimate of the maximum percentage of the need for essential RMNCAH interventions that could potentially be met by the current workforce, *if it was well educated, equitably distributed and working within an enabling environment* (and thus able to deliver high-quality care). The conditionality of an enabling environment means that RMNCAH workers are authorized and enabled to practise to their full scope, are accountable for independent decisions within the required standard operating procedure, work within a functional health infrastructure with adequate human resources,

equipment and supplies, have access to timely and respectful consultation, collaboration and referral, are safe from physical and emotional harm and have equitable compensation, including salary and working conditions.

The PMN estimates do not take into account the geographical distribution of the workforce. In many countries, rural and remote locations tend to have fewer health workers. [31] This requires creative solutions to rural recruitment and retention, such as widening access to midwifery education for people living in rural areas. Investment in the education of people from rural communities often results in them returning to their home community to practise, thus filling important health workforce gaps. Box 2.1 provides examples from Somalia.

Box 2.1: Scholarships for young rural women in Somalia help to address midwife shortages in rural areas

UNFPA's midwifery programme in Somalia provides scholarships for midwifery students. This has helped young women from poor families and remote communities to qualify as midwives. Below, two scholarship recipients share their stories:

Kowsar Farah Goox studied at the Sool College of Health Science. After graduation, she returned to practise in a primary health facility in her home village of Qoriley. With the support of partners including the Ministry of Health and Development, Direct Relief and Save the Children, Kowsar provides antenatal, childbirth and postnatal care to local women and newborns, and makes weekly outreach visits to remote communities to provide antenatal and postnatal care, family planning services, and child vaccinations. Without these outreach visits, families in these communities would find it very difficult to access essential RMNCAH services. When Kowsar identifies pregnant women nearing their due date, or with complications, she supports them to travel and find temporary accommodation near the clinic so that they can access skilled childbirth care.

Kafiya is from the village of Bali-dhiig. At the age of 17, her family could not afford to pay for her to continue her education, but a scholarship from UNFPA allowed her to study midwifery at the Buroa Institute of Health Sciences. After graduation she returned to her home village. She said "It is very important to produce more midwives. They are needed in remote areas which don't have fully functional health facilities and qualified midwives." Until Kafiya started to practise, the only people available to support labouring women in her village were traditional birth attendants. Six years after graduation, Kafiya has attended more than 2000 births.

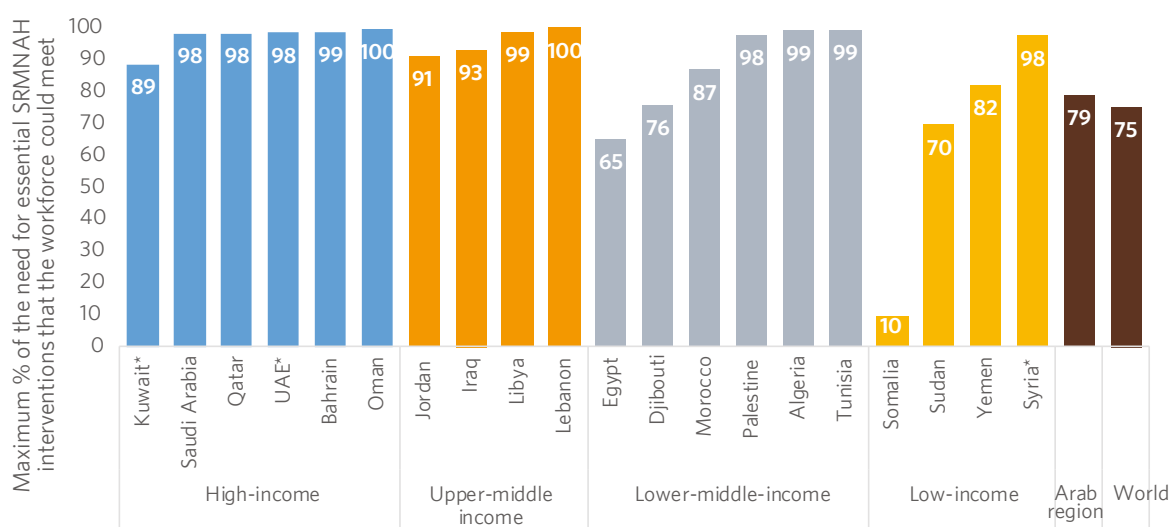


The PMN estimates involve two key sets of assumptions about: (i) the amount of RMNCAH worker time needed to achieve universal coverage of the essential RMNCAH interventions (see SoWMy 2021 web appendix 5 [20]), and (ii) which RMNCAH occupations should be competent to perform which essential interventions (see SoWMy 2021 web appendix 6 [20]). Where constraints prevent the workforce from operating to its full potential (e.g. poor infrastructure, ineffective supply chains, high absenteeism, poor-quality education, inequitable geographical distribution) the actual level of need being met will be lower than is indicated by the PMN estimate.

The overall PMN for the Arab region is 79%, which is slightly above the global average of 75%. However, most countries in the region have a PMN estimate above 90%. The regional average is brought down by the very low PMN in Somalia, and the low PMNs in Egypt and Sudan (Figure 2.9).



Figure 2.9: Potential met need estimates by country, 2020



* These countries did not provide a midwife headcount. With a midwife headcount their PMN estimates would probably be higher.

A low PMN indicates that the RMNCAH workforce is too small and/or does not have the correct composition to meet the need. A high PMN indicates a workforce large enough to meet the need, but not necessarily with the optimal composition. For example, a country with many midwives could achieve the same PMN as a country with many doctors, because the time required to deliver interventions is allocated to the available competent occupations. Thus, if there are too few midwives in a workforce, the time required for interventions that could be delivered by a midwife is allocated to the available doctors or nurses. This situation may have negative implications outside the scope of RMNCAH. Furthermore, it could be argued that it is inefficient and expensive to routinely allocate tasks to doctors if the tasks could be performed by midwives. It may also deprive women, newborns and adolescents of the unique philosophy of care that midwives provide.

It is therefore important to critically evaluate the composition of the RMNCAH workforce for its efficiency, as well as overall size. To that end, the country profiles also estimate the number of DSEs required to reach 100% PMN. These estimates are based on the allocation of tasks to a preferred occupation. The preferred occupation is selected on the basis of the competencies it should have if properly educated and regulated (see SoWMy 2021 web appendix 6 [20]). Tasks are allocated to doctors last, on the premise that doctors should only be the preferred provider if no other occupation group is competent to perform the task. This is because doctors are relatively expensive to educate and employ, and should be deployed only when medical intervention is indicated. If a country's PMN estimate is high but the "needed" numbers are very different from the "actual" numbers within an occupation group, this may indicate suboptimal composition of the RMNCAH workforce.

Allocating interventions to preferred occupations enables us to estimate the shortage of different RMNCAH occupations, i.e. how many more are needed to ensure universal coverage of essential RMNCAH interventions from appropriate providers. This analysis indicates an overall shortage of 178,000 DSE midwives, nurses, doctors and community

health workers in the region, 128,000 of which are midwives. Every country except Saudi Arabia has a midwife shortage. The largest shortage is in Egypt, with major shortages also evident in: Iraq, Algeria, Somalia, Sudan, Morocco, and Yemen (Table 2.2).

Table 2.2: Estimated midwife shortage by country, 2020

Country	Shortage	Country	Shortage
Egypt	48,300	Tunisia	1,200
Iraq	18,800	Lebanon	600
Algeria	12,100	Jordan	600
Sudan	11,450	Oman	350
Somalia	11,250	Bahrain	350
Morocco	10,600	Qatar	250
Yemen	8,800	Djibouti	150
Palestine	1,650	Saudi Arabia	0
Libya	1,400		
		Arab region	127,850

Note: estimates are rounded to the nearest 50.

Several countries have a midwife shortage despite having a very high PMN estimate, most notably: Algeria, Iraq, Libya, Palestine, and Tunisia. This indicates that these countries are relatively well supplied with doctors and nurses, and that tasks which could be allocated to midwives are allocated instead to doctors or nurses.

Future supply of and need for RMNCAH workers, and the workforce's potential to meet that need

Effective workforce planning and management requires understanding why people join and leave the workforce, and how this will affect future workforce availability. Future availability is influenced by a number of factors, including domestic production of new graduates and the age profile of the current and future workforce. Very few countries provided data on their domestic production of midwives, nurses and doctors. This makes it difficult to draw overall conclusions about whether the region is producing enough graduates to meet future need. For countries which provided graduate numbers, these are shown in the country profile and were used to project workforce numbers to 2030. Otherwise, standard assumptions were applied to make projections (see SoWMy 2021 web appendix 3 [20]).

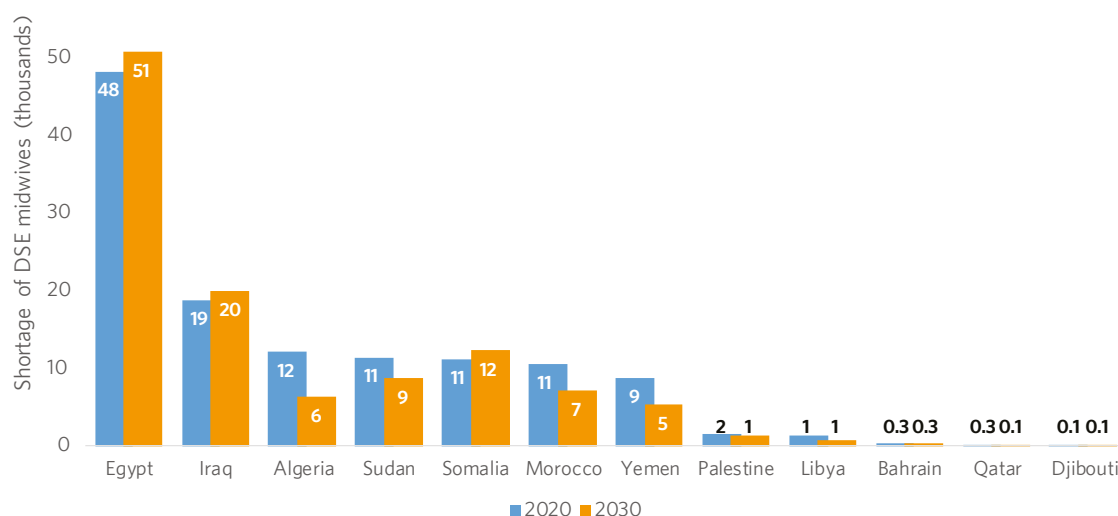
In addition to production of new graduates, the age structure of the workforce is an indicator of future availability. If more are approaching retirement age than are young and/or levels of replacement are low, availability will be negatively impacted in the near future. Most countries were unable to provide the age distribution of their RMNCAH workers, but

six did so for midwives, five for nurses (excluding nurse-midwives) and seven for doctors. None of the reporting countries have an ageing midwife or nurse workforce, but four have an ageing RMNCAH doctor workforce: Algeria, Lebanon, Palestine, and Saudi Arabia.

Using graduate numbers and age profile, or evidence-based estimates when these data are missing, the country profiles project the workforce supply estimates to 2030. This indicates that the supply of DSE workers in the region will grow from 626,000 in 2020 to 663,000 in 2030 (a 6% increase). The projected growth in DSE numbers is largely due to a projected 38% increase in the number of DSE midwives (up from 76,000 to 105,000). This projected growth in midwife numbers will reduce the size of the region's midwife shortage by 12% (the shortage will reduce from 128,000 in 2020 to 113,000 in 2030). These figures emphasize the challenge facing countries with large midwife shortages and growing populations: 38% growth in midwife numbers will achieve only a 12% reduction in the shortage.

Figure 2.10 shows that, if current trends continue, most countries will see a reduced shortage by 2030 and four countries are on track to eliminate their midwife shortage: Jordan, Lebanon, Oman and Tunisia. On the other hand, three countries are projected to have a slightly worse shortage in 2030 than they do in 2020: Egypt, Iraq and Somalia.

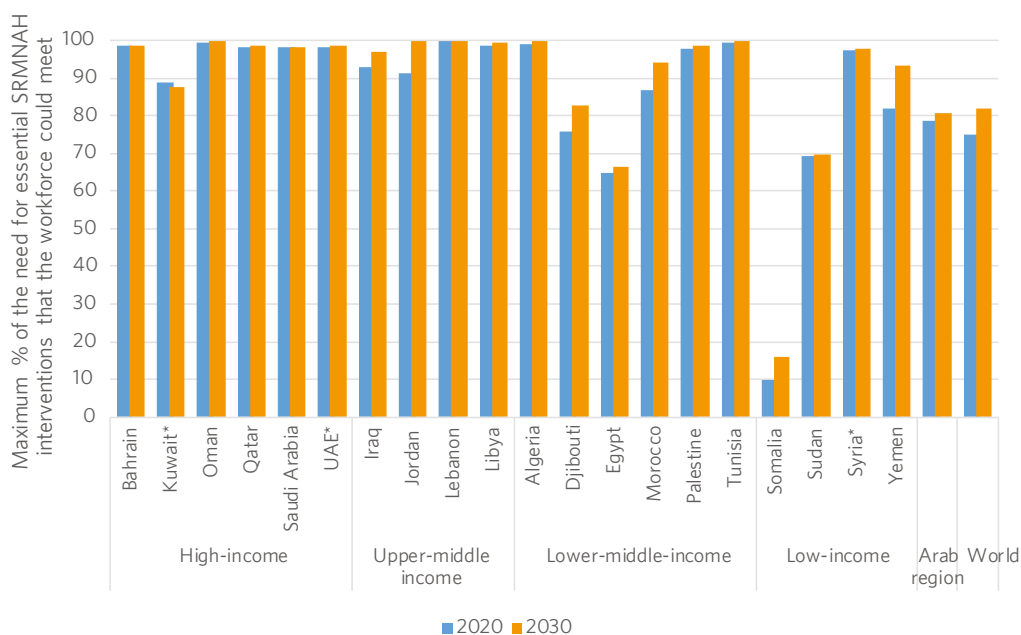
Figure 2.10: Estimated midwife shortage by country, 2020 and 2030



DSE = dedicated RMNCAH equivalent. Note: the following countries are not shown because they are projected to have no midwife shortage in 2030: Jordan, Lebanon, Oman, Saudi Arabia, and Tunisia. The remaining three (Kuwait, Syria, and UAE) are not shown because they did not provide sufficient data to make a projection.

Having projected the supply to 2030, it is then compared with the projected need, yielding a 2030 PMN estimate. These projections indicate that the region's overall PMN will increase only slightly (from 79% to 81%). Figure 2.11 shows that the PMN will remain largely unchanged for most countries in the region, but that some countries are projected to see small improvements, most notably: Djibouti, Jordan, Morocco, Somalia, and Yemen. On the other hand, Sudan is not projected to see any improvement and Egypt only a small improvement, despite these two countries having relatively low PMN estimates for 2020.

Figure 2.11: Potential met need estimates by country, 2020 and 2030



UAE = United Arab Emirates. * These countries did not provide a midwife headcount. With a midwife headcount their PMN estimates would probably be higher.

Capacity for high-quality midwife education in the region

It is important for health systems to have sufficient availability of midwives, but it is equally important that the available midwives provide high-quality care. High-quality midwifery education is an essential ingredient for quality of care. [32] Inadequate education and training jeopardize the professional identity, competence and confidence of midwives. [33] The International Confederation of Midwives (ICM) has published global standards for midwifery education, covering issues such as course duration and content, [34] and the analysis in this section examines the extent to which these standards are met in the Arab region.

The most common type of pre-service midwife education pathway in the region is direct entry midwifery. Of 16 responding countries, 12 offer a direct entry programme, 6 a post-nursing programme and 2 an integrated nursing and midwifery programme (Table 2.3). Most countries offer just one type, but four offer both direct entry and either post-nursing or an integrated programme: Bahrain, Palestine, Somalia, and Sudan.

Table 2.3: Types of midwife education programme, by country, 2020

Income group	Country	Direct entry	Post-nursing	Integrated
High	Bahrain	✓		✓
	Saudi Arabia		✓	
Upper middle	Iraq	✓		
	Jordan	✓		
	Lebanon	✓		
	Libya		✓	
Lower middle	Algeria	✓		
	Djibouti	✓		
	Egypt		✓	
	Morocco	✓		
	Palestine	✓	✓	
	Tunisia	✓		
Low	Somalia	✓	✓	
	Sudan	✓	✓	
	Syria			✓
	Yemen	✓		
	Number of countries	12/16	6/16	2/16

The opportunity to obtain high-level academic qualifications in midwifery helps to assure professional respect for midwives and midwifery. Table 2.4 shows that ten of the 16 responding countries in the region offer a Bachelor's degree (or equivalent) in midwifery, but in only six countries are all midwives educated to at least degree level. In a further six countries, the midwifery qualification is below degree level: Bahrain, Egypt, Iraq, Saudi Arabia, Somalia, and Syria. Additionally, one region of Iraq offers a Bachelor's degree and Saudi Arabia does offer postgraduate study to Master's degree level.

Half of the responding countries offer a Master's degree in midwifery, and Jordan, Lebanon, and Morocco also offer a PhD programme. Strong midwifery departments in universities encourage further study and research on midwifery, making it possible for midwives to take the lead in the education and research which is greatly needed.

Table 2.4: Available qualifications in midwifery, by country, 2020

Income group	Country	PhD	Master's	Bachelor's	Below Bachelor's
High	Bahrain				✓
	Saudi Arabia		✓		✓
Upper middle	Iraq			*	✓
	Jordan	✓	✓	✓	
	Lebanon	✓	✓	✓	
	Libya		✓	✓	✓
Lower middle	Algeria		✓	✓	
	Djibouti			✓	
	Egypt				✓
	Morocco	✓	✓	✓	
	Palestine		✓	✓	✓
	Tunisia			✓	
Low	Somalia				✓
	Sudan			✓	✓
	Syria				✓
	Yemen		✓	✓	✓
	Number of countries	3/16	8/16	10/16	10/16

* A Bachelor's degree programme is available in one region of Iraq.

Three of the countries offering both Bachelor's degree-level qualifications and qualifications below this level nevertheless report that all their midwives as counted as professionals: Libya, Palestine, and Yemen. This may indicate that no distinction is made between midwives with different levels of qualification in terms of how and where they are deployed. This raises concerns about whether all midwives in these countries are deployed to positions which make appropriate use of their skills and competencies.

ICM recommends that midwife education programmes should be competency-based. [34] Out of 14 responding countries, 10 have a national policy/guideline on education of midwifery care providers that is based on ICM competencies: Algeria, Djibouti, Egypt, Iraq, Jordan, Morocco, Oman, Palestine, Saudi Arabia, and Syria. Of the four countries without such a policy (Lebanon, Somalia, Sudan, and Yemen), three are low-income countries. Yemen responded that its national policy partially meets this condition.

ICM also recommends that direct entry programmes should be at least three years in duration, and that post-nursing programmes should be at least 18 months in duration. [34] ICM does not have a policy on the duration of integrated nursing and midwifery education programmes. Syria's integrated programme consists of 24 months on a combined nursing and midwifery curriculum, followed by 18 months focusing solely on midwifery. Figures 2.12

and 2.13 show that most of the remaining countries in the region meet or exceed the ICM recommendation. However, the direct entry programmes of Bahrain, Iraq and Somalia are shorter than three years, and the post-nursing programmes of Egypt and Sudan are shorter than 18 months, even though two of these five countries (Iraq and Egypt) have a policy for education to be based on ICM competencies.

In Iraq, Somalia and Sudan, the short duration is probably related to the fact that the midwives who graduate from the programmes are classed as associate professionals rather than professionals, and therefore should not be expected to provide the full range of midwifery interventions. However, in Bahrain and Egypt the graduates are classed as professional midwives and therefore should be able to provide a wide range of RMNCAH interventions on their own initiative. It is questionable whether these shorter programmes leading to qualifications below degree level are able to cover the full range of midwifery competencies to a high standard. Conversely, in Lebanon and Saudi Arabia midwives are classed as associate professionals even though their education programmes are of the recommended duration. This may indicate a mismatch between what midwives are educated to do and what they actually do in the workplace, or it may indicate potential to broaden the midwifery curriculum and scope of practice in these countries.

Figure 2.12: Duration of direct-entry midwifery education programme, by country, 2020

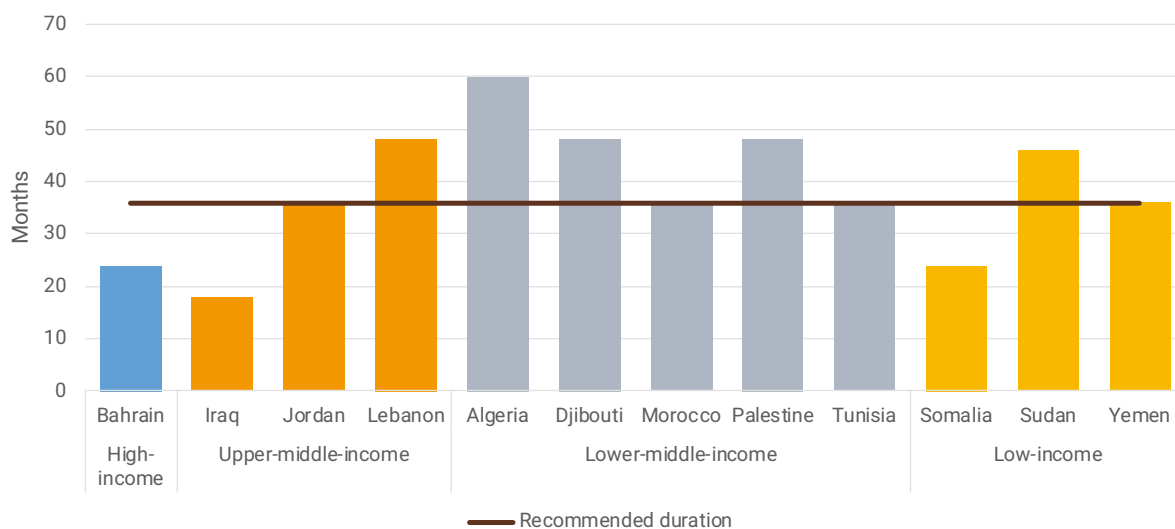
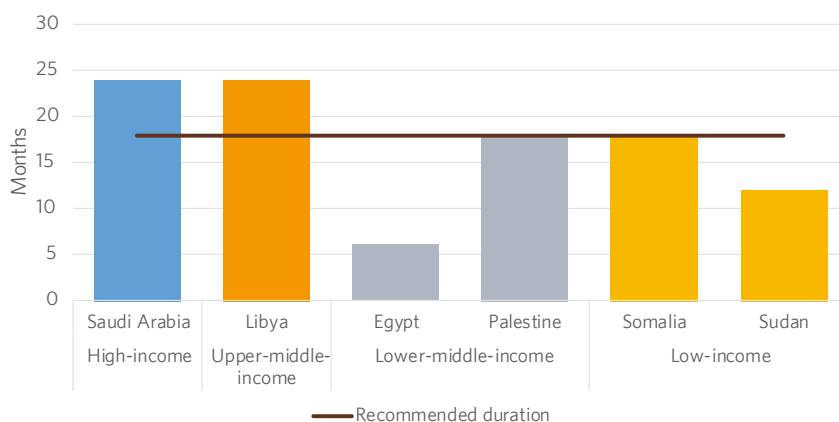


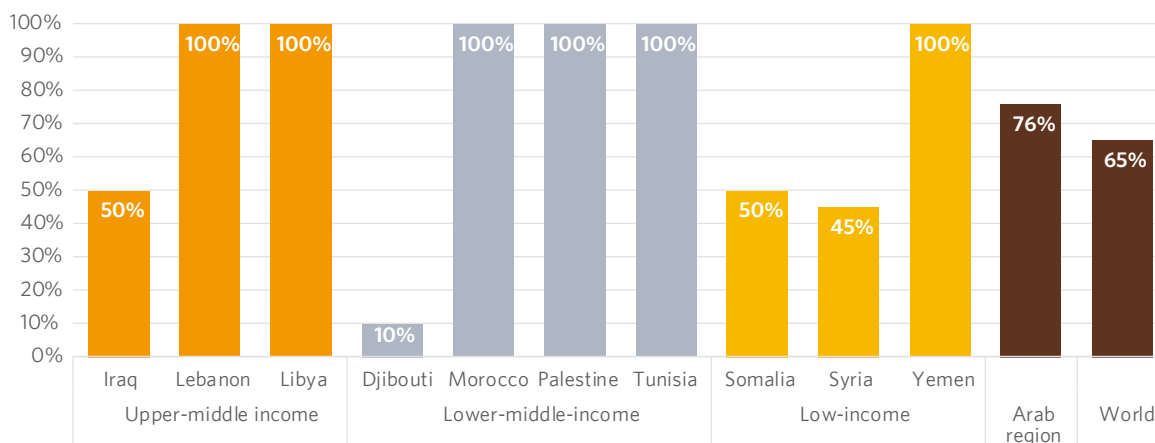
Figure 2.13: Duration of post-nursing midwifery education programme, by country, 2020



A programme of the recommended duration is not *per se* sufficient to ensure high-quality pre-service education. A 2014 analysis of the status of midwifery in North Africa and the Middle East found many challenges to midwife education in the region, such as lack of education and training facilities and insufficient midwifery educators. [12] ICM global standards for education recommend that midwifery education programmes should be led by midwives and that the faculty should consist primarily of midwives with a professional midwifery qualification and formal preparation for teaching. [34]

Only ten countries in the region (and none of the high-income countries) provided data on the percentage of faculty who are qualified midwives. On average in these ten countries, three-quarters (76%) of midwifery educators are midwives. On this measure, the region compares well against the global average of 65%. [19] However, Figure 2.14 illustrates how these averages mask wide variation between countries. Six of the ten responding countries said that all their midwife educators were midwives, but four reported that 50% or fewer were midwives, and in Djibouti only 10% are midwives.

Figure 2.14: % of midwife educators who are themselves midwives, by country, 2020



World Health Organization (WHO) guidelines for improving the quality of health professional education and training make a number of recommendations, including increasing the number and competencies of faculty and regular curriculum reviews. [35] Central to these guidelines was a call to establish and strengthen education accreditation systems. Tools exist to support this process, including ICM's midwifery education accreditation programme. [36]

In partnership with ICM, UNICEF and WHO, UNFPA published a framework for strengthening quality midwifery education. [37] This identified three strategic priorities: (i) all midwives to be educated and trained to international standards, (ii) the appointment of midwife leaders who can influence key decisions about investment in midwifery education, and (iii) better coordination and alignment between stakeholders. Some Arab countries have recognized the need to make strategic investments in midwifery education. For example, Morocco has taken several steps to increase the professionalization of midwifery, including the expansion of education opportunities to include master's degree and doctorate programmes. [38] Libya is currently developing a new policy and strategic action plan for midwifery and nursing education (Box 2.2).

Box 2.2: Towards a national policy and strategic action plan for midwifery and nursing education and training in Libya

The Libyan conflict has had a devastating effect on the country's health and education systems. To build a solid foundation for the future of nursing and midwifery, UNFPA and its partners have started the process of developing a national midwifery and nursing education and training policy and accompanying strategic action plan.

The first stage of this process was to hold introductory meetings with high-level decision-makers, starting with the Hon. Deputy Minister of Higher Education and Scientific Research and the Directorate of Human Resources at the Ministry of Health. The outcome of these meetings was agreement on the need for a policy and strategic plan for nursing and midwifery education and training as part of the effort to transform the country's health services.



The team then undertook a situation analysis. This was a consultative process involving stakeholders at different levels of the health and education systems, with a focus on leaders in higher education institutions and health facilities. The situation analysis highlighted challenges to the provision of high-quality midwifery and nursing education, including:

- A lack of coordination between relevant government ministries, resulting in misalignment between the need for and production of nurses and midwives
- A proliferation of short-term training programmes of dubious quality, producing large numbers of underqualified health workers
- A lack of standard, competency-based curricula
- A lack of qualified midwife and nurse educators, leading to most teaching being done by doctors
- Insufficient opportunities for student nurses and midwives to gain practical experience due to insufficient equipped skills labs
- A lack of opportunity for midwives and nurses to take up leadership positions and thus influence strategic policy and planning
- A lack of continuing professional development programmes

The results of the situation analysis were used to develop a strategic framework with proposed policy statements and strategic objectives. This has been shared with the relevant government ministries. The ministries assigned technical and scientific committees, who will lead the process of elaborating and refining the strategic objectives. UNFPA has been invited to develop an institutional development framework and monitoring and evaluation framework for implementation of the strategic plan. It is hoped that the policy and strategy will eventually align the efforts of all education and training institutions so that all Libya's nurses and midwives will receive high-quality education and training.

The legislative, policy, regulation, and working environment

In this section, we consider both legislation and policy. In this context, policy can be defined as a set of principles that guide the actions of a government or health system. By contrast, legislation involves enshrining in law a procedure or standard that must be followed by all relevant actors.

National laws and regulations establish who is qualified to use the title “midwife”, as well as the midwife’s scope of practice. Midwives’ associations are established at country level to support members of the profession and to provide leadership to strengthen and advance the role and impact of midwives. Most countries in the region have at least one professional association specifically for midwives, the exceptions being: Jordan, Palestine, and Syria.

Some countries in the region have made major progress in recent years towards introducing appropriate legislation to optimize the role of midwives. For example, Morocco recognized the potential of midwives to contribute to reduced maternal mortality, and passed a law which redefined the midwifery profession, expanded the scope of practice of a midwife and set up a new regulatory authority. [38] Out of 13 reporting countries, 10 (77%) have legislation in place which recognizes midwifery as distinct from nursing. The three exceptions are Somalia, Syria, and Tunisia. SoWMy 2021 reported that 77% of countries across the world have such legislation, [19] so the Arab region is in line with the global average on this measure. Of the ten Arab countries who reported on this indicator in both 2015 and 2021, Yemen is the only one to have introduced a change: it now has legislation to recognize midwifery as a distinct profession. [14]

Out of 14 responding countries, 11 have midwives in leadership roles² at some level of the health system. Of these 11 countries, 10 have a midwife leader in the national ministry of health (MoH), 9 have midwife leaders at sub-national MoH offices, 8 in the regulatory authority and 7 in health facilities (Table 2.5). All four of the region’s low-income countries have midwives in leadership roles at all levels of the health system, but this is less common in the other income groups.

2 “Leadership role” was defined as referring to a number of management, supervisory and executive titles, including: chief midwife, midwife advisor, midwife director, maternity advisor, midwife-in-charge, president, chief executive, executive director, chair, head of school, head of programme.

Table 2.5: Existence of midwives in leadership positions, by country, 2020

Income group	Country	Midwife leader(s) in...			
		National MoH	Sub-national MoH	Regulatory authority	Health facility
High	Saudi Arabia	✓	✓	✓	✗
Upper middle	Iraq	✗	✗	✗	✗
	Jordan	✓	nr	nr	nr
	Lebanon	✗	✗	✗	✓
	Libya	✗	✓	✗	✗
Lower middle	Algeria	✗	nr	nr	nr
	Djibouti	✓	✓	✓	✓
	Morocco	✓	✓	✓	✓
	Palestine	✓	✗	✓	✗
	Tunisia	✓	✓	✗	✗
Low	Somalia	✓	✓	✓	✓
	Sudan	✓	✓	✓	✓
	Syria	✓	✓	✓	✓
	Yemen	✓	✓	✓	✓
Number of countries		10/14	9/14	8/14	7/14

MoH = ministry of health; nr = not reported.

Table 2.6 summarizes elements of the policy environment for midwifery in the region. Most reporting countries have a national policy or guideline that recommends midwife-led care for pregnancy, childbirth and the postnatal period. Slightly fewer have a policy/guideline setting forth a competency framework for maternal and/or newborn care, and a policy/guideline on regulation of RMNCAH workers that is based on ICM competencies. Lebanon, Somalia and Tunisia are the only countries to have none of these policies/guidelines. Oman and Sudan have some, but not all, of them.

Table 2.6: Policy environment for midwifery, by country, 2020

	National policy/guideline...				
	...recommends midwife-led care for pregnancy	...recommends midwife-led care for childbirth	...recommends midwife-led care for postnatal period	...sets forth competency framework for maternal and/or newborn care	... on regulation of midwifery care providers based on ICM competencies
Algeria	✓	✓	✓	✓	✓
Djibouti	✓	✓	✓	✓	✓
Egypt	✓	✓	✓	✓	✓
Iraq	✓	✓	✓	✓	✓
Jordan	✓	✓	✓	✓	✓
Lebanon	x	x	x	*	*
Morocco	✓	✓	✓	✓	✓
Oman	x	x	x	✓	✓
Palestine	✓	✓	✓	nr	✓
Saudi Arabia	✓	nr	nr	✓	✓
Somalia	x	x	x	x	x
Sudan	✓	✓	✓	x	x
Syria	✓	✓	✓	✓	nr
Tunisia	x	x	x	x	x
UAE	nr	✓	nr	nr	nr
Yemen	✓	✓	✓	nr	nr
Number of countries	11/15	11/15	10/14	9.5/13	9.5/13

* = partial. ICM = International Confederation of Midwives; nr = not reported; UAE = United Arab Emirates.

Box 2.3 contains examples of midwives stepping up to take the lead when lives were in danger. When midwives are enabled to take the lead, they can make a positive difference to sexual and reproductive health and reproductive rights, especially when they work close to the communities they serve.

Box 2.3: Midwives taking the lead on care provision in Somalia and Yemen

Somalia

Midwife Hoodo A/Rahman Dixood works at the health centre in Fiqi-Adan. She told us about Amina*, a 45-year-old woman who had been pregnant 15 times but all of her babies had been stillborn at 7-8 months of gestation. Hoodo took charge of Amina's care in her 16th pregnancy, encouraging her to attend all of her antenatal care appointments, and explaining to her family why it was important that they allowed Amina to attend. Knowing that none of Amina's previous pregnancies had reached full term, when she was 6 months pregnant, Hoodo referred her to Borama general hospital for an ultrasound scan and other tests. There, she was advised to have a caesarean section before reaching 35 weeks of gestation. She gave birth to a healthy baby. This happy ending was a result of Hoodo's leadership, and of excellent teamwork between midwives and doctors. Amina said: *"If the health centre had not been there, my life and the life of my baby would have been endangered. I am very happy with the midwives in Fiqi-Adan, and the doctors of Borama hospital."*

Yemen

Ashjan Mohammed is a community midwife in Al Makhader district, who has been working at the UNFPA-supported maternal health clinic since 2018. News about the clinic and the midwife has spread throughout the village and neighbouring village, and there is now increased demand for these services. Ashjan recounted the story of one of her clients named Rabab*. Rabab gave birth in a hospital two hours away, and left the hospital two hours after giving birth. When she was nearly home, she started to bleed heavily. She went to Ashjan's clinic, where Ashjan was able to stop the bleeding and save Rabab's life.



© UNFPA Yemen

* Some names have been changed to protect anonymity.

Another regulatory component which is critical to ensure high quality health care is the existence of effective health worker regulation and licensing systems. Of the 14 reporting countries, 11 have a regulatory system for midwives (the exceptions being Lebanon, Somalia, and Yemen), but only 6 treat midwifery as a separate health profession by either having a regulatory body specifically for midwives or having distinct policies and processes for midwives (Table 2.7). Similarly, 11 countries have a system of requiring midwives to gain a license to practice (the exceptions are Algeria, Somalia, and Tunisia, and the system in Yemen is only partially operational), but only 4 countries require periodic relicensing with proof of continuing professional development (CPD). Midwives working in countries without such a system may not have the most up-to-date skills and competencies.

Table 2.7: Midwife regulation and licensing systems, by country, 2020

Midwife regulation system	Countries with this system
Regulatory body specifically for midwives	Djibouti
No separate regulatory body for midwives, but distinct policies and processes for midwives	Jordan, Libya, Morocco, Palestine, Syria
No separate regulatory body for midwives, and no distinct policies and processes	Algeria, Iraq, Saudi Arabia, Sudan, Tunisia
No regulation system for midwives	Lebanon, Somalia, Yemen
Midwife licensing system	Countries with this system
Compulsory licensing with periodic relicensing and CPD requirement	Jordan, Morocco, Saudi Arabia, Sudan
Compulsory licensing with periodic relicensing but no CPD requirement	Iraq, Libya, Palestine
Compulsory licensing: one-off event	Djibouti, Lebanon, Syria, Yemen*
Licensing not compulsory	Algeria, Somalia, Tunisia

CPD = continuing professional development. UAE = United Arab Emirates. * System exists but is not fully implemented.

While essential for safe practice, licensing and regulatory systems are not sufficient to maximize midwives' contribution to improved sexual and reproductive health and reproductive rights. In many countries, midwives do not have the authority to perform tasks typically considered part of the midwife's scope of practice. For example, Figure 2.16 shows that, in most of the 14 responding countries, midwives are authorized to provide three of the seven basic emergency obstetric and newborn care (BEmONC) signal functions, but the other four functions are authorized in half of countries or fewer. Djibouti and Morocco are the only countries in the region that authorize midwives to provide all seven signal functions. In Jordan, midwives are not authorized to perform any of the seven. None of the countries providing data on this indicator in both 2015 and 2021 report a broadening of the midwife's scope of practice. In the vast majority of countries of the world, midwives are authorized to provide the first five signal functions, and in half of countries they are authorized to provide the final two. [19] This indicates that the Arab region restricts the scope of practice of its midwives more than most other parts of the world.

Table 2.8: Midwives' authorization to perform each BEmONC signal function, by country, 2020

	Newborn resuscitation with bag and mask	Parenteral administration of antibiotics	Administration of oxytocics	Administration of anticonvulsants	Manual removal of placenta	Assisted instrumental delivery by vacuum extraction	Manual vacuum aspiration for retained products
Algeria	✓	✗	✗	✗	✓	✗	✗
Djibouti	✓	✓	✓	✓	✓	✓	✓
Iraq	✓	✗	✗	✗	✗	✓	✗
Jordan	✗	✗	✗	✗	✗	✗	✗
Lebanon	✓	✓	✓	✗	✓	✗	✗
Libya	✗	✓	✓	✗	✗	✗	✗
Morocco	✓	✓	✓	✓	✓	✓	✓
Palestine	✗	✓	✓	✓	✗	✗	✗
Saudi Arabia	✓	✓	✓	✓	✓	✗	✗
Somalia	✓	✓	✗	✓	✓	✓	✓
Sudan	✓	✓	✗	✗	✗	✗	✗
Syria	✓	✗	✗	✓	✗	✓	✗
Tunisia	✓	✓	✓	✗	✗	✗	✗
Yemen	✓	✓	✓	✓	✓	✗	✓
Number of countries	11/14	10/14	8/14	7/14	7/14	5/14	4/14

BEmONC = basic emergency obstetric and newborn care.

Box 2.4 provides examples of how midwives who are educated and enabled to provide emergency care can save lives. These stories highlight the importance of all midwives – and especially those in peripheral health facilities – having the skills and the equipment they need to provide basic emergency obstetric and newborn care, and of a functioning referral system. When these aspects of an enabling work environment are in place, midwives are able to contribute to a positive outcome in an emergency.

Box 2.4: Midwives providing emergency care to save lives in Somalia and Yemen

Somalia

Midwife Halimo Mohmoud Hadi works at Dilla hospital in Somaliland. She recounted the story of Samsam* who arrived at the hospital 38 weeks' pregnant with her seventh baby, bleeding heavily and in shock. Halimo was able to stabilise Samsam by inserting an intravenous fluids line, and then she arranged an emergency transfer to the regional hospital. At the regional hospital, Samsam received a blood transfusion and gave birth by caesarean section. She and her baby left the hospital in good health one week later.



Yemen



Naeema Saleh is a community midwife who works at a private clinic supported by UNFPA in Habban district. She told us about Mariam* who had previously given birth four times without a skilled attendant because the family could not afford to travel to the nearest hospital. Mariam's fifth pregnancy in 2020 was post-term, and she spent all of her family's savings to travel to Ataq hospital in Shabwa. A caesarean section was recommended, but did not go ahead for fear of

COVID-19 infection. Mariam had no choice but to return to Habban. On arrival at Naeema's clinic, Mariam was very weak but she gave birth to a healthy son after a difficult labour, supported by Naeema's knowledge and skill and the enabling working environment at her clinic.

* Some names have been changed to protect anonymity.

Similarly, although WHO recommends that midwives can safely and effectively provide a wide range of contraceptive products, [39] some countries' regulatory systems restrict the range of products which midwives are authorized to provide. Most countries in the region authorize their midwives to provide pills, injections and intrauterine devices, but only half authorize them to provide emergency contraception and just four to provide implants (Figure 2.17). Djibouti and Yemen are the only countries in the region that authorize their midwives to provide all five methods. In three countries (Iraq, Jordan, and Libya) midwives are not authorized to provide any of the five. Again, none of the countries providing data on this indicator in both 2015 and 2021 reported a broadening of the midwife's scope of practice over that time. In the majority of countries of the world (except in Europe), midwives are authorized to provide all five methods. [19] Again, this indicates that the Arab region restricts the scope of practice of its midwives more than most other parts of the world. Box 2.5 gives an example of how midwives can increase access to contraception, when they are enabled to do so.

Table 2.9: Midwives' authorization to provide modern methods of contraception, by country, 2020

	Pill	Injection	Intrauterine device	Emergency contraception	Implant
Algeria	✓	✓	✓	✓	✗
Djibouti	✓	✓	✓	✓	✓
Iraq	✗	✗	✗	✗	✗
Jordan	✗	✗	✗	✗	✗
Lebanon	✓	✓	✓	✓	✗
Libya	✗	✗	✗	✗	✗
Morocco	✓	✓	✓	✓	✗
Palestine	✗	✗	✓	✗	✗
Saudi Arabia	✓	✓	✓	✗	✓
Somalia	✓	✓	✗	✗	✓
Sudan	✓	✗	✗	✗	✗
Syria	✓	✓	✓	✓	✗
Tunisia	✓	✓	✓	✓	✗
Yemen	✓	✓	✓	✓	✓
Number of countries	10/14	9/14	9/14	7/14	4/14

Box 2.5: Midwives increasing access to contraception in Sudan

Women in Sudan who wish to use family planning methods often face a range of obstacles. Even if a woman receives high-quality counselling, her contraceptive method of choice may not be available in her local area. The use of contraception can be stigmatized, which can lead to uncomfortable interactions at the health facility, or deter women from seeking the service altogether. Services in the private sector can be prohibitively expensive.

Considering these challenges, Alzayrat Health Centre in South Darfur was established in 2004 by Mariam Abdallah and three of her fellow midwives. It is a social enterprise built on public-private partnership. The MoH deploys midwives and nurses to the centre, and provides family planning commodities donated by UNFPA. The centre is funded by a mix of user fees and contributions from health care providers.

3. Midwifery in humanitarian and fragile settings



The global commitments made to the sexual and reproductive health and reproductive rights of women and girls are fully applicable in humanitarian crisis situations, because the need and demand for these services continues. [40] However, the evidence indicates that crises negatively affect RMNCAH in various ways, including a reduction in the availability and accessibility of basic services such as contraception and antenatal care as well as availability of emergency obstetric care. As a result, maternal and neonatal mortality rates tend to be high in humanitarian and fragile settings. [41] For this reason, the current *Global Strategy for Women's, Children's and Adolescents' Health (2016-2030)* highlights humanitarian and fragile settings as a priority area for action. [5]

This chapter examines the scale of the crises affecting the Arab region, discusses the implications for the midwifery workforce and provides examples from the region of high-quality midwifery care in humanitarian and fragile contexts. No new data were collected for this section of the report. Rather, evidence from existing literature and databases are cited and synthesized to acknowledge the importance of humanitarian crises in the Arab region, highlight the implications for the midwifery workforce, and showcase successful midwifery initiatives in humanitarian settings.

The scale of the region's humanitarian crises

Fragile settings are characterized by the combination of exposure to risk and insufficient capacity to manage, absorb or mitigate those risks. [22] The OECD defined 57 countries across the globe as "fragile" or "extremely fragile" contexts in 2020. These included eight countries in the Arab region: Djibouti, Iraq, Libya, Palestine, Somalia, Sudan, Syria, and Yemen. Five are classed as "extremely fragile": Iraq, Somalia, Sudan, Syria, and Yemen. [22]

According to the United Nations High Commissioner for Refugees (UNHCR), at the end of 2020, globally 82.4 million people had been forcibly displaced and were living as asylum seekers, refugees or internally displaced persons (IDPs). A further 9.5 million people were classed as "returnees, stateless persons or others of concern to UNHCR", making a total of 91.9 million persons of concern. [42] Of these 91.9 million people, 30% originated from a country in the Arab region, and 25% were hosted in the region. [43]

Table 3.1 presents a summary of key indicators relevant to the provision of RMNCAH services in the region. It shows that most countries in the region are affected by humanitarian crises to some extent, and that the numbers of affected persons are highest in: Iraq, Libya, Somalia, Sudan, Syria, and Yemen. Djibouti, Jordan, Lebanon, and Sudan also stood out as hosting large numbers of persons of concern relative to their population size, which creates additional pressure on their health systems. Where data on age and sex is available, it shows that on average 30% of the persons of concern hosted in the region are adult women or adolescent girls, most of whom will be in need of RMNCAH services.

Table 3.1: Persons of concern to UNHCR, by country of origin and host country, % who are adult women or children under 5 years, and refugees per 1000 population, 2020

Country	Fragile states index category	Persons of concern originating from this country	Persons of concern hosted in this country	Refugees hosted per 1000 population	% of those hosted* who are women aged 18-59	% of those hosted* who are girls aged 12-17
High-income countries						
Bahrain	Non-fragile	672	360	0.15	36	4
Kuwait	Non-fragile	2,865	93,811	0.17	nr	nr
Oman	Non-fragile	1,096	638	0.06	30	8
Qatar	Non-fragile	76	1,644	0.07	27	6
Saudi Arabia	Non-fragile	3,295	79,774	0.01	24	7
UAE	Non-fragile	367	8,686	0.13	26	8
Upper-middle-income countries						
Iraq	Extremely fragile	2,109,057	1,833,998	6.72	26	5
Jordan	Non-fragile	8,318	708,364	68.85	24	7
Lebanon	Non-fragile	18,108	887,853	127.53	24	8
Libya	Fragile	406,708	427,814	0.61	20	4
Lower-middle-income countries						
Algeria	Non-fragile	12,565	99,810	2.23	19	4
Djibouti	Fragile	4,628	33,320	21.47	25	7
Egypt	Non-fragile	42,816	329,322	2.67	22	5
Morocco	Non-fragile	13,057	13,549	0.22	20	3
Palestine	Fragile	113,587	nr	nr	nr	nr
Tunisia	Non-fragile	4,487	6,383	0.22	27	3
Low-income countries						
Somalia	Extremely fragile	4,126,421	3,282,498	0.71	20	6
Sudan	Extremely fragile	3,409,803	3,612,234	23.72	nr	nr
Syria	Extremely fragile	13,614,539	7,024,933	0.88	25	8
Yemen	Extremely fragile	4,067,732	4,190,446	5.60	22	10
Arab region		27,960,197	22,635,437	na	22	8

na = not applicable; nr = not reported; UAE = United Arab Emirates. * The denominator of this percentage is the number with data on age and sex, which in some cases is a small minority of the total number of persons hosted. Source: Fragile states index category from OECD. [22] Numbers from UNHCR 2021. [43]

The number and scale of the humanitarian crises affecting the Arab region is a significant challenge to the achievement of its SDG targets. UNFPA's vision for humanitarian action places RMNCAH at the core of crisis prevention, response and recovery, and identifies seven services which should be prioritized from the onset of a crisis: EmONC, referral system for obstetric emergencies, supplies for clean and safe deliveries, contraception, condoms, anti-retrovirals, and clinical care for survivors of rape. [41] It aligns with the Minimum Initial Service Package (MISP): a priority set of life-saving interventions to be implemented at the onset of a crisis to maintain access to essential RMNCAH services. [44]

The concept of a “humanitarian-development-peace nexus” (HDPN) – also known as the “triple nexus” – has evolved to reflect the fact that addressing risk and vulnerability before, during and after crises requires humanitarian relief, development programmes and peacebuilding to be addressed concurrently rather than as separate elements of a linear process. This requires structural shifts so as to ‘future proof’ humanitarian and development efforts and to acknowledge that crises are becoming more complex and protracted than ever before. The United Nations is putting the HDPN into practice via the “New Way of Working”, which calls on humanitarian and development actors to work collaboratively towards “collective outcomes” that increase resilience and reduce need, risk and vulnerability across a 3-5 year period. [45]

The high prevalence of humanitarian crises has provided an impetus for the region to take a leading role in putting the HDPN into practice. Within the health sector, this brings with it the need for flexible funding and implementation modalities that allow local actors to have the major role in decision-making without at the same time having to bear most of the risk. [46]

The role of midwives during humanitarian crises

Motivated health care workers are needed throughout the health emergency and disaster risk management cycle, and this includes RMNCAH workers. Lack of attention to the specific RMNCAH needs of women and girls during crises can lead to their needs being overlooked in humanitarian responses. Midwives have several characteristics which make them uniquely well placed to respond to these specific needs. They are specialists in RMNCAH care who – when educated, regulated and enabled to work to their full scope of practice – can provide most of the RMNCAH services which have been identified as priorities in a crisis, [47] nearly all are themselves women, [19] and they are more likely than other health professional occupations to remain in post during a crisis, [15] perhaps due to their strong links with the communities they serve.

ICM has published a position statement on the role of the midwife in disaster/emergency preparedness. This document recommends that midwives' associations should ensure they understand the possible emergencies that may occur in their country and the types of services that will be needed in the event of an emergency. It is vital for midwives to be included in national emergency preparedness planning, to ensure that midwifery is not overlooked in a disaster response. It is also essential for education and training curricula to cover the provision of effective RMNCAH care in a crisis. [48]

Box 3.1 describes the work of midwives working with refugees and IDPs in Jordan and Sudan, and highlights how the unique philosophy of midwifery is so much needed and appreciated by displaced women and girls.

Box 3.1: Midwives provide outstanding care for refugees and IDPs in Jordan and Sudan

Ammoun's story

Ammoun Kitabi is a Jordanian midwife who obtained her qualification in Syria in the 1980s. Having previously worked in senior positions in Syria and Jordan, she now works at the UNFPA reproductive health clinic in Zaatari refugee camp, Jordan. The women in her care are in need of clinical services, but they also need someone to restore their lost faith in humanity. Ammoun believes that midwifery is a humanitarian profession first and foremost, which inspires her to treat each client as a member of her own family. She considers all the newborns as her own children, "because I was there for them when their eyes saw light for the first time." Her outstanding care, kindness and commitment inspires the love and respect both of her colleagues and of the camp residents.



Rahma's story



Rahma Al Omari qualified as a midwife in 2015. Since 2018 she has worked at the UNFPA clinic in Azraq refugee camp, Jordan. Like Ammoun, Rahma treats her clients like members of her own family. She defines a midwife as "the protector, mother and caregiver to both the mother and the child". She pays close attention to the specific needs of her clients so that she can provide them with the best possible service. She says "this builds trust between us."

The arrival of COVID-19 brought additional challenges. Transport services were suspended, which made it much more difficult for Rahma and her colleagues to get to work. For two weeks, Rahma was the only midwife providing services to a camp of 50,000 people, over half of whom are women. She made the 2km journey to work on foot, carrying her 9-month-old baby and holding the hand of her 3-year-old daughter, dropping them off at a home-based nursery on the way and collecting them after her shift was over. She was inspired to continue because she could see the level of need for her services: "When I sense satisfaction in the eyes of the women we tend to, I realize how much they are in dire need of the services we provide. I then forget all about the challenges that I face."

Aldodawa's story

Aldodawa has worked as a midwife in West Darfur in Sudan for over 25 years. She was inspired to become a midwife when she witnessed a maternal death in her community: "When I was 13 years old, my neighbour passed away during childbirth. I vividly recall her screaming for days. It was devastating when she died. I felt there was a better way and more to be done."



When conflict broke out in May 2021, Aldodawa started working at a UNFPA-supported clinic in the Kaga camp for IDPs, since when the clinic has provided sexual and reproductive health services to over 1300 women and girls. Her energy and joy has contributed to a relationship of trust with the community, with the result that women come from all over West Darfur to receive care from her.

The analyses in this report show that the region is experiencing a midwife shortage, and health worker shortages are invariably exacerbated by humanitarian crises. In addition, as is evident from the stories in Box 3.1, the provision of high-quality RMNCAH care in a crisis requires a workforce with the confidence and competencies to provide essential RMNCAH care autonomously, and even in difficult situations. To build resilience to crises, midwives in all countries should be adequately educated, trained, regulated and supervised to enable them to work to their full scope of practice.

Crisis-affected countries in the Arab region which did not invest in a strong midwifery profession found that their ability to meet the need for high-quality RMNCAH care was reduced when crises occurred. For example, the pre-war Syrian health system did not support autonomous midwifery care in facilities and communities, with the result that midwives had limited capacity to contribute to the provision of RMNCAH care during the crisis. This lack of a strong midwifery profession in the country makes it more challenging to rebuild the RMNCAH care system. [29] Similarly, midwives attending births in Palestine during a period of armed conflict found themselves ill-equipped to provide high-quality care outside of a hospital setting. [49] On the other hand, investment in community midwives in Yemen prior to and during the current conflict means that RMNCAH services in rural areas have continued despite the crisis. [38] Box 3.2 gives examples of how this investment has resulted in improved outcomes for mothers and newborns from communities affected by the conflict.

In 2005, WHO issued guidance on health workforce development in post-conflict environments. This document sets out key health workforce considerations for policy-makers, senior managers and donors, and describes the steps to be taken during reconstruction of the health system in terms of human resource management, policy, planning, education, financing and interagency coordination. [50]

Box 3.2: Prior investment in community midwives saved lives in Yemen

Lena and Abia's story

Midwife Lena Al-Shurmani works on a mobile outreach team, providing integrated reproductive health services. Her work focuses on vulnerable, displaced families living in camps and spontaneous settlements. Often these families are unable to access health services. Lena remembers meeting Abia* at Al Mawa camp in Ibb: Abia was 15 years old and 8 months' pregnant. Lena was worried about her: "She had a prolapsed uterus and was severely malnourished."



Lena's concern was well founded. When Abia went into labour, she began bleeding profusely. The family did not know where to find a hospital, and even if they had known, they could not afford to travel. Abia's husband rushed to find Lena, who arrived at Abia's side at 2am. Abia lost consciousness many times during her labour, but Lena managed to bring the bleeding under control, and Abia gave birth to a healthy baby. Later, Abia said "I am very grateful to the midwife. She travelled far in the middle of the night to save my life and my baby."

Lina and Amna's story



Lina Mohammed Fawz was trained and supported by UNFPA to establish a private midwifery clinic in Warazan village in the district of Dimnat Khadir. Lina tells the story of Amna*, a 38-year-old mother of three who, at 9 months' pregnant, was forced to flee her home. The family walked for 20 hours on mountainous roads to reach Warazan, where they spent five days struggling to find food and shelter. Amna was exhausted, hungry and dehydrated to the extent that she kept losing consciousness. Community members advised Amna's

husband to take her to Lina's clinic.

Lina recalls: "I used the doppler device to check on the fetus, and I couldn't hide my surprise ... I repeated the procedure three times before I broke the news to her and her husband that she was carrying twins! They were stunned and silent for a few minutes, then relieved to know that the babies were unharmed ... Amna's eyes filled with tears as she found out that the services here in this clinic will be free of charge for her."

Amal and Jomaa's story

Amal Jareebah works at the Maternal Health Best Practices clinic in Jordan district. The district is famous for high-quality honey, but it also had a reputation for very poor quality health services. The clinic is staffed by trained community midwives who had previously been unemployed for several years.



Jomaa*, a 36-year-old mother of five, arrived at the clinic in February 2020 from her home in a remote village. She was very fatigued and her fetus was in a transverse position. Amal referred her to the hospital in Ataq, a 50km journey from the clinic. However, heavy rain and flooding made the journey impossible, so it was up to Amal to ensure a healthy labour and birth. She was able to correct the position for the fetus to a head-down presentation and Jomaa gave birth to a healthy baby.

* Some names have been changed to protect anonymity.

Impact of COVID-19 on RMNCAH and the workforce

Emerging data indicate that COVID-19 will affect progress towards the SDGs, particularly in humanitarian and fragile settings. [22] As with other humanitarian crises, epidemics can result in sexual and reproductive health and reproductive rights being overlooked, especially in contexts with weak health systems. The Arab region initially kept transmission and mortality rates lower than the global average, but weak health systems and humanitarian crises in many countries have impeded the region's ability to respond to the pandemic. [51]

Efforts to contain disease outbreaks can divert resources away from the provision of routine RMNCAH care. [52] In the early stages of the COVID-19 pandemic, RMNCAH workers in the Arab region were being asked to support the COVID-19 response at the expense of their core responsibilities. [53] WHO has tracked levels of service disruption due to COVID-19 in several areas of health care. They collected data in two rounds: June-August 2020 and January-March 2021. Overall, there was much less disruption in the second round than in the first, and Table 3.2 shows data from the second round relating to RMNCAH services. It shows low levels of RMNCAH service disruption in all high-income countries. The situation in middle-income countries was mixed, with Egypt, Iraq, Jordan and Morocco reporting high levels of disruption for some RMNCAH services, and several countries with missing data, especially for intimate partner violence (IPV) and post-abortion care services. The lack of data on IPV is of particular concern, given the evidence that the need for such services is known to increase at times like this. [53, 54] Missing data is also an issue in the low-income countries, but among reporting countries service disruption was at relatively low levels except for facility-based births in Somalia. This level of disruption is of particular concern given Somalia's already low levels of skilled birth attendance (see Figure 1.5).

WHO estimates that health workers experienced more than triple the risk of COVID-19 infection compared with the general population. [57] To minimize these risks they require priority access to vaccines and personal protective equipment (PPE). Inequitable distribution of vaccines, [58] sometimes combined with vaccine hesitancy, [59, 60] means that in some parts of the world health worker vaccination rates are very low. [61] ICM has called on all midwives to be vaccinated both to protect themselves and to fulfil their professional obligation to those in their care. [62]

Table 3.2: Estimated % of RMNCAH services disrupted by COVID-19 (January-March 2021) and COVID-19 deaths reported per 100,000 population (November 2021)

	Family planning and contraception	Antenatal care	Postnatal care	IPV prevention and response	Post-abortion care	Facility-based births	COVID-19 deaths per 100,000 population
High-income countries							
Bahrain	<5%	<5%	<5%	<5%	<5%	<5%	82
Kuwait	5-25%	<5%	<5%	<5%	<5%	<5%	58
Oman	<5%	<5%	<5%	na	<5%	<5%	81
Qatar	<5%	<5%	<5%	<5%	na	<5%	21
Saudi Arabia	<5%	<5%	<5%	<5%	<5%	<5%	25
UAE	<5%	<5%	<5%	dk	<5%	<5%	22
Upper-middle-income countries							
Iraq	26-50%	5-25%	<5%	5-25%	dk	5-25%	59
Jordan	26-50%	26-50%	26-50%	5-25%	dk	dk	112
Lebanon	<5%	5-25%	dk	dk	dk	dk	127
Libya	nr	nr	nr	nr	nr	nr	79
Lower-middle-income countries							
Algeria	nr	nr	nr	nr	nr	nr	14
Djibouti	<5%	<5%	<5%	<5%	<5%	<5%	19
Egypt	>50%	26-50%	>50%	dk	5-25%	<5%	20
Morocco	5-25%	26-50%	26-50%	dk	dk	26-50%	40
Palestine	nr	nr	nr	nr	nr	nr	94
Tunisia	nr	nr	nr	nr	nr	nr	215
Low-income countries							
Somalia	5-25%	5-25%	dk	dk	dk	26-50%	8
Sudan	<5%	5-25%	5-25%	dk	dk	5-25%	7
Syria	<5%	<5%	<5%	<5%	<5%	<5%	16
Yemen	dk	dk	dk	dk	dk	dk	7

IPV = intimate partner violence. UAE = United Arab Emirates. dk = don't know. na = not applicable. nr = not reported. Source: service disruption data from WHO 2021. [55] COVID-19 death data from WHO 2021. [56]

A global survey of midwives' associations at the end of 2020 found that, in most countries, midwives had insufficient PPE with the result that they had to make or purchase their own supplies and/or take risks such as re-using single-use PPE or working without PPE. [19] PPE shortages were also recorded in many countries in the region. [38] Box 3.3 describes how midwives in three countries continued to provide essential services despite these challenges. The midwives featured in these stories are rightly proud of their essential contribution to the continued provision of essential care during the pandemic. However, health systems should not be totally reliant on the professionalism and commitment of their health workers to maintain RMNCAH services in a crisis. Midwives and their colleagues need and deserve to be protected and supported as well.

Data on the number of health workers infected with COVID-19 are scarce, but in May 2021 WHO estimated that globally more than 115,000 health workers had died of the disease, of whom almost 2000 were from the WHO Eastern Mediterranean region, [57] which includes most countries in the UNFPA Arab region. Although a small proportion of the total, this represents a major and tragic loss in a region which was already experiencing health worker shortages.

In addition to the infection risk, health workers are also likely to experience increased pressure at work during a pandemic, which puts them at higher risk of mental health problems. Additional psychosocial support for health workers will almost certainly be needed as part of post-COVID-19 recovery plans, but there is a lack of high-quality evidence about the effectiveness of different types of intervention. [63]

The RMNCAH workforce consists mostly of women, and the suspension of many education, childcare and transport services make it more difficult for working parents, especially women, to work their contracted hours [64]. The International Labour Organization estimated a 9% decline in working hours in the Arab region in 2020. [65]

Published in June 2020, UNFPA's COVID-19 global response plan [66] identified three strategic priorities, of which one was "continuity of sexual and reproductive health services and interventions, including protection of the health workforce". UNFPA also recommended the investment of time and resources to advocacy, in particular for RMNCAH services to be integrated with other relevant health services to ensure that RMNCAH is not overlooked in the pandemic response. The pandemic presented many challenges to continuity of services and protection of the workforce. Some countries took the decision to redeploy RMNCAH workers to COVID-19 wards, leaving RMNCAH clinics short-staffed. In other countries (e.g. Tunisia), fear of infection caused health workers in peripheral health facilities to refer more women in labour to higher-level facilities, which became overwhelmed by the increased workload. [38]

Box 3.3: Midwives continue to provide care throughout the COVID-19 pandemic: examples from Algeria, Djibouti and Morocco

Algeria

Many public services were cut back or closed as a result of COVID-19 restrictions. Midwives in Algeria were determined to continue to provide safe services despite the difficulties and challenges. In April 2020, the UNFPA country office launched a "call for witness", to collect the testimonies of midwives and emphasize their essential role in saving lives during the pandemic. Many stories were received, describing the resourcefulness and commitment of the country's midwives. For example, many manufactured their own PPE to protect themselves and their clients.



"Pregnant women are very vulnerable. Our duty is to provide them with the best possible protection during pregnancy and childbirth." (Said Naïma Rebai, Algerian midwife)

Nevertheless, some midwives lost their lives to COVID-19, and UNFPA pays tribute to them.

Djibouti

Fardoussalgueh Mahamoud qualified as a midwife in 2018 and started work at Cheiko hospital in Balbala. She tells the story of how her work has been affected by the COVID-19 pandemic and how UNFPA has supported her hospital to provide safe services:



"The pandemic seemed far away to me when I saw it on TV, but when the first cases were detected in Djibouti, my concern increased. Despite the considerable risk of infection and the lack of means of protection, I continued to work my shifts at the hospital ... What stressed me most is that we did not have COVID-safe services for pregnant women until we recorded a positive case in my region. With UNFPA support, we established a secure unit for women who come to give birth during the pandemic - this has helped us enormously."

Fardoussalgueh's story emphasizes the importance of RMNCAH services being prepared for health shocks such as COVID-19 so that when they occur, action can be taken to protect women, newborns and their families before it is too late.



Morocco

"I am so proud to be part of the health care professionals who are at the frontline fighting the pandemic to ensure mothers' and babies' safety. During antenatal consultations, our duty is to provide women with advice on how to protect themselves during this difficult period." (Chaimae Zoubari, Moroccan midwife)

Since the onset of the pandemic, UNFPA has been supporting midwives to continue working in various ways, including: providing PPE and training in its use, supporting governments to provide continuity of service delivery including telephone-based care, disseminating evidence-based guidance, and supporting education institutions to provide virtual learning. Such support has been provided to several countries in the Arab region, including Egypt, Morocco, and Palestine. [67]

The arrival of COVID-19 in countries experiencing humanitarian crises placed additional pressure on the health workforce. In 2020 UNFPA Arab States Regional Office published guidance on best practices and lessons learned from countries in humanitarian settings that adapted their RMNCAH work in response to COVID-19. [68] These included: the provision of new telephone-based delivery modalities for services which lend themselves to remote working; publications and virtual training packages on COVID-19 case management and the continued provision of essential services during the pandemic; and additional PPE for RMNCAH workers. These were achieved due to effective partnership working between UNFPA, its implementing partners and national stakeholders such as health ministries, professional midwives' associations and civil society organizations. With the pandemic still ongoing, initiatives such as these remain vital to ensure the continued provision of essential services while ensuring adequate protection for the workforce.

4. Midwives: a vital investment



Midwives provide many essential clinical RMNCAH interventions and can play a broader role in activities such as advancing primary health care and UHC, responding to violence against women, and addressing sexual and reproductive health and reproductive rights. [69] Their valued and respected role in the communities they serve positions them well to be agents of change in promoting women's empowerment (see Box 4.1) and behaviour change on family planning and also in addressing harmful social and gender norms and practices, such as female genital mutilation (FGM) and child and early forced marriage. They can be a point-of-contact in the community for sexual and reproductive health services. Midwives play a vital role in resuscitating newborns, promoting breastfeeding and supporting the mother and her family in infant care. Midwives can also support and promote self-care interventions such as self-monitoring of blood pressure during pregnancy.

Box 4.1: Investing in midwives increases women's empowerment in Somalia

Amran's story

Amran Hassan Mohamed graduated with a Diploma in midwifery from Buhodle Health Professionals Institute in December 2019. She now works at a maternity hospital in Buhodle. Her success at the midwifery school was especially impressive because she is the mother of 11 children and she kept up with her studies in addition to her domestic commitments.



Before she gained her qualification in midwifery, Amran and her children were completely financially dependent on her husband. Now her monthly income means she also contributes to the household finances. She is more confident, having developed skills in maternal and newborn care, and she feels that she is making a contribution to her community by helping mothers and their families. She is planning to upgrade her Diploma to a BSc in midwifery.

Saynab's story



Saynab Ahmed Farah graduated from Buhodle Health Professionals Institute in 2019 with a degree in midwifery. Her achievements are particularly impressive because she came from a rural area and received very little financial support from her family for her educational needs such as copy charges, accessories and living expenses. Despite this, her dedication and hard work earned her a place as one of

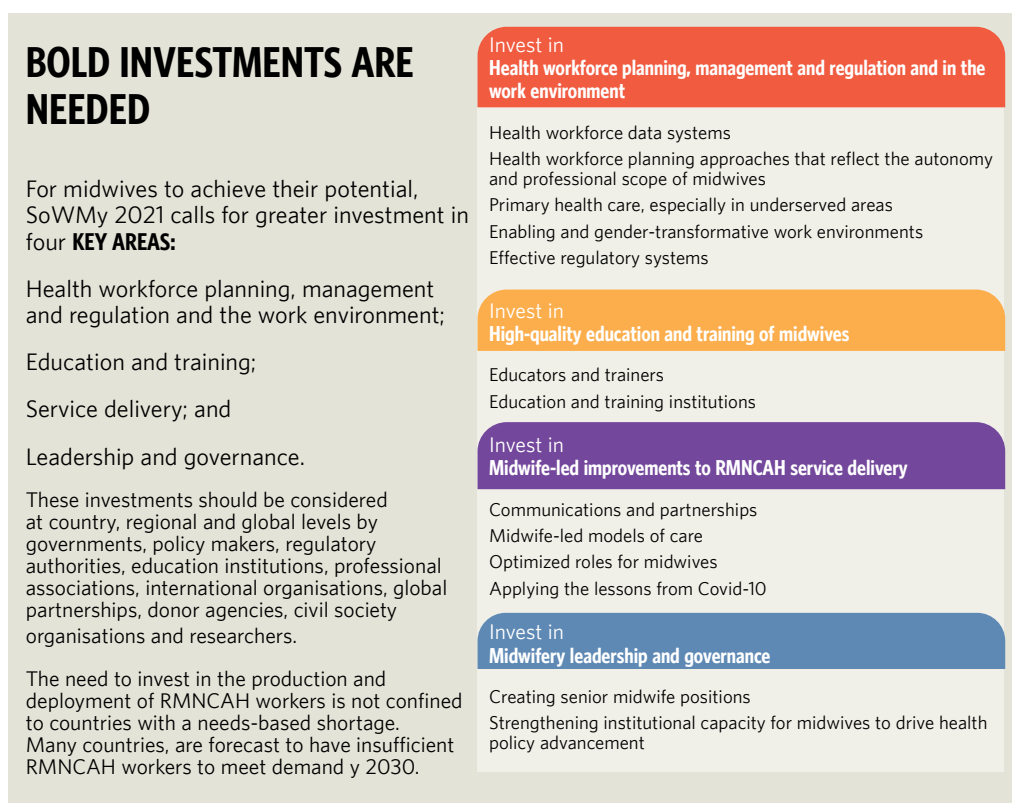
the top students in her cohort.

Saynab had previously qualified in Islamic studies, but she could not find work and spent her days doing household chores with her older sister. She now works as a professional midwife in Buhodle and also as a tutor at the university. Her earnings allow her to provide financial and practical support for her family. Her parents now live with her in the city, and Saynab is responsible for all of their needs and expenses.

In addition to their clinical roles, midwives also work in education institutions, management, policy, research, regulation, midwives' associations and government. It is important to count and value midwives working in these areas, which are fundamentally important for the development of the profession and for the provision of high-quality RMNCAH services. Strengthening midwifery at a country level requires multilevel investments, including in those who educate and support midwives in clinical practice.

SoWMy 2021 recommended that, for midwives to achieve their potential, there should be investment in four areas: (i) health workforce planning, management and regulation, and the work environment, (ii) high-quality education and training of midwives, (iii) midwife-led improvements to RMNCAH service delivery, and (iv) midwifery leadership and governance (Figure 4.1). [19]

Figure 4.1: Types of investment needed for midwifery



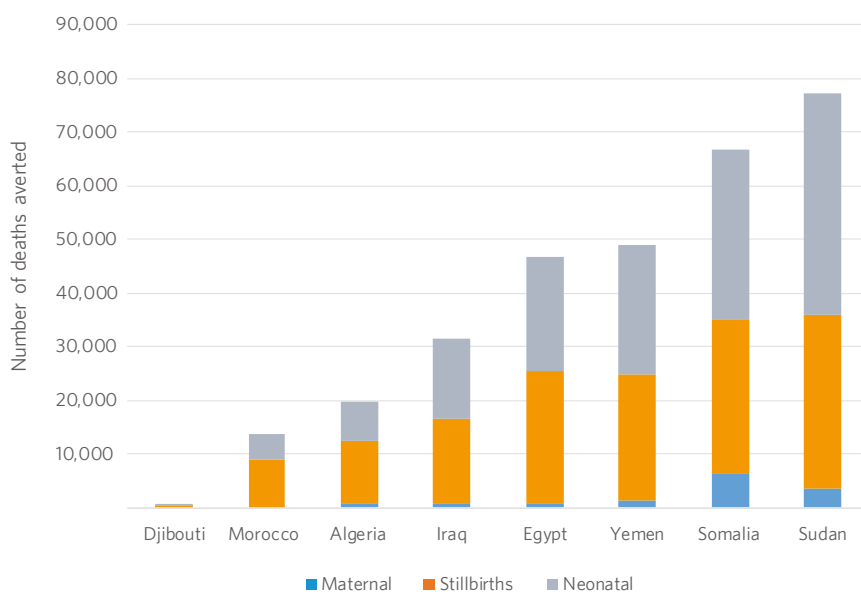
This chapter discusses the potential return on investment in midwives, and provides examples of such investments from the Arab region.

The positive impact that midwives can make

A recent study from 88 countries that account for the vast majority of the world's maternal and neonatal deaths and stillbirths concluded that universal coverage of midwife-delivered interventions could avert two-thirds of these deaths and save 4.3 million lives per year by 2035. [70] A special analysis of these estimates was conducted for this report,

estimating the number of lives that could be saved in the 8 Arab countries included in the study: Algeria, Djibouti, Egypt, Iraq, Morocco, Somalia, Sudan, and Yemen. It shows that universal coverage of midwife-delivered interventions³ in the region could save approximately 300,000 lives per year by 2035. Figure 4.2 shows that most of the lives saved would be in Sudan (almost 80,000 per year), Somalia (almost 70,000), Yemen (almost 50,000), and Egypt (almost 50,000), with substantial numbers also in Iraq, Algeria and Morocco, and smaller numbers in Djibouti.

Figure 4.2: Projected numbers of maternal and neonatal deaths and stillbirths averted in 2035 by universal coverage of midwife-delivered interventions



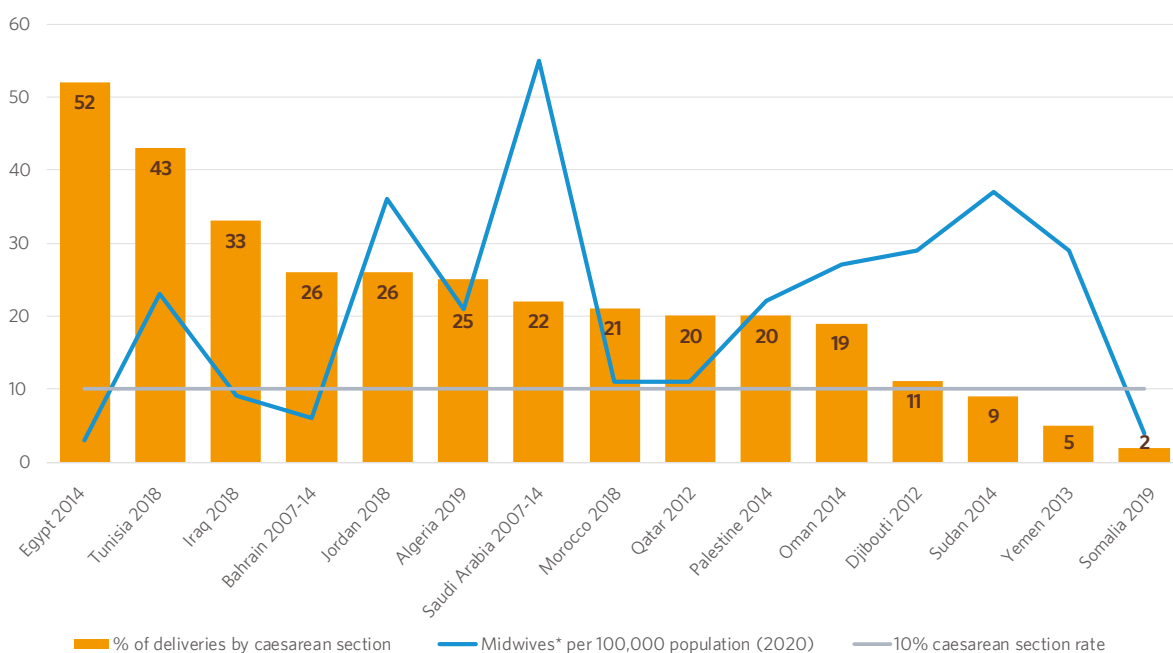
Source: Special analysis of projections used for Nove et al 2021. [70]

The unique philosophy of midwifery promotes physiological birth where this is the safest option. When medically necessary, caesarean sections save lives. However, they are often performed when not medically necessary. WHO states that when caesarean section rates rise towards 10%, the number of maternal and newborn deaths decreases, but that rates above 10% are not associated with further reductions of maternal and newborn mortality. [71] In 2018, WHO published five recommendations for reducing unnecessary caesarean sections, of which one is "*collaborative midwifery-obstetrician model of care (i.e. a model of staffing based on care provided primarily by midwives, with 24-hour back-up from an obstetrician)*". [72] Barriers to uptake of the recommendations included: low provider confidence and knowledge about vaginal birth (especially in high- and middle-income countries), insufficient human resources (especially in low- and middle-income countries), and "*dysfunctional teamwork ... including the marginalization of midwives*". It stopped short of recommending midwife-led continuity of care because the studies of this model of care did not have the objective of reducing unnecessary caesareans. However, several more recent studies conducted in high-income countries report that midwife-led care is associated with lower caesarean section rates. [73-75]

3 A "midwife-delivered intervention" was defined as one which (i) can be delivered in its entirety by a professional midwife according to standards published by ICM, (ii) is known to directly affect mortality or nutritional status, and (iii) is listed as an essential intervention either by ICM or the *Global Strategy for Women's, Children's and Adolescents' Health*.

Figure 4.3 illustrates the wide variation in caesarean section rates between countries in the region. Somalia and Yemen have very low rates, indicating insufficient access to this important intervention. Conversely, some countries have extremely high rates which are indicative of over-medicalization of childbirth, most notably Egypt, Tunisia and Iraq. Figure 4.3 also shows that there is only a weak relationship between the caesarean section rate and midwife density. It would be reasonable to expect countries with very high caesarean rates to have low midwife density, because the midwife shortage is indicative of a highly medicalized RMNCAH care system. Similarly, it would be reasonable to expect countries with very low caesarean rates to have low midwife density because it could be indicative of a more general health worker shortage. While this hypothesis is true for some countries (Bahrain, Egypt, Iraq, and Somalia), it is not true for others (Sudan, Tunisia, and Yemen). It is therefore highly likely that other factors confound this relationship.

Figure 4.3: Percentage of deliveries by caesarean section (most recent available year) and midwife density (2020), by country



* including professional and associate professional midwives and nurse-midwives.

Source for caesarean section rates: Saudi Arabia: WHO 2015. [76] All other countries: UNICEF 2021. [8]

At 26%, the caesarean section rate is also relatively high in Syria, [8] although the data are from before the war when the health system was highly medicalized.⁴ It has been suggested that the rate may still be high because the fear of targeted attacks on health facilities can lead to a preference for caesarean section, as it is quicker than labour and vaginal birth. [29]

The stories in this report demonstrate that midwives are often honoured and respected within their communities, which puts them in a strong position to help and support families to make good decisions about the health and rights of women and girls, e.g. in relation to FGM. This practice is prevalent in several countries in the region. UNFPA estimates that 97% of 15-19 year-old girls in Somalia have undergone it: 80% in Djibouti, 82% in Sudan,

4 Syria does not appear in the chart because its midwife density is not reported (see Chapter 2).

70% in Egypt, 16% in Yemen and 4% in Iraq. [77] Midwives from communities which commonly practice FGM may find themselves in an ethical dilemma when providing advice and care. This is because their knowledge of the harm caused by FGM can be in conflict with own cultural norms and beliefs, and it can potentially lead to conflict between midwives and the communities they serve. Indeed, midwives and other health professionals in many communities themselves perform FGM, either in response to family/community pressure or as way to ensure that the procedure causes as little harm as possible. [78, 79] Midwives working in communities where FGM is prevalent may require additional support to help them navigate this ethical dilemma and provide the best advice and support to their clients. [80] UNFPA has published a toolkit to help mobilize and support midwives to this effect via improved advocacy, education and training. [79]

The health workforce is often perceived as a net cost to the health system, rather than as contributing to positive health and social outcomes. It is true that an initial financial outlay will be required to address the RMNCAH workforce issues highlighted in this report. However, there is growing recognition that creating jobs for health workers not only improves population health indicators such as those shown above, but also supports sustainable economic growth and progress towards other SDGs. [19] Benefits such as these represent a return on the initial investment, but they are not always factored into cost-effectiveness analyses such as the Tunisian example shown in Box 4.2.

Box 4.2: Midwives' wages in Morocco and Tunisia, and the cost-effectiveness of different RMNCAH workforce strategies in Tunisia

According to analysis featured in SoWMy 2021, a newly-qualified Tunisian midwife is paid five times the public sector minimum wage. A newly-qualified Moroccan midwife is paid about the same as her Tunisian counterpart, but this represents only double the minimum wage. [19] Assuming that the minimum wages of each country reflect the respective cost of living, this indicates that Moroccan midwives are paid much less in real terms than their Tunisian counterparts.

"Low salaries, low status in addition to lack of recognition are some real problems faced by Moroccan midwives" (Oumaima Rahmaoui, Moroccan midwife)

A recent cost-effectiveness analysis of different workforce policies in Tunisia [81] considered five different strategies for increasing the effective coverage of essential RMNCAH interventions, whether by incentivizing improved productivity or by improving workforce retention. The five options were: (1) in-service training of midwives, (2) increased performance-based incentives for midwives, (3) requiring doctors to remain in the national health workforce for 5 years after graduation, (4) increased recruitment of midwives and RMNCAH doctors, and (5) increased salaries for midwives and RMNCAH doctors. The analysis concluded that increasing salaries would achieve the biggest increase in effective coverage.

Recommendations for advancing midwifery in the region

This report and the global SoWMy 2021 report take stock of the strengths, gaps and challenges affecting the midwifery workforce in the Arab region. This information can be used to encourage further investment in midwives and midwifery to address the gaps and challenges.

All countries in the region except Saudi Arabia have a midwife shortage, most notably: Egypt, Iraq, Algeria, Somalia, Sudan, Morocco, and Yemen. In most cases, this is reflective of a more general health worker shortage, but in some countries it appears to be reflective of a decision to provide a medicalized system of RMNCAH care.

In countries with a major midwife shortage, significant investment in increased production is required. If necessary, this will need to be coupled with investment in demand creation, so that the additional midwives can be absorbed into the workforce and enabled to take the lead on RMNCAH care for women and girls who do not require medical intervention. This may require advocacy about the return on investment in midwives specifically, using the extensive body of evidence available on this topic.

Although the evidence on the benefits of midwife-led care is strong and compelling, it must be acknowledged that midwives can only fulfil their potential to save lives if they are working within a multi-disciplinary team and a functioning referral system. Countries in the region should consider the models of care available within their health systems and whether these can be adjusted or optimized for greater efficiency and higher quality of care. For example, WHO recommends collaborative staffing models to reduce unnecessary caesarean sections, [72] which are a major issue in several countries in the region.

This report underlines the importance of going beyond a focus on the number of midwives. In addition, it considers the positive impact of ensuring that midwives are educated, equipped and enabled to provide high-quality care. This applies whether or not the country has a major midwife shortage.

In many countries in the region, the data indicate shortcomings in the quality of midwifery education and training, such as low-level qualifications, lack of competency-based curricula, programmes which are shorter than the recommended duration, a lack of midwives who are qualified to teach the next generation, and no requirement for periodic CPD to maintain skills and competencies. Stronger midwifery departments in universities will provide midwives with the best possible education and enable them to take the lead on research.

Given the prevalence of humanitarian crises in the region, education and training curricula and scopes of practice should be aligned with the MISP to increase the resilience of the midwifery workforce to current and future crises. [47] Similarly, in countries with high rates of FGM or other harmful practices, education and training curricula should equip midwives to address these practices within their communities.

The policy environment for midwifery is fairly strong in most countries in the region. There is now a need to increase the focus on addressing the barriers to policy implementation. An important barrier in many countries is restriction of the midwife's scope of practice,

which occurs to a great extent in this region compared with other parts of the world. In countries which restrict the scope of practice, regulatory authorities should consider the potential benefits (for both health systems and service users) of expanding the scope. The appointment of midwives to leadership positions within the departments responsible for RMNCAH care provision could be an important first step. Currently, only about half of countries in the region have midwives in leadership at national level.

Several countries in the region have already made significant investment in midwives, e.g. Morocco, [38] Syria, [29] and Yemen, and other countries in the region could potentially learn from their experiences. Any change to the scope of practice of midwives must take into account the political and health system context and would benefit from the use of an evidence-based theoretical framework to ensure all relevant issues are considered. [82]

Although this report represents a major step forward in building the evidence base on midwifery in the Arab region, it highlights several evidence gaps. The following regional research agenda is recommended:

- Studies on RMNCAH worker availability at a sub-national level, to assess the extent to which the workforce is equitably distributed and if not, where the major gaps are
- Factors contributing to midwives' and other health workers' motivation to live and work in underserved locations
- Studies on RMNCAH worker accessibility, e.g. health facility mapping, travel time analysis, opening time analysis, the extent to which user fees are levied, the extent to which access is limited due to factors such as age, gender, language, and ethnic group
- A study of midwives' wages and how they compare with other health professions
- The impact of COVID-19 on the midwifery workforce, and how the workforce can be supported to be more resilient to future health shocks
- The extent to which RMNCAH worker education and training curricula cover all midwifery competencies according to global standards, [83] and equip midwives to continue working in the event of a humanitarian crisis
- In countries with more than one midwife education programme, a study of how the competencies of graduates of different programmes compare

5. Country profiles



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How to use the country profiles

The country profiles prepared for this report are designed to prompt and inform policy discussions on how the education, composition, deployment and working environment of the RMNCAH workforce impacts on the delivery of RMNCAH services for all women, newborns and adolescents.

The country profiles are an innovative mix of the data submitted to the various data sources, and projections for the period leading to 2030. The projections aim to inform policy dialogue and decision-making within countries. They are, of course, sensitive to the data and assumptions that inform them and are limited in their context-specificity by the use of standard, evidence-based parameters (details in the SoWMy 2021 [Webappendix 3](#) and the Technical Annex to this report.). They should therefore be treated, not as fact sheets, but as a tool to review and improve data quality, and to inform discussions of the potential impact of different workforce planning strategies. They may also enable the identification of future analysis and research needed at national and sub-national levels.

The estimates shown in the country profiles were those available in mid-2021. More recent updates to these data sources are not captured in the country profiles. The code “nr” stands for “not reported”, i.e. the cited data source includes no estimate for that country.

1. Key RMNCAH indicators (page 1, top section)

This section illustrates the country context using key RMNCAH indicators. Table 5.1 shows the data sources used for these indicators. Some countries prefer to use national data sources for these indicators, but global sources have been used to ensure that comparable methods were applied for all countries.

Table 5.1: Data sources used for key RMNCAH indicators in the country profiles

Indicator(s)	Data source
Estimated population; women of reproductive age; adolescents, total fertility rate; live births	UN Department of Economic and Social Affairs (DESA) World Population Prospects 2019 revision
Pregnancies	Live births as above, with a multiplier to account for stillbirths, spontaneous abortions and induced abortions based on estimates made by the Guttmacher Institute ¹ and used in Tatem et al. 2014
Adolescent birth rate;	WHO Global Health Observatory data repository
Maternal mortality ratio	WHO, UNICEF, UNFPA, World Bank Group and UN Population Division, 2019
Neonatal mortality rate; stillbirth rate	UN Inter-Agency Group for Child Mortality estimation, 2020
Births attended by skilled health personnel	SDG indicator database
Modern contraceptive prevalence rate; unmet need for family planning	UN DESA estimates and projections of family planning indicators, 2020
Coverage for 4+ antenatal care visits; Caesarean section rate	UNICEF Maternal and newborn health coverage

Note: The estimates shown in the country profiles were current when they were prepared in late 2021.

2. Full RMNCAH workforce availability (page 1, middle section)

The first two columns in this table in the country profile show the best estimate for the number of health workers, for each occupation considered to be part of the RMNCAH workforce. Numbers in bold indicate validated data submitted by the national focal point to the WHO National Health Workforce Accounts (NHWA) (as at December 2020; if more recent data have since been entered in NHWA, these are not shown). Numbers which are not in bold are updates or clarifications provided by the UNFPA country office as part of the preparation for this report. The occupations are defined in the Technical Annex to this report.

Individual countries may have other occupations working in RMNCAH. The country profile does not take these other occupations into account, and the analysis should be interpreted with this in mind.

¹ Guttmacher Institute, 16 February 2014, tabulations of data for: Singh S, Darroch JE and Ashford LS. Adding it up: the costs and benefits of investing in sexual and reproductive health. New York: Guttmacher Institute; 2014

For each occupation, the headcount and the year to which the headcount applies are shown. If a country provided headcount data for more than one year, only the most recent year is shown. The code “nr” means that the country has reported no data to NHWA for that occupation since the SoWMy 2014 report and has not been able to provide an update for this report. It is important to establish whether this is because the occupation does not exist in the country, or because no headcount data were available. If the latter, plans should be made to improve data availability for NHWA.

The “total RMNCAH workforce” number at the bottom of the table is the sum of the headcounts for individual occupations. If headcount data are missing for one or more occupations, this may be because that occupation does not exist in the country. Alternatively, it may be because headcount numbers were not provided to NHWA or through the update process for this report, in which case the total will underrepresent the size of the RMNCAH workforce.

The “percentage of time on RMNCAH” column shows estimates of the proportion of clinical time each occupation group spends on RMNCAH interventions (details in the Technical Annex to this report). Within an occupation group there will be considerable variation: some individual nurses or doctors may have a specialist RMNCAH role; others may spend no time on RMNCAH. The percentage represents an average across all individuals within an occupation group. These estimates were based on expert opinion and previous surveys and are exactly the same as used for the global SoWMy 2021 report except for one occupation (general medical practitioners – see Technical Annex). The estimates may not accurately reflect the reality in every country. If the percentage is judged to be much too high or much too low in a specific country context, the projections (Sections 3 and 6 below) should be interpreted with this in mind. The code “na” (not applicable) signifies that there are no headcounts for that occupation.

The “Dedicated RMNCAH Equivalent (DSE)” column is the result of multiplying the headcount by the % time on RMNCAH. It is similar to a “full-time equivalent” worker, and takes into account that some occupation groups do not spend all their available clinical time on RMNCAH work. This is a better indication than the headcount of the workforce’s availability for providing RMNCAH interventions.

The “graduates” columns show the number of graduates produced domestically for each occupation, as entered in NHWA. Again, if data were provided for more than one year, only the most recent year is shown. Relatively few countries were able to provide graduate numbers for all occupations, despite this indicator being among the most important drivers of future workforce availability. If these data are not shown in the country profile, national stakeholders are encouraged to work with the NHWA focal points to ensure better data availability in future. Some countries provided a graduate number but no headcount for an occupation. In such cases, the graduate numbers are still shown.

The “density per 10,000 population” column shows a ratio of the headcount to the country’s 2020 population according to the United Nations’ World Population Prospects

2019 revision. No adjustment was made if the headcount predated 2020. If the headcount in NHWA predates 2020 (as indicated in the first column) this density figure is probably inaccurate, especially if the population is growing quickly.

3. Projections to 2030, dedicated RMNCAH equivalent (DSE) workforce (page 1, bottom section)

This section compares estimates of the number of DSE workers needed with the number available. On each chart, the first pair of bars show the baseline year, the second pair shows projections to 2025, and the third pair shows projections to 2030. The main chart shows all RMNCAH workers, while the chart above and to the right highlights RMNCAH doctors, as these numbers can be difficult to see on the main chart.

The “needed” numbers represent the number of DSEs necessary to achieve universal coverage of essential RMNCAH interventions in that year (details in the SoWMy 2021 [Webappendix 3](#)). This need is allocated to occupations according to the competencies they should have if educated and regulated according to global standards (details in the SoWMy 2021 [Webappendix 6](#)). Thus, a “need” estimate may be shown for certain occupations, even if the country currently reports no headcount for this occupation. If a country does not recognize that occupation, it should consider how that need can be met by other occupation groups in the short term, and whether new occupation groups should be created to meet the need in the longer term.

The “actual” numbers for 2020 represent the number of DSEs currently available (see section 2 above).

If the “actual” bar is smaller than the “needed” bar for the baseline year, the country may have a needs-based shortage of RMNCAH workers. Alternatively, it might be due to missing data or to the need being met by other health occupations.

If the “actual” bar is the same size as or bigger than the “needed” bar, the country theoretically has sufficient RMNCAH workers to meet the need for the essential RMNCAH interventions which they are competent to deliver. However, in practice the need may not actually be met, e.g. if the workforce is inequitably distributed or poorly educated, or if the occupation group’s scope of practice is restricted. Furthermore, countries without a needs-based shortage may still have shortages according to other measures, such as demand for RMNCAH care.

The “forecast” numbers for 2025 and 2030 are estimates based on the current age structure of the workforce (if provided in NHWA or UNFPA country office updates for this report: otherwise regional averages were applied) and the rate of domestic production (details in SoWMy 2021 [Webappendix 3](#): again estimates were used if no graduate numbers were provided). If the “forecast” bar is smaller than the “needed” bar, the country is projected to have a needs-based shortage in that year.

The differently coloured sections of the bars show how many DSEs of each type are within

the overall total. It is important to look at these individual sections as well as the overall height of each bar. If any individual segment of the “actual” or “forecast” bar is smaller than the corresponding segment of the “needed” bar, this may indicate an inappropriate or inefficient skill mix within the RMNCAH workforce.

4. Midwives demography (page 2, top section)

These two charts illustrate the age and gender distribution of the country’s midwifery workforce. If the bar for those aged 55+ is larger than the bar for those aged <35, the midwifery workforce is ageing and there is a risk of shortages within the next 10 years if production does not keep pace with retirements.

A midwifery workforce which is mostly female is not necessarily a problem, because many women prefer to receive care from a female midwife. However, a workforce which is 100% female may indicate unnecessarily restrictive recruitment policies and/or practices. If a large proportion of midwifery workers are male, consideration should be given to whether the gender balance is appropriate.

The code “nr” means that the country did not provide age- and gender-disaggregated headcounts for midwives.

5. Enabling environment (page 2, left-hand section)

The data in this section come from the 2020 ICM member association survey and the 2018–2019 WHO SRMNCAH policy survey or UNFPA country office updates as submitted for this report.

The code “nr” denotes one of two things; either the country did not complete the survey, or the survey was completed but this question was not answered. If the answer is in bold, then this indicates that the response was validated by the competent authority in the country as part of the SoWMy 2021 data collection process.

The code “na” means that this indicator is not applicable. For example, for a country without a direct-entry midwifery education programme, the question about the duration of the direct-entry programme is not applicable. The code “dk” means “don’t know”, i.e. those responsible for completing the survey did not know the answer to that question.

Policy environment

The first indicator in this section has three parts, one in each of the three columns on the right. The left-hand box shows whether there is a policy/guideline recommending midwife-led care in pregnancy, the middle box shows whether there is a policy/guideline recommending midwife-led care in childbirth, and the right-hand box whether there is a policy/guideline recommending midwife-led care in the postnatal period. For each, there are three possible answers: “mother only” (if there is a guideline but it only applies to the

mother), “mother and newborn” (if the guideline applies to both) or “no” (if there is no guideline at all). Ideally a country should not have “no” or “don’t know” in any of the three boxes.

The second indicator has three numerical answers. The left-hand box shows the number of midwives in leadership roles in the national MoH, the middle box shows the number in sub-national MoH offices, and the right-hand box the number in health worker regulatory authorities. Small numbers, especially zeroes, may be cause for concern.

Education

The first indicator has a single “yes/no” answer. Ideally the answer should be “yes”.

The second indicator has three yes/no answers. A “yes” in the left-hand box indicates that the country has at least one direct-entry midwifery education programme, a “yes” in the middle box that there is at least one post-nursing midwifery programme, under which a person graduates as a nurse (and in some cases must work for a period as a nurse) before continuing their midwifery studies. A “yes” in the right-hand box that there is at least one integrated nursing and midwifery education programme, i.e. graduates qualify in both nursing and midwifery simultaneously.

The third indicator shows the duration (in months) of the available education programme(s). If the country has more than one direct-entry programme, the one with the longest duration is shown here, and details about the other programmes are given in the “explanatory notes” box on the bottom right of this page. The same applies if there is more than one post-nursing programme or more than one combined programme. The duration of the post-nursing programme does not include time spent qualifying as a nurse (usually 3-4 years) only the additional time spent on the midwifery programme. A direct-entry programme of less than 36 months’ duration or a post-nursing programme of less than 18 months’ duration may indicate the need for a curriculum review.

The fourth indicator shows the percentage of midwifery educators who are themselves qualified midwives. If this number is low, it may indicate a shortage of midwives who are competent to educate future midwives, and/or a restrictive policy about which types of health professional are competent to teach.

Regulation

The first three indicators have single “yes/no” answers. Ideally the answer should be “yes” for all three.

The fourth indicator has three “yes/no” answers. A “yes” in the left-hand box indicates that midwives must be licensed before they are permitted to practise; a “yes” in the middle box that midwives are required to renew their licence periodically; and a “yes” in the right-hand box that CPD is a requirement for licence renewal. Ideally the answer should be “yes” for all three, unless the country has an alternative system or mechanism to ensure continuing competence.

Association

This indicator has two “yes/no” answers. A “yes” in the left-hand box indicates that the country has at least one professional association specifically for midwives. An association was classed as “specifically for midwives” if the association’s name includes the word “midwife” and does not mention other health occupations. A “yes” in the right-hand box indicates that there is at least one other professional association which midwives are eligible to join. A “no” in both boxes indicates that the midwifery profession may not be well represented in the country.

6. Potential to meet need, 2015, 2021 and 2030 (page 2, right-hand section)

This section includes a needs-based summary estimate of RMNCAH workforce availability referred to as “potential met need” (PMN). The methods used to produce this estimate can be found in the SoWMy 2021 [Webappendix 3](#) and the Technical Annex to this report. PMN is primarily a measure of the overall size and composition of the workforce: it does not account for workforce accessibility, acceptability or quality.

The three pictures of a baby each represent a year: the one on the left-hand side shows the PMN estimate from the previous SoWMy regional report in 2015. This picture is labelled “nr” if the country has not participated in a SoWMy report before, or if they did participate but there was insufficient data to make a PMN estimate. The picture labelled “2021” shows the current PMN estimate; the one labelled “2030” shows a forecast for that year.

If the estimate is above 50%, the baby is mostly coloured green, below 50% the baby is mostly grey. Ideally the 2021 and 2030 pictures should both be completely green. A small amount of grey is usually an indication of insufficient specialist doctors or insufficient midwives, because a few essential interventions (most notably caesarean sections and breastfeeding counselling) can only be delivered by them. A large amount of grey usually indicates a needs-based shortage across many or all RMNCAH occupation groups.

The 2015 and 2021 estimates are not directly comparable, because the definition of need has been expanded since the 2015 report, which makes it more challenging to achieve a high PMN in 2021. However, the method used to produce the 2021 estimates is almost certainly a more accurate reflection of the workforce’s potential to meet the need. The changed method means that: (1) a lower % in 2021 than in 2015 does not necessarily indicate that the workforce’s potential to meet the need has decreased in the last six years, and (2) a large increase since 2015 is strong evidence that the country has significantly expanded the size or improved the composition of its RMNCAH workforce.

As noted in Section 3 above, a PMN estimate of 100% means that all of the need could potentially be met - it does not necessarily mean that all of the need is actually met. For example, there may be poor accessibility or poor quality of the available RMNCAH workers.

It could also be due to the way in which need is defined: in this report it is based on the clinical time required to deliver the minimum set of essential RMNCAH interventions (see SoWMy 2021 [Webappendix 5](#)). However, individual countries may use other definitions of need which are more challenging to achieve.

7. Need for RMNCAH services (page 2, lower right-hand section)

This section shows the 'need for RMNCAH services' in the population for essential RMNCAH interventions, expressed as the working hours required per annum from the RMNCAH workforce. The total need is also presented in a pie chart, where it is split between five stages along the continuum of care from antenatal care, childbirth care, postnatal care, though other sexual and reproductive health (e.g. contraceptive services, detection and management of sexually transmitted infections), to adolescent sexual and reproductive health and development.

8. Explanatory notes (page 2, bottom right)

When submitting data, many countries provided additional explanatory information. Where applicable, that information is summarized here, to support understanding and interpretation of the country profiles.

Estimated population	2020	43,851,043
Women of reproductive age (aged 15 - 49)	2020	10,994,786
Adolescents (aged 10 - 19)	2020	6,731,747
Total fertility rate (births per woman)	2015-2020	3.05
Live births	2020	972,760
Pregnancies	2020	1,329,846
Adolescent birth rate (births per 1,000 women aged 15-19)	2017	12
Maternal mortality ratio (maternal deaths per 100,000 live births)	2017	112
Neonatal mortality rate (deaths within 28 days per 1,000 live births)	2019	16
Stillbirth rate (per 1,000 total births)	2019	9
Births attended by skilled health personnel (%)	2019	99%
Modern contraceptive prevalence rate (% using modern method)	2020	31%
Unmet need for family planning (% of women of reproductive age)	2020	6%
Caesarean section rate (% of live births)	2019	25%
Coverage for 4+ antenatal care visits (% of live births)	2019	70%

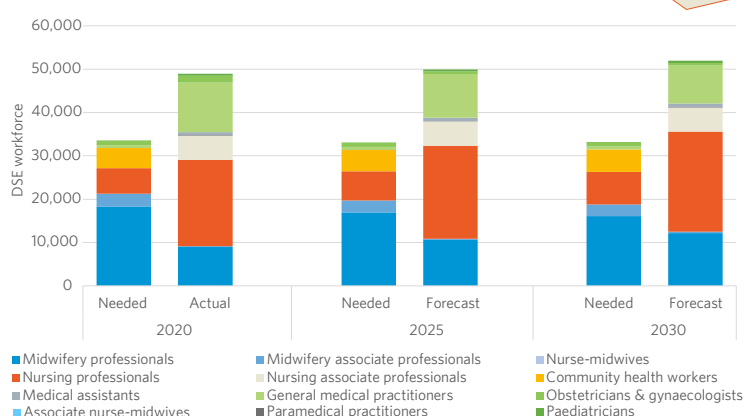
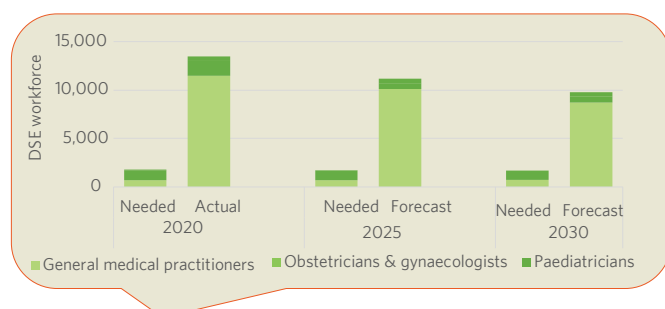
FULL RMNCAH WORKFORCE AVAILABILITY

Occupation	Year	Headcount (A)	Percentage of time on RMNCAH (B)	Dedicated RMNCAH Equivalent (DSE) (A*B)	Graduates		Density per 10,000 population
					Year	Number	
Midwifery professionals	2019	9,000	100%	9,000	2017	647	2.1
Midwifery associate professionals	2018	209	100%	209	nr	nr	0.0
Nurse-midwives	nr	nr	na	nr	nr	nr	nr
Associate nurse-midwives	nr	nr	na	nr	nr	nr	nr
Nursing professionals	2018	45,173	44%	19,876	nr	nr	10.3
Nursing associate professionals	2018	11,238	50%	5,619	nr	nr	2.6
Community health workers	nr	nr	na	nr	nr	nr	nr
Paramedical practitioners	2018	365	30%	110	nr	nr	0.1
Medical assistants	2018	2,148	30%	644	nr	nr	0.5
General medical practitioners	2018	32,774	35%	11,471	nr	nr	7.5
Obstetricians & gynaecologists	2018	3,114	50%	1,557	nr	nr	0.7
Paediatricians	2018	2,960	15%	444	nr	nr	0.7
Total RMNCAH workforce		106,981		48,930			24.4

Source: **If in bold type: WHO National Health Workforce Accounts (NHWA) data platform, accessed Dec 2020, most recent year**
If not in bold type: communication with UNFPA Country Office Sept. 2021

These charts compare estimates of the number of DSE workers needed with the number available. On each chart, the first pair of bars show the baseline year, the second pair shows projections to 2025, and the third pair shows projections to 2030.

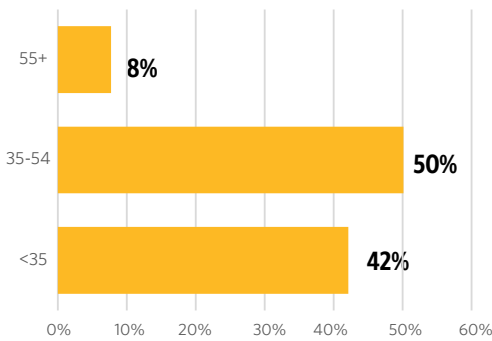
The chart below shows all RMNCAH occupations. The chart to the right highlights RMNCAH doctors (as these numbers are difficult to see on the main chart)



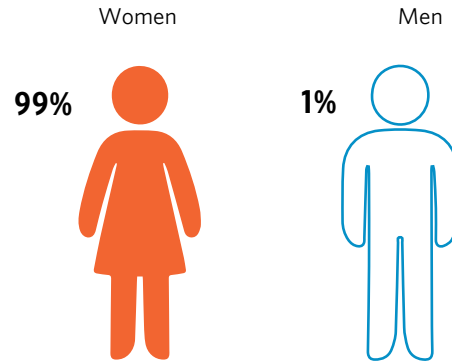
The 'needed' numbers represent the number of DSEs necessary to achieve universal coverage of essential RMNCAH interventions. Need is allocated to occupations according to competencies they should have if educated and regulated according to global standards.

MIDWIVES DEMOGRAPHY

Age distribution



Gender distribution



Source: **If in bold type: WHO National Health Workforce Accounts (NHWA) data platform, accessed Dec 2020, most recent year**
 If not in bold type: communication with UNFPA Country Office Sept. 2021

ENABLING ENVIRONMENT

Policy environment

National policy guideline that recommends midwife-led care for pregnancy and/or childbirth and/or postnatal period for mother only, or both mother and newborn? *

Pregnancy	Childbirth	Postnatal
mother & newborn	mother & newborn	mother & newborn

Number of midwives in leadership roles in national MoH / sub-national MoH / regulatory authorities

National MoH	Sub-national MoH	Regulatory authorities
0	dk	dk

Education

National policy / guideline on education of midwifery care providers based on ICM competencies? *

yes

Midwifery education pathway (direct entry / post-nursing / combined)

Direct entry	Post-nursing	Combined
yes	no	no

Duration of direct entry / post-nursing / combined education programme (months)

Direct entry	Post-nursing	Combined
60	na	na

% of midwifery educators who are midwives

dk

Regulation

National policy sets a competency framework for maternal and/or newborn care? *

yes

National policy on regulation of midwifery care providers based on ICM competencies? *

yes

Regulatory system for midwifery practice?

yes

Is licensing compulsory prior to practise? / Is there periodic relicensing? / Is continuing professional development a requirement for relicensing?

License compulsory	Periodic relicensing	Continuing development requirement
no	na	na

Association

Is there a professional association specifically for midwives? Is there another professional association open to midwives?

Association specifically for midwives	Other association open to midwives
yes	yes

POTENTIAL MET NEED

Potential to meet NEED =

Workforce time available

Workforce time needed for universal coverage of essential SRMNAH interventions

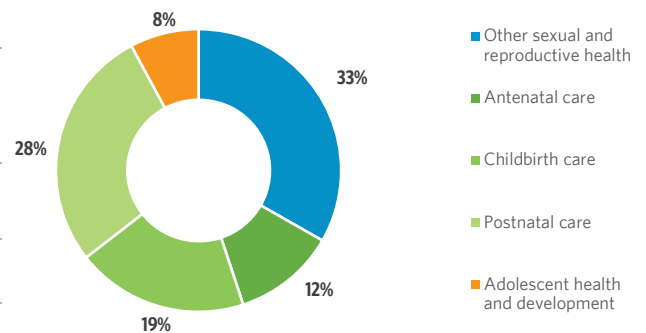
2015
98%

2021
99%

2030
100%



% OF NEED AT EACH STAGE ON CONTINUUM OF CARE



Total need for SRMNAH worker time to deliver essential interventions is

42 million hours per year

EXPLANATORY NOTES

Source: **If in bold type: validated data from 2020 ICM survey, except those marked * which are from 2018 2019 WHO SRMNAH policy survey**
 If not in bold type: either communication with UNFPA Country Office Sept. 2021 or unvalidated data from 2020 ICM survey

Key: na = not applicable dk = don't know nr = not reported MoH = Ministry of Health

Estimated population	2020	1,701,583
Women of reproductive age (aged 15 - 49)	2020	357,242
Adolescents (aged 10 - 19)	2020	181,855
Total fertility rate (births per woman)	2015-2020	2.00
Live births	2020	22,040
Pregnancies	2020	32,532
Adolescent birth rate (births per 1,000 women aged 15-19)	2018	13
Maternal mortality ratio (maternal deaths per 100,000 live births)	2017	14
Neonatal mortality rate (deaths within 28 days per 1,000 live births)	2019	3
Stillbirth rate (per 1,000 total births)	2019	6
Births attended by skilled health personnel (%)	2017	100%
Modern contraceptive prevalence rate (% using modern method)	2020	22%
Unmet need for family planning (% of women of reproductive age)	2020	5%
Caesarean section rate (% of live births)	nr	nr
Coverage for 4+ antenatal care visits (% of live births)	2013	100%

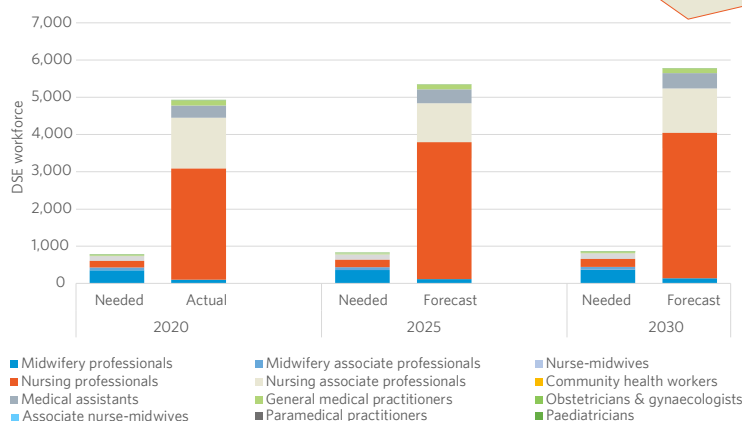
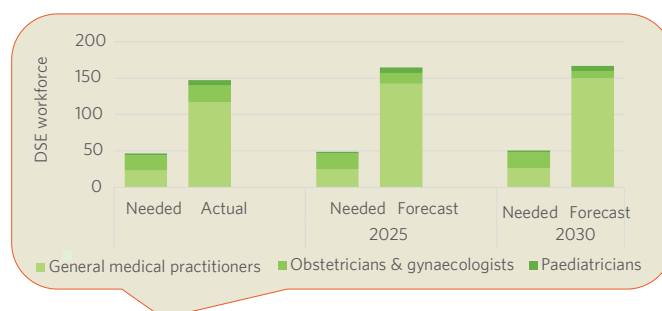
FULL RMNCAH WORKFORCE AVAILABILITY

Occupation	Year	Headcount (A)	Percentage of time on RMNCAH (B)	Dedicated RMNCAH Equivalent (DSE) (A*B)	Graduates		Density per 10,000 population
					Year	Number	
Midwifery professionals	2016	100	100%	100	nr	nr	0.6
Midwifery associate professionals	nr	nr	na	nr	nr	nr	nr
Nurse-midwives	nr	nr	na	nr	nr	nr	nr
Associate nurse-midwives	nr	nr	na	nr	nr	nr	nr
Nursing professionals	2016	9,955	30%	2,987	nr	nr	58.5
Nursing associate professionals	2015	3,422	40%	1,369	nr	nr	20.1
Community health workers	nr	nr	na	nr	nr	nr	nr
Paramedical practitioners	2019	1,100	30%	330	nr	nr	6.5
Medical assistants	nr	nr	na	nr	nr	nr	nr
General medical practitioners	2015	333	35%	117	nr	nr	2.0
Obstetricians & gynaecologists	2015	47	50%	24	nr	nr	0.3
Paediatricians	2015	48	15%	7	nr	nr	0.3
Total RMNCAH workforce		15,005		4,932			88.2

Source: **If in bold type: WHO National Health Workforce Accounts (NHWA) data platform, accessed Dec 2020, most recent year**
If not in bold type: communication with UNFPA Country Office Sept. 2021

These charts compare estimates of the number of DSE workers needed with the number available. On each chart, the first pair of bars show the baseline year, the second pair shows projections to 2025, and the third pair shows projections to 2030.

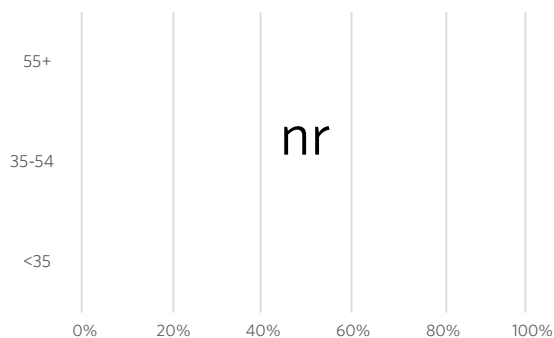
The chart below shows all RMNCAH occupations. The chart to the right highlights RMNCAH doctors (as these numbers are difficult to see on the main chart)



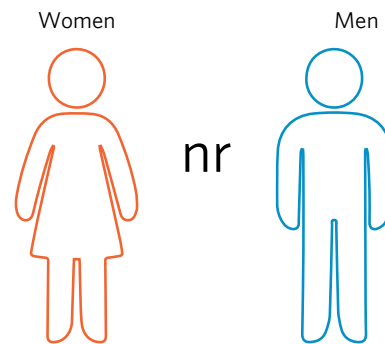
The 'needed' numbers represent the number of DSEs necessary to achieve universal coverage of essential RMNCAH interventions. Need is allocated to occupations according to competencies they should have if educated and regulated according to global standards.

MIDWIVES DEMOGRAPHY

Age distribution



Gender distribution



Source: **If in bold type: WHO National Health Workforce Accounts (NHWA) data platform, accessed Dec 2020, most recent year**
If not in bold type: communication with UNFPA Country Office Sept. 2021

ENABLING ENVIRONMENT

Policy environment

National policy guideline that recommends midwife-led care for pregnancy and/or childbirth and/or postnatal period for mother only, or both mother and newborn? *

Pregnancy	Childbirth	Postnatal
nr	nr	nr

Number of midwives in leadership roles in national MoH / sub-national MoH / regulatory authorities

National MoH	Sub-national MoH	Regulatory authorities
nr	nr	nr

Education

National policy / guideline on education of midwifery care providers based on ICM competencies? *

nr

Midwifery education pathway (direct entry / post-nursing / combined)

Direct entry yes	Post-nursing no	Combined yes
nr	nr	nr

Duration of direct entry / post-nursing / combined education programme (months)

Direct entry	Post-nursing	Combined
24	nr	nr

% of midwifery educators who are midwives

nr

Regulation

National policy sets a competency framework for maternal and/or newborn care? *

nr

National policy on regulation of midwifery care providers based on ICM competencies? *

nr

Regulatory system for midwifery practice?

nr

Is licensing compulsory prior to practise? / Is there periodic relicensing? / Is continuing professional development a requirement for relicensing?

License compulsory	Periodic relicensing	Continuing development requirement
nr	nr	nr

Association

Is there a professional association specifically for midwives? Is there another professional association open to midwives?

Association specifically for midwives	Other association open to midwives
nr	nr

POTENTIAL MET NEED

Potential to meet NEED =

Workforce time available

Workforce time needed for universal coverage of essential SRMNAH interventions

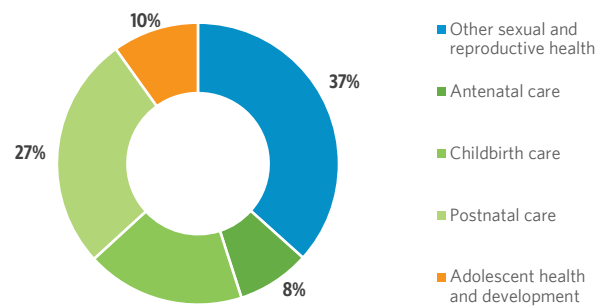
2015
nr

2021
98%

2030
99%



% OF NEED AT EACH STAGE ON CONTINUUM OF CARE



Total need for SRMNAH worker time to deliver essential interventions is

1 million hours per year

EXPLANATORY NOTES

Source: **If in bold type: validated data from 2020 ICM survey, except those marked * which are from 2018 2019 WHO SRMNAH policy survey**
If not in bold type: either communication with UNFPA Country Office Sept. 2021 or unvalidated data from 2020 ICM survey

Key:

na = not applicable

dk = don't know

nr = not reported

MoH = Ministry of Health

Estimated population	2020	988,002
Women of reproductive age (aged 15 - 49)	2020	257,108
Adolescents (aged 10 - 19)	2020	179,320
Total fertility rate (births per woman)	2015-2020	2.76
Live births	2020	20,120
Pregnancies	2020	28,492
Adolescent birth rate (births per 1,000 women aged 15-19)	2011	21
Maternal mortality ratio (maternal deaths per 100,000 live births)	2017	248
Neonatal mortality rate (deaths within 28 days per 1,000 live births)	2019	31
Stillbirth rate (per 1,000 total births)	2019	28
Births attended by skilled health personnel (%)	2012	87%
Modern contraceptive prevalence rate (% using modern method)	2020	15%
Unmet need for family planning (% of women of reproductive age)	2020	15%
Caesarean section rate (% of live births)	2012	11%
Coverage for 4+ antenatal care visits (% of live births)	2012	23%

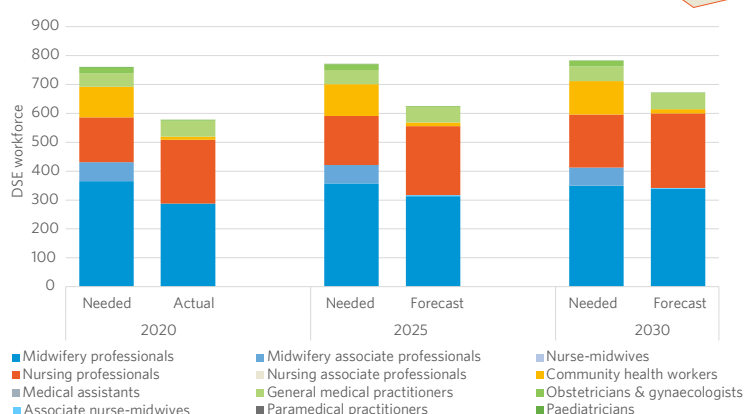
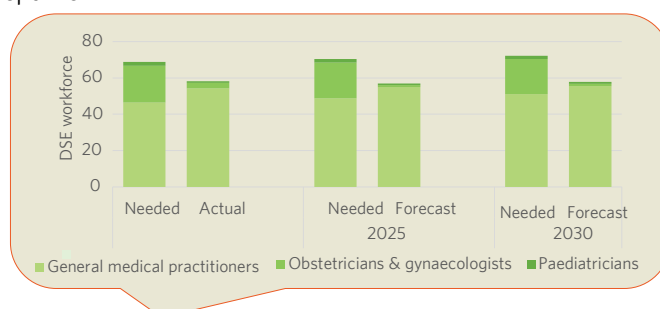
FULL RMNCAH WORKFORCE AVAILABILITY

Occupation	Year	Headcount	Percentage of time on RMNCAH	Dedicated RMNCAH Equivalent (DSE)	Graduates		Density per 10,000 population
					Year	Number	
		(A)	(B)	(A*B)			
Midwifery professionals	2021	288	100%	288	2021	25	2.9
Midwifery associate professionals	nr	nr	na	nr	nr	nr	nr
Nurse-midwives	nr	nr	na	nr	nr	nr	nr
Associate nurse-midwives	nr	nr	na	nr	nr	nr	nr
Nursing professionals	2021	501	44%	220	nr	nr	5.1
Nursing associate professionals	nr	nr	na	nr	nr	nr	nr
Community health workers	2021	115	10%	12	nr	nr	1.2
Paramedical practitioners	nr	nr	na	nr	nr	nr	nr
Medical assistants	nr	nr	na	nr	nr	nr	nr
General medical practitioners	2021	155	35%	54	nr	nr	1.6
Obstetricians & gynaecologists	2021	6	50%	3	nr	nr	0.1
Paediatricians	2021	6	15%	1	nr	nr	0.1
Total RMNCAH workforce		1,071		578			10.8

Source: **If in bold type: WHO National Health Workforce Accounts (NHW) data platform, accessed Dec 2020, most recent year**
 If not in bold type: communication with UNFPA Country Office Sept. 2021

These charts compare estimates of the number of DSE workers needed with the number available. On each chart, the first pair of bars show the baseline year, the second pair shows projections to 2025, and the third pair shows projections to 2030.

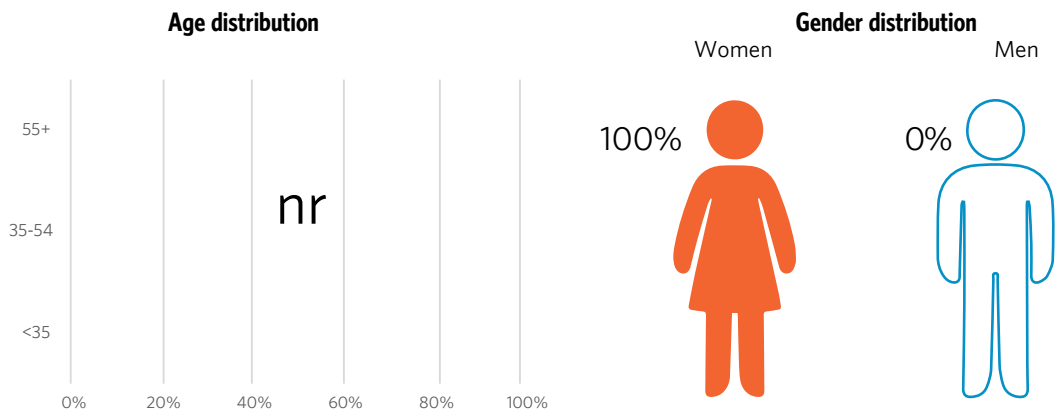
The chart below shows all RMNCAH occupations. The chart to the right highlights RMNCAH doctors (as these numbers are difficult to see on



the main chart)

The 'needed' numbers represent the number of DSEs necessary to achieve universal coverage of essential RMNCAH interventions. Need is allocated to occupations according to competencies they should have if educated and regulated according to global standards.

MIDWIVES DEMOGRAPHY



Source: **If in bold type: WHO National Health Workforce Accounts (NHWA) data platform, accessed Dec 2020, most recent year**
 If not in bold type: communication with UNFPA Country Office Sept. 2021

ENABLING ENVIRONMENT

Policy environment

National policy guideline that recommends midwife-led care for pregnancy and/or childbirth and/or postnatal period for mother only, or both mother and newborn? *

Pregnancy **mother only** Childbirth **mother only** Postnatal **mother only**

Number of midwives in leadership roles in national MoH / sub-national MoH / regulatory authorities

National MoH: 8 Sub-national MoH: 3 Regulatory authorities: 3

Education

National policy / guideline on education of midwifery care providers based on ICM competencies? *

yes

Midwifery education pathway (direct entry / post-nursing / combined)

Direct entry: yes Post-nursing: no Combined: no

Duration of direct entry / post-nursing / combined education programme (months)

Direct entry: 48 Post-nursing: na Combined: na

% of midwifery educators who are midwives

10

Regulation

National policy sets a competency framework for maternal and/or newborn care? *

yes

National policy on regulation of midwifery care providers based on ICM competencies? *

yes

Regulatory system for midwifery practice?

yes

Is licensing compulsory prior to practise? / Is there periodic relicensing? / Is continuing professional development a requirement for relicensing?

License compulsory: yes Periodic relicensing: no Continuing development requirement: na

Association

Is there a professional association specifically for midwives? Is there another professional association open to midwives?

Association specifically for midwives: yes Other association open to midwives: no

Source: **If in bold type: validated data from 2020 ICM survey, except those marked * which are from 2018 2019 WHO SRMNAH policy survey**
 If not in bold type: either communication with UNFPA Country Office Sept. 2021 or unvalidated data from 2020 ICM survey

Key: na = not applicable dk = don't know nr = not reported MoH = Ministry of Health

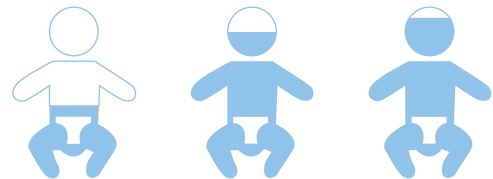
POTENTIAL MET NEED

Potential to meet NEED =

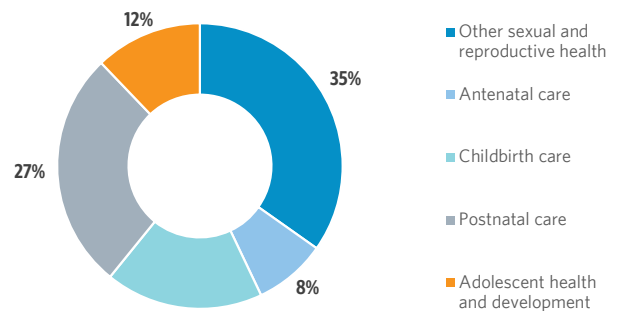
Workforce time available

Workforce time needed for universal coverage of essential SRMNAH interventions

2015: 44% 2021: 76% 2030: 83%



% OF NEED AT EACH STAGE ON CONTINUUM OF CARE



Total need for SRMNAH worker time to deliver essential interventions is

1 million hours per year

EXPLANATORY NOTES

Estimated population	2020	102,334,403
Women of reproductive age (aged 15 - 49)	2020	25,300,812
Adolescents (aged 10 - 19)	2020	18,385,431
Total fertility rate (births per woman)	2015-2020	3.33
Live births	2020	2,551,520
Pregnancies	2020	3,488,146
Adolescent birth rate (births per 1,000 women aged 15-19)	2018	52
Maternal mortality ratio (maternal deaths per 100,000 live births)	2017	37
Neonatal mortality rate (deaths within 28 days per 1,000 live births)	2019	11
Stillbirth rate (per 1,000 total births)	2019	9
Births attended by skilled health personnel (%)	2014	92%
Modern contraceptive prevalence rate (% using modern method)	2020	42%
Unmet need for family planning (% of women of reproductive age)	2020	9%
Caesarean section rate (% of live births)	2014	52%
Coverage for 4+ antenatal care visits (% of live births)	2014	83%

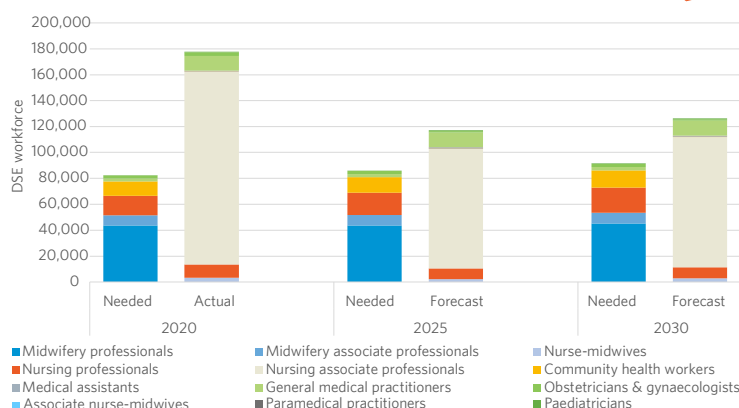
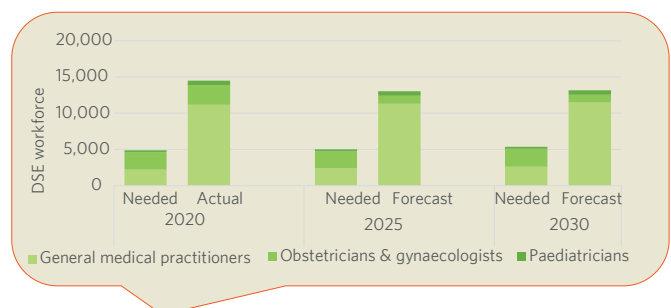
FULL RMNCAH WORKFORCE AVAILABILITY

Occupation	Year	Headcount	Percentage of time on RMNCAH	Dedicated RMNCAH Equivalent (DSE)	Graduates		Density per 10,000 population
		(A)	(B)	(A*B)	Year	Number	
Midwifery professionals	2018	0	na	0	nr	nr	0.0
Midwifery associate professionals	2018	0	na	0	nr	nr	0.0
Nurse-midwives	2018	3,253	100%	3,253	nr	nr	0.3
Associate nurse-midwives	2018	0	na	0	nr	nr	0.0
Nursing professionals	2018	17,221	60%	10,333	nr	nr	1.7
Nursing associate professionals	2018	169,105	88%	148,812	nr	nr	16.5
Community health workers	2018	963	10%	96	nr	nr	0.1
Paramedical practitioners	2018	2,778	30%	833	nr	nr	0.3
Medical assistants	nr	nr	na	nr	nr	nr	nr
General medical practitioners	2019	31,944	35%	11,180	nr	nr	3.1
Obstetricians & gynaecologists	2019	5,431	50%	2,716	nr	nr	0.5
Paediatricians	2019	4,033	15%	605	nr	nr	0.4
Total RMNCAH workforce		234,728		177,829			22.9

Source: **If in bold type: WHO National Health Workforce Accounts (NHWA) data platform, accessed Dec 2020, most recent year**
 If not in bold type: communication with UNFPA Country Office Sept. 2021

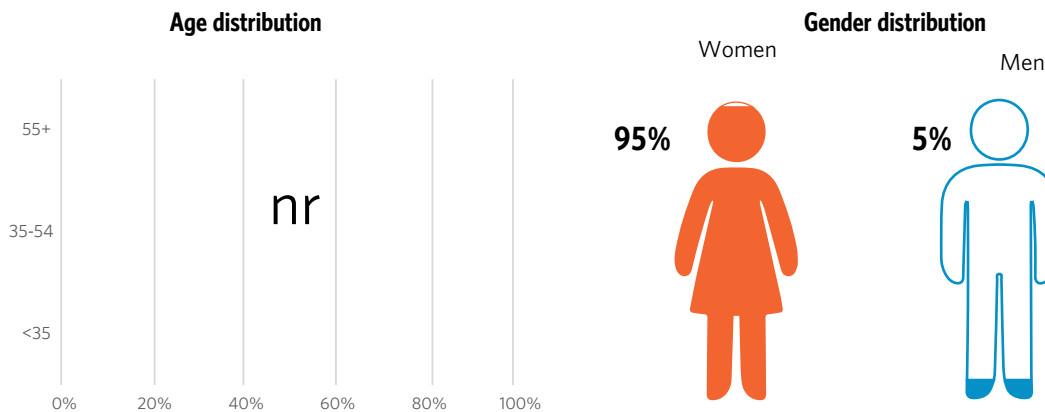
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The chart below shows all RMNCAH occupations. The chart to the right highlights RMNCAH doctors (as these numbers are difficult to see on the main chart)



The 'needed' numbers represent the number of DSEs necessary to achieve universal coverage of essential RMNCAH interventions. Need is allocated to occupations according to competencies they should have if educated and regulated according to global standards.

MIDWIVES DEMOGRAPHY



Source: **If in bold type: WHO National Health Workforce Accounts (NHWA) data platform, accessed Dec 2020, most recent year**
 If not in bold type: communication with UNFPA Country Office Sept. 2021

ENABLING ENVIRONMENT

Policy environment

National policy guideline that recommends midwife-led care for pregnancy and/or childbirth and/or postnatal period for mother only, or both mother and newborn? *

Pregnancy	Childbirth	Postnatal
mother & newborn	mother & newborn	mother & newborn

Number of midwives in leadership roles in national MoH / sub-national MoH / regulatory authorities

National MoH	Sub-national MoH	Regulatory authorities
nr	nr	nr

Education

National policy / guideline on education of midwifery care providers based on ICM competencies? *

yes

Midwifery education pathway (direct entry / post-nursing / combined)

Direct entry	Post-nursing	Combined
no	yes	no

Duration of direct entry / post-nursing / combined education programme (months)

Direct entry	Post-nursing	Combined
nr	6	na

% of midwifery educators who are midwives

nr

Regulation

National policy sets a competency framework for maternal and/or newborn care? *

yes

National policy on regulation of midwifery care providers based on ICM competencies? *

yes

Regulatory system for midwifery practice?

nr

Is licensing compulsory prior to practise? / Is there periodic relicensing? / Is continuing professional development a requirement for relicensing?

License compulsory	Periodic relicensing	Continuing development requirement
nr	nr	nr

Association

Is there a professional association specifically for midwives? Is there another professional association open to midwives?

Association specifically for midwives	Other association open to midwives
nr	nr

POTENTIAL MET NEED

Potential to meet NEED =

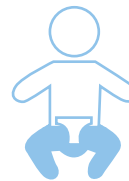
Workforce time available

Workforce time needed for universal coverage of essential SRMNAH interventions

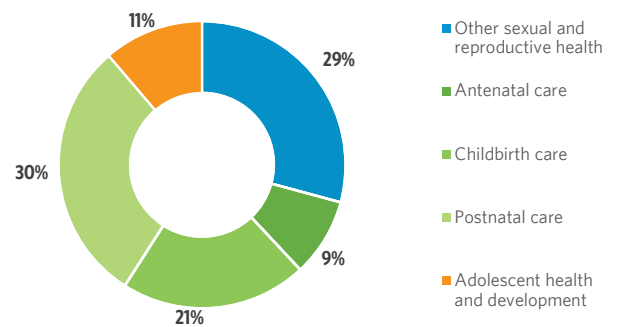
2015
35%

2021
65%

2030
67%



% OF NEED AT EACH STAGE ON CONTINUUM OF CARE



Total need for SRMNAH worker time to deliver essential interventions is

104 million hours per year

EXPLANATORY NOTES

Source: **If in bold type: validated data from 2020 ICM survey, except those marked * which are from 2018 2019 WHO SRMNAH policy survey**
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Key:
 na = not applicable dk = don't know nr = not reported MoH = Ministry of Health

Estimated population	2020	40,222,503
Women of reproductive age (aged 15 - 49)	2020	10,134,366
Adolescents (aged 10 - 19)	2020	8,710,757
Total fertility rate (births per woman)	2015-2020	3.68
Live births	2020	1,145,520
Pregnancies	2020	1,690,820
Adolescent birth rate (births per 1,000 women aged 15-19)	2016	70
Maternal mortality ratio (maternal deaths per 100,000 live births)	2017	79
Neonatal mortality rate (deaths within 28 days per 1,000 live births)	2019	15
Stillbirth rate (per 1,000 total births)	2019	12
Births attended by skilled health personnel (%)	2018	96%
Modern contraceptive prevalence rate (% using modern method)	2020	26%
Unmet need for family planning (% of women of reproductive age)	2020	9%
Caesarean section rate (% of live births)	2018	33%
Coverage for 4+ antenatal care visits (% of live births)	2018	68%

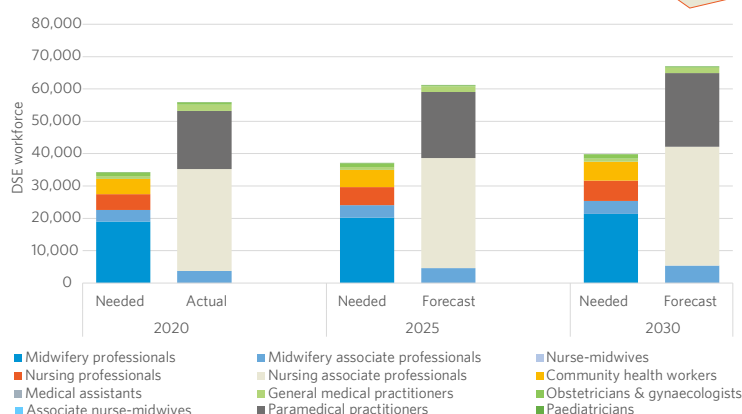
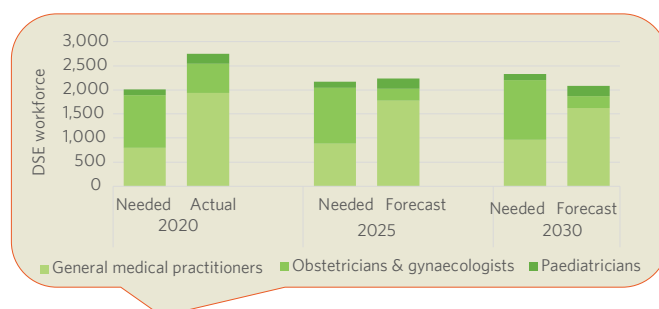
FULL RMNCAH WORKFORCE AVAILABILITY

Occupation	Year	Headcount (A)	Percentage of time on RMNCAH (B)	Dedicated RMNCAH Equivalent (DSE) (A*B)	Graduates		Density per 10,000 population
					Year	Number	
Midwifery professionals	nr	nr	na	nr	2018	4,403	nr
Midwifery associate professionals	2017	3,793	100%	3,793	nr	nr	0.9
Nurse-midwives	nr	nr	na	nr	nr	nr	nr
Associate nurse-midwives	nr	nr	na	nr	nr	nr	nr
Nursing professionals	nr	nr	na	nr	2018	39,988	nr
Nursing associate professionals	2018	78,588	40%	31,435	nr	nr	19.5
Community health workers	nr	nr	na	nr	nr	nr	nr
Paramedical practitioners	2017	59,961	30%	17,988	nr	nr	14.9
Medical assistants	nr	nr	na	nr	nr	nr	nr
General medical practitioners	2018	5,521	35%	1,932	2018	1	1.4
Obstetricians & gynaecologists	2018	1,214	50%	607	nr	nr	0.3
Paediatricians	2018	1,399	15%	210	nr	nr	0.3
Total RMNCAH workforce		150,476		55,966			37.4

Source: **If in bold type: WHO National Health Workforce Accounts (NHWA) data platform, accessed Dec 2020, most recent year**
 If not in bold type: communication with UNFPA Country Office Sept. 2021

These charts compare estimates of the number of DSE workers needed with the number available. On each chart, the first pair of bars show the baseline year, the second pair shows projections to 2025, and the third pair shows projections to 2030.

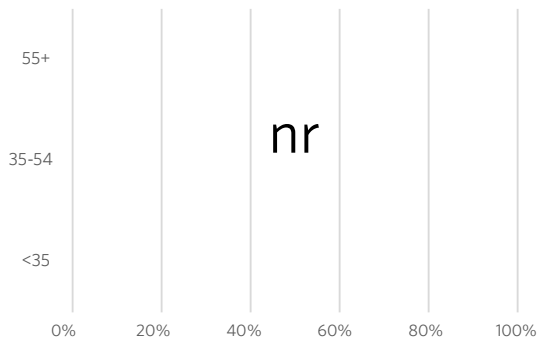
The chart below shows all RMNCAH occupations. The chart to the right highlights RMNCAH doctors (as these numbers are difficult to see on the main chart)



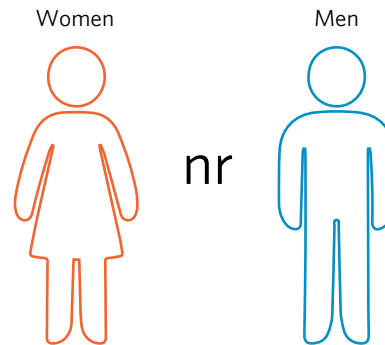
The 'needed' numbers represent the number of DSEs necessary to achieve universal coverage of essential RMNCAH interventions. Need is allocated to occupations according to competencies they should have if educated and regulated according to global standards.

MIDWIVES DEMOGRAPHY

Age distribution



Gender distribution



Source: **If in bold type: WHO National Health Workforce Accounts (NHWA) data platform, accessed Dec 2020, most recent year**
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ENABLING ENVIRONMENT

Policy environment

National policy guideline that recommends midwife-led care for pregnancy and/or childbirth and/or postnatal period for mother only, or both mother and newborn? *

Pregnancy	Childbirth	Postnatal
mother only	mother & newborn	mother & newborn

Number of midwives in leadership roles in national MoH / sub-national MoH / regulatory authorities

National MoH	Sub-national MoH	Regulatory authorities
0	0	0

Education

National policy / guideline on education of midwifery care providers based on ICM competencies? *

yes

Midwifery education pathway (direct entry / post-nursing / combined)

Direct entry	Post-nursing	Combined
yes	no	no

Duration of direct entry / post-nursing / combined education programme (months)

Direct entry	Post-nursing	Combined
18	na	na

% of midwifery educators who are midwives

50

Regulation

National policy sets a competency framework for maternal and/or newborn care? *

yes

National policy on regulation of midwifery care providers based on ICM competencies? *

yes

Regulatory system for midwifery practice?

yes

Is licensing compulsory prior to practise? / Is there periodic relicensing? / Is continuing professional development a requirement for relicensing?

License compulsory	Periodic relicensing	Continuing development requirement
yes	yes	nr

Association

Is there a professional association specifically for midwives? Is there another professional association open to midwives?

Association specifically for midwives	Other association open to midwives
yes	yes

Source: **If in bold type: validated data from 2020 ICM survey, except those marked * which are from 2018 2019 WHO SRMNCAH policy survey**
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POTENTIAL MET NEED

Potential to meet NEED =

Workforce time available

Workforce time needed for universal coverage of essential SRMNAH interventions

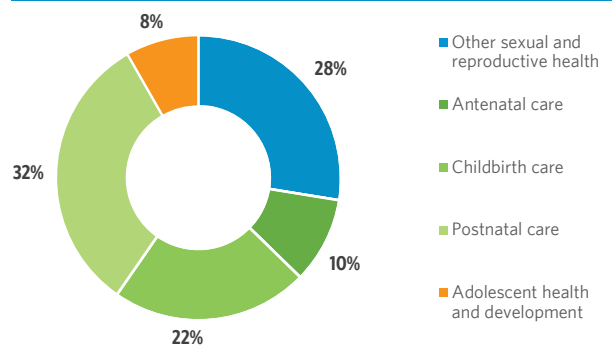
2015
31%

2021
93%

2030
97%



% OF NEED AT EACH STAGE ON CONTINUUM OF CARE



Total need for SRMNAH worker time to deliver essential interventions is **43 million hours per year**

EXPLANATORY NOTES

Estimated population	2020	10,203,140
Women of reproductive age (aged 15 - 49)	2020	2,696,578
Adolescents (aged 10 - 19)	2020	2,179,853
Total fertility rate (births per woman)	2015-2020	2.77
Live births	2020	213,280
Pregnancies	2020	314,807
Adolescent birth rate (births per 1,000 women aged 15-19)	2016	27
Maternal mortality ratio (maternal deaths per 100,000 live births)	2017	46
Neonatal mortality rate (deaths within 28 days per 1,000 live births)	2019	9
Stillbirth rate (per 1,000 total births)	2019	9
Births attended by skilled health personnel (%)	2018	100%
Modern contraceptive prevalence rate (% using modern method)	2020	21%
Unmet need for family planning (% of women of reproductive age)	2020	8%
Caesarean section rate (% of live births)	2018	26%
Coverage for 4+ antenatal care visits (% of live births)	2018	92%

FULL RMNCAH WORKFORCE AVAILABILITY

Occupation	Year	Headcount	Percentage of time on RMNCAH	Dedicated RMNCAH Equivalent (DSE)	Graduates		Density per 10,000 population
					Year	Number	
		(A)	(B)	(A*B)			
Midwifery professionals	2019	3,701	100%	3,701	2019	133	3.6
Midwifery associate professionals	2020	0	na	0	nr	nr	0.0
Nurse-midwives	nr	nr	na	nr	nr	nr	nr
Associate nurse-midwives	2020	0	na	0	nr	nr	0.0
Nursing professionals	2019	25,326	30%	7,598	2018	1,825	24.8
Nursing associate professionals	2019	4,783	40%	1,913	nr	nr	4.7
Community health workers	nr	nr	na	nr	nr	nr	nr
Paramedical practitioners	nr	nr	na	nr	nr	nr	nr
Medical assistants	2019	1,713	30%	514	nr	nr	1.7
General medical practitioners	2019	1,056	35%	370	nr	nr	1.0
Obstetricians & gynaecologists	2019	877	50%	439	nr	nr	0.9
Paediatricians	2017	964	15%	145	nr	nr	0.9
Total RMNCAH workforce		38,420		14,679			37.7

Source: **If in bold type: WHO National Health Workforce Accounts (NHWA) data platform, accessed Dec 2020, most recent year**
 If not in bold type: communication with UNFPA Country Office Sept. 2021

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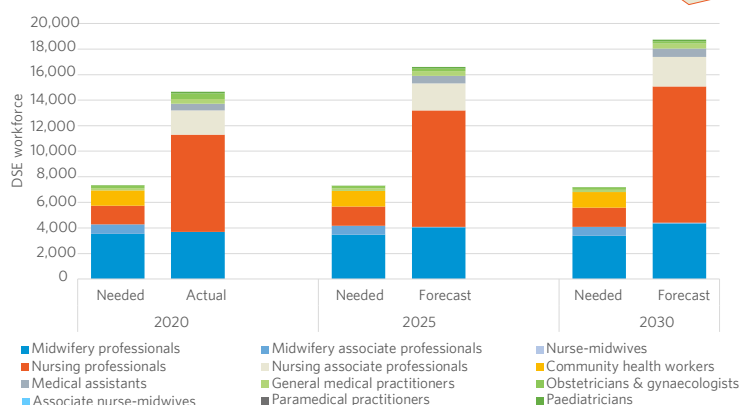
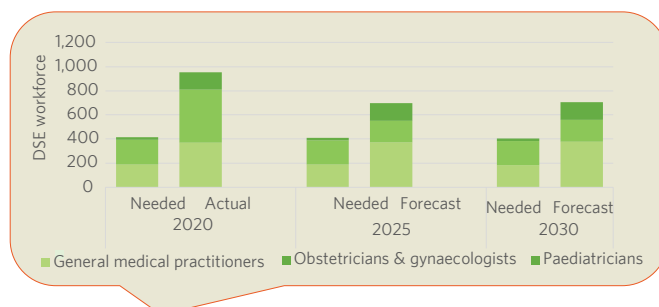
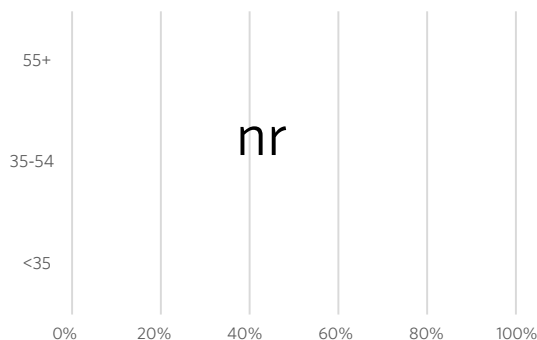


chart)

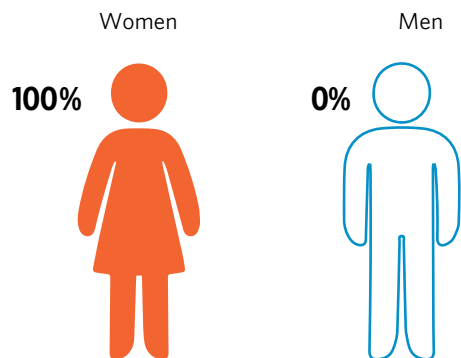
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MIDWIVES DEMOGRAPHY

Age distribution



Gender distribution



Source: **If in bold type: WHO National Health Workforce Accounts (NHWA) data platform, accessed Dec 2020, most recent year**
 If not in bold type: communication with UNFPA Country Office Sept. 2021

ENABLING ENVIRONMENT

Policy environment

National policy guideline that recommends midwife-led care for pregnancy and/or childbirth and/or postnatal period for mother only, or both mother and newborn? *

Pregnancy	Childbirth	Postnatal
mother & newborn	mother & newborn	mother & newborn

Number of midwives in leadership roles in national MoH / sub-national MoH / regulatory authorities

National MoH	Sub-national MoH	Regulatory authorities
30	nr	nr

Education

National policy / guideline on education of midwifery care providers based on ICM competencies? *

yes

Midwifery education pathway (direct entry / post-nursing / combined)

Direct entry	Post-nursing	Combined
yes	no	no

Duration of direct entry / post-nursing / combined education programme (months)

Direct entry	Post-nursing	Combined
36	na	na

% of midwifery educators who are midwives

nr

Regulation

National policy sets a competency framework for maternal and/or newborn care? *

yes

National policy on regulation of midwifery care providers based on ICM competencies? *

yes

Regulatory system for midwifery practice?

yes

Is licensing compulsory prior to practise? / Is there periodic relicensing? / Is continuing professional development a requirement for relicensing?

License compulsory	Periodic relicensing	Continuing development requirement
yes	yes	yes

Association

Is there a professional association specifically for midwives? Is there another professional association open to midwives?

Association specifically for midwives	Other association open to midwives
no	no

Source: **If in bold type: validated data from 2020 ICM survey, except those marked * which are from 2018 2019 WHO SRMNAH policy survey**
 If not in bold type: either communication with UNFPA Country Office Sept. 2021 or unvalidated data from 2020 ICM survey

Key:

na = not applicable

dk = don't know

nr = not reported

MoH = Ministry of Health

POTENTIAL MET NEED

Potential to meet NEED =

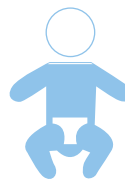
Workforce time available

Workforce time needed for universal coverage of essential SRMNAH interventions

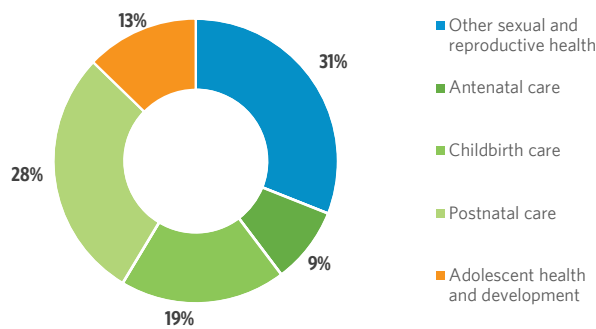
2015
62%

2021
91%

2030
100%



% OF NEED AT EACH STAGE ON CONTINUUM OF CARE



Total need for SRMNAH worker time to deliver essential interventions is

9 million hours per year

EXPLANATORY NOTES

Estimated population	2020	4,270,563
Women of reproductive age (aged 15 - 49)	2020	944,762
Adolescents (aged 10 - 19)	2020	533,226
Total fertility rate (births per woman)	2015-2020	2.10
Live births	2020	53,160
Pregnancies	2020	78,466
Adolescent birth rate (births per 1,000 women aged 15-19)	2018	5
Maternal mortality ratio (maternal deaths per 100,000 live births)	2017	12
Neonatal mortality rate (deaths within 28 days per 1,000 live births)	2019	5
Stillbirth rate (per 1,000 total births)	2019	6
Births attended by skilled health personnel (%)	2016	100%
Modern contraceptive prevalence rate (% using modern method)	2020	34%
Unmet need for family planning (% of women of reproductive age)	2020	10%
Caesarean section rate (% of live births)	nr	nr
Coverage for 4+ antenatal care visits (% of live births)	nr	nr

FULL RMNCAH WORKFORCE AVAILABILITY

Occupation	Year	Headcount	Percentage of time on RMNCAH	Dedicated RMNCAH Equivalent (DSE)	Graduates		Density per 10,000 population
					Year	Number	
		(A)	(B)	(A*B)			
Midwifery professionals	nr	nr	na	nr	nr	nr	nr
Midwifery associate professionals	nr	nr	na	nr	nr	nr	nr
Nurse-midwives	nr	nr	na	nr	nr	nr	nr
Associate nurse-midwives	nr	nr	na	nr	nr	nr	nr
Nursing professionals	nr	nr	na	nr	nr	nr	nr
Nursing associate professionals	2018	30,676	40%	12,270	nr	nr	71.8
Community health workers	nr	nr	na	nr	nr	nr	nr
Paramedical practitioners	nr	nr	na	nr	nr	nr	nr
Medical assistants	nr	nr	na	nr	nr	nr	nr
General medical practitioners	2015	2,661	35%	931	nr	nr	6.2
Obstetricians & gynaecologists	2015	403	50%	201	nr	nr	0.9
Paediatricians	2015	380	15%	57	nr	nr	0.9
Total RMNCAH workforce		34,120		13,460			79.9

Source: **If in bold type: WHO National Health Workforce Accounts (NHWA) data platform, accessed Dec 2020, most recent year**
 If not in bold type: communication with UNFPA Country Office Sept. 2021

These charts compare estimates of the number of DSE workers needed with the number available. On each chart, the first pair of bars show the baseline year, the second pair shows projections to 2025, and the third pair shows projections to 2030.

The chart below shows all RMNCAH occupations. The chart to the right highlights RMNCAH doctors (as these numbers are difficult to see on the main

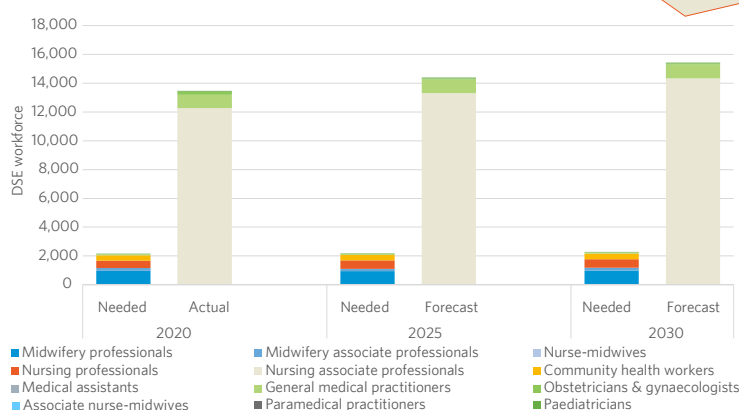
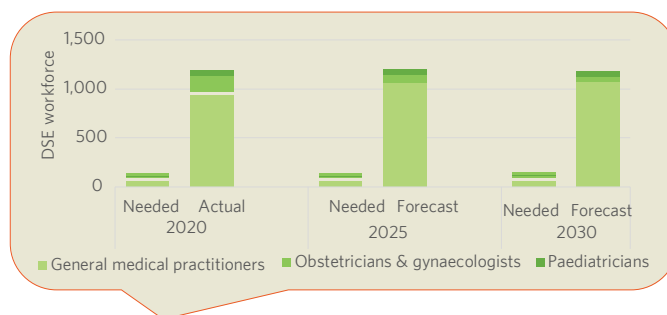
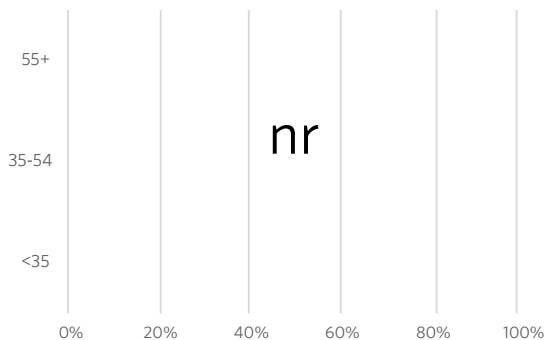


chart)

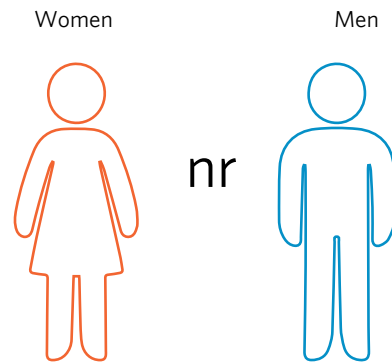
The 'needed' numbers represent the number of DSEs necessary to achieve universal coverage of essential RMNCAH interventions. Need is allocated to occupations according to competencies they should have if educated and regulated according to global standards.

MIDWIVES DEMOGRAPHY

Age distribution



Gender distribution



Source: **If in bold type: WHO National Health Workforce Accounts (NHWA) data platform, accessed Dec 2020, most recent year**
 If not in bold type: communication with UNFPA Country Office Sept. 2021

ENABLING ENVIRONMENT

Policy environment

National policy guideline that recommends midwife-led care for pregnancy and/or childbirth and/or postnatal period for mother only, or both mother and newborn? *	Pregnancy	Childbirth	Postnatal
	nr	nr	nr

Number of midwives in leadership roles in national MoH / sub-national MoH / regulatory authorities	National MoH	Sub-national MoH	Regulatory authorities
	nr	nr	nr

Education

National policy / guideline on education of midwifery care providers based on ICM competencies? *	
	nr

Midwifery education pathway (direct entry / post-nursing / combined)	Direct entry	Post-nursing	Combined
	nr	nr	nr

Duration of direct entry / post-nursing / combined education programme (months)	Direct entry	Post-nursing	Combined
	nr	nr	nr

% of midwifery educators who are midwives	
	nr

Regulation

National policy sets a competency framework for maternal and/or newborn care? *	
	nr

National policy on regulation of midwifery care providers based on ICM competencies? *	
	nr

Regulatory system for midwifery practice?	
	nr

Is licensing compulsory prior to practise? / Is there periodic relicensing? / Is continuing professional development a requirement for relicensing?	License compulsory	Periodic relicensing	Continuing development requirement
	nr	nr	nr

Association

Is there a professional association specifically for midwives? Is there another professional association open to midwives?	Association specifically for midwives	Other association open to midwives
	nr	nr

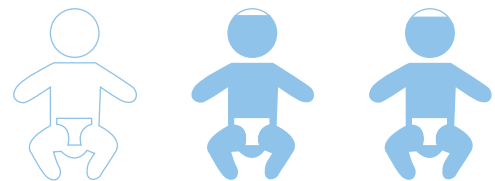
POTENTIAL MET NEED

Potential to meet NEED = $\frac{\text{Workforce time available}}{\text{Workforce time needed for universal coverage of essential SRMNAH interventions}}$

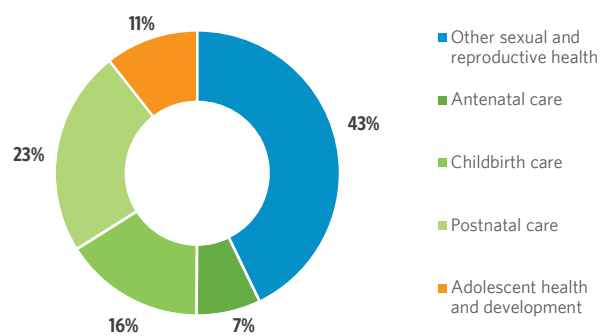
2015
nr

2021
89%

2030
88%



% OF NEED AT EACH STAGE ON CONTINUUM OF CARE



Total need for SRMNAH worker time to deliver essential interventions is **3 million hours per year**

EXPLANATORY NOTES

Source: **If in bold type: validated data from 2020 ICM survey, except those marked * which are from 2018 2019 WHO SRMNAH policy survey**
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Key:
 na = not applicable dk = don't know nr = not reported MoH = Ministry of Health

Lebanon

Estimated population	2020	6,825,442
Women of reproductive age (aged 15 - 49)	2020	1,859,380
Adolescents (aged 10 - 19)	2020	1,134,997
Total fertility rate (births per woman)	2015-2020	2.09
Live births	2020	112,360
Pregnancies	2020	165,847
Adolescent birth rate (births per 1,000 women aged 15-19)	2019	12
Maternal mortality ratio (maternal deaths per 100,000 live births)	2017	29
Neonatal mortality rate (deaths within 28 days per 1,000 live births)	2019	4
Stillbirth rate (per 1,000 total births)	2019	6
Births attended by skilled health personnel (%)	nr	nr
Modern contraceptive prevalence rate (% using modern method)	2020	21%
Unmet need for family planning (% of women of reproductive age)	2020	6%
Caesarean section rate (% of live births)	nr	nr
Coverage for 4+ antenatal care visits (% of live births)	nr	nr

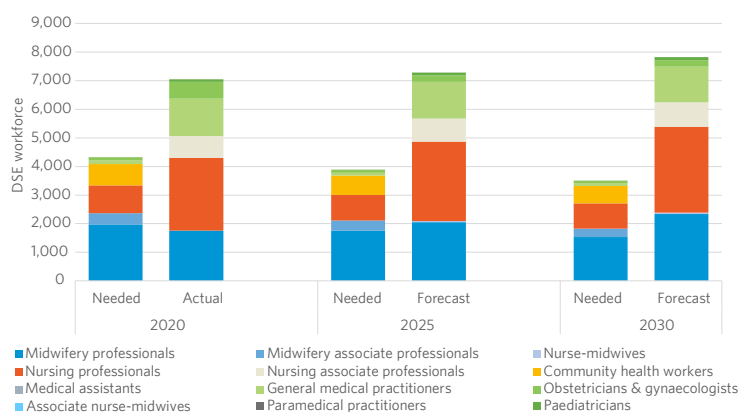
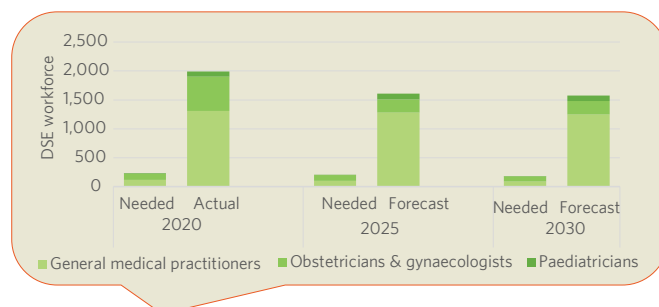
FULL RMNCAH WORKFORCE AVAILABILITY

Occupation	Year	Headcount	Percentage of time on RMNCAH	Dedicated RMNCAH Equivalent (DSE)	Graduates		Density per 10,000 population
					Year	Number	
		(A)	(B)	(A*B)			
Midwifery professionals	2020	1,762	100%	1,762	2022	109	2.6
Midwifery associate professionals	2020	0	na	0	nr	nr	0.0
Nurse-midwives	2020	0	na	0	nr	nr	0.0
Associate nurse-midwives	2020	0	na	0	nr	nr	0.0
Nursing professionals	2018	8,477	30%	2,543	nr	nr	12.4
Nursing associate professionals	2018	1,902	40%	761	nr	nr	2.8
Community health workers	nr	nr	na	nr	nr	nr	nr
Paramedical practitioners	nr	nr	na	nr	nr	nr	nr
Medical assistants	nr	nr	na	nr	nr	nr	nr
General medical practitioners	2018	3,744	35%	1,310	nr	nr	5.5
Obstetricians & gynaecologists	2018	1,175	50%	588	nr	nr	1.7
Paediatricians	2018	612	15%	92	nr	nr	0.9
Total RMNCAH workforce		17,672		7,056			25.9

Source: **If in bold type: WHO National Health Workforce Accounts (NHWA) data platform, accessed Dec 2020, most recent year**
If not in bold type: communication with UNFPA Country Office Sept. 2021

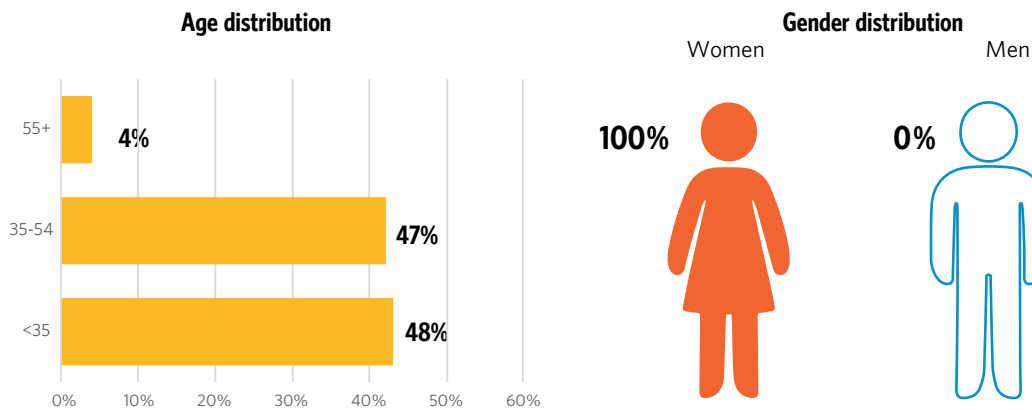
These charts compare estimates of the number of DSE workers needed with the number available. On each chart, the first pair of bars show the baseline year, the second pair shows projections to 2025, and the third pair shows projections to 2030.

The chart below shows all RMNCAH occupations. The chart to the right highlights RMNCAH doctors (as these numbers are difficult to see on the main chart)



The 'needed' numbers represent the number of DSEs necessary to achieve universal coverage of essential RMNCAH interventions. Need is allocated to occupations according to competencies they should have if educated and regulated according to global standards.

MIDWIVES DEMOGRAPHY



Source: **If in bold type: WHO National Health Workforce Accounts (NHWA) data platform, accessed Dec 2020, most recent year**
 If not in bold type: communication with UNFPA Country Office Sept. 2021

ENABLING ENVIRONMENT

Policy environment

National policy guideline that recommends midwife-led care for pregnancy and/or childbirth and/or postnatal period for mother only, or both mother and newborn? *

Pregnancy	Childbirth	Postnatal
no	no	no

Number of midwives in leadership roles in national MoH / sub-national MoH / regulatory authorities

National MoH	Sub-national MoH	Regulatory authorities
0	0	0

Education

National policy / guideline on education of midwifery care providers based on ICM competencies? *

No

Midwifery education pathway (direct entry / post-nursing / combined)

Direct entry	Post-nursing	Combined
yes	no	no

Duration of direct entry / post-nursing / combined education programme (months)

Direct entry	Post-nursing	Combined
48	na	na

% of midwifery educators who are midwives

100

Regulation

National policy sets a competency framework for maternal and/or newborn care? *

partial

National policy on regulation of midwifery care providers based on ICM competencies? *

partial

Regulatory system for midwifery practice?

no

Is licensing compulsory prior to practise? / Is there periodic relicensing? / Is continuing professional development a requirement for relicensing?

License compulsory	Periodic relicensing	Continuing development requirement
yes	no	na

Association

Is there a professional association specifically for midwives? Is there another professional association open to midwives?

Association specifically for midwives	Other association open to midwives
yes	no

POTENTIAL MET NEED

Potential to meet NEED =

Workforce time available

Workforce time needed for universal coverage of essential SRMNAH interventions

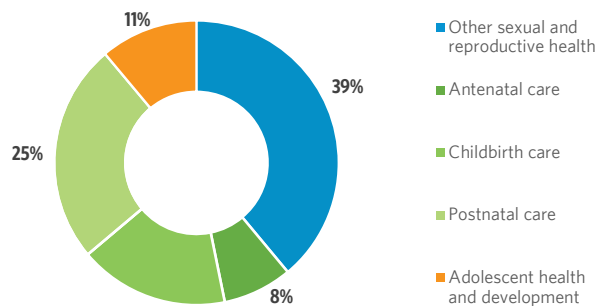
2015
100%

2021
100%

2030
100%



% OF NEED AT EACH STAGE ON CONTINUUM OF CARE



Total need for SRMNAH worker time to deliver essential interventions is **5 million hours per year**

EXPLANATORY NOTES

Source: **If in bold type: validated data from 2020 ICM survey, except those marked * which are from 2018 2019 WHO SRMNAH policy survey**
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Key: na = not applicable dk = don't know nr = not reported MoH = Ministry of Health

Estimated population	2020	6,871,287
Women of reproductive age (aged 15 - 49)	2020	1,909,780
Adolescents (aged 10 - 19)	2020	1,185,744
Total fertility rate (births per woman)	2015-2020	2.25
Live births	2020	121,400
Pregnancies	2020	165,964
Adolescent birth rate (births per 1,000 women aged 15-19)	2013	11
Maternal mortality ratio (maternal deaths per 100,000 live births)	2017	72
Neonatal mortality rate (deaths within 28 days per 1,000 live births)	2019	6
Stillbirth rate (per 1,000 total births)	2019	9
Births attended by skilled health personnel (%)	2013	100%
Modern contraceptive prevalence rate (% using modern method)	2020	16%
Unmet need for family planning (% of women of reproductive age)	2020	17%
Caesarean section rate (% of live births)	nr	nr
Coverage for 4+ antenatal care visits (% of live births)	nr	nr

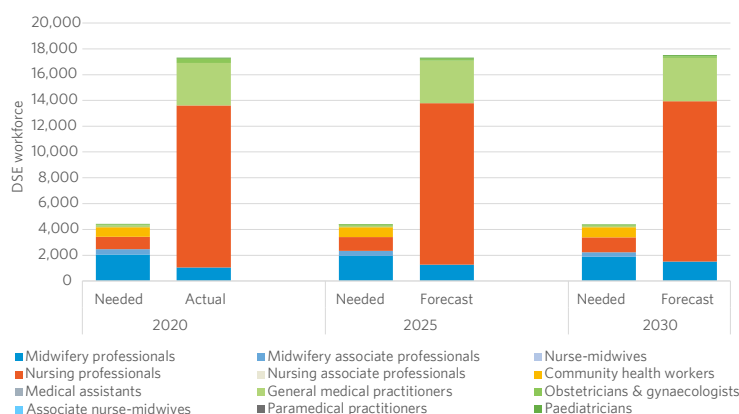
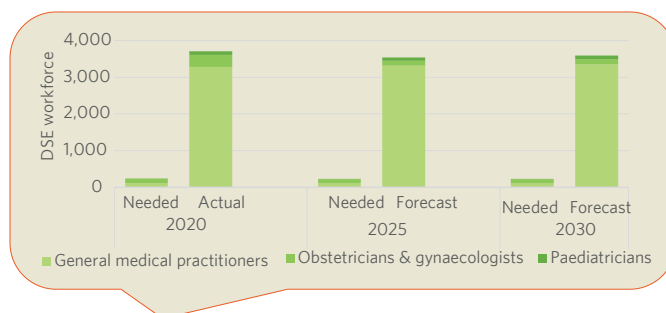
FULL RMNCAH WORKFORCE AVAILABILITY

Occupation	Year	Headcount	Percentage of time on RMNCAH	Dedicated RMNCAH Equivalent (DSE)	Graduates		Density per 10,000 population
					Year	Number	
		(A)	(B)	(A*B)			
Midwifery professionals	2017	1,041	100%	1,041	nr	nr	1.5
Midwifery associate professionals	nr	nr	na	nr	nr	nr	nr
Nurse-midwives	nr	nr	na	nr	nr	nr	nr
Associate nurse-midwives	nr	nr	na	nr	nr	nr	nr
Nursing professionals	2017	41,934	30%	12,580	2017	263	61.0
Nursing associate professionals	nr	nr	na	nr	nr	nr	nr
Community health workers	nr	nr	na	nr	nr	nr	nr
Paramedical practitioners	nr	nr	na	nr	nr	nr	nr
Medical assistants	nr	nr	na	nr	nr	nr	nr
General medical practitioners	2017	9,366	35%	3,278	nr	nr	13.6
Obstetricians & gynaecologists	2017	680	50%	340	nr	nr	1.0
Paediatricians	2017	583	15%	87	nr	nr	0.8
Total RMNCAH workforce		53,604		17,327			78.0

Source: **If in bold type: WHO National Health Workforce Accounts (NHWA) data platform, accessed Dec 2020, most recent year**
 If not in bold type: communication with UNFPA Country Office Sept. 2021

These charts compare estimates of the number of DSE workers needed with the number available. On each chart, the first pair of bars show the baseline year, the second pair shows projections to 2025, and the third pair shows projections to 2030.

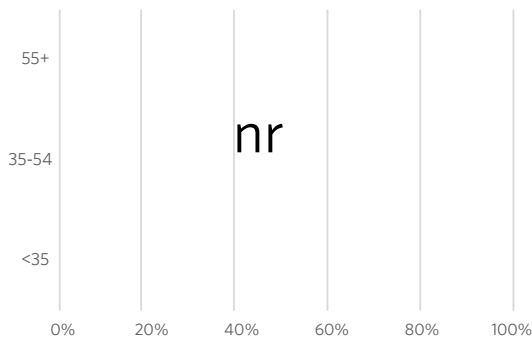
The chart below shows all RMNCAH occupations. The chart to the right highlights RMNCAH doctors (as these numbers are difficult to see on the main chart)



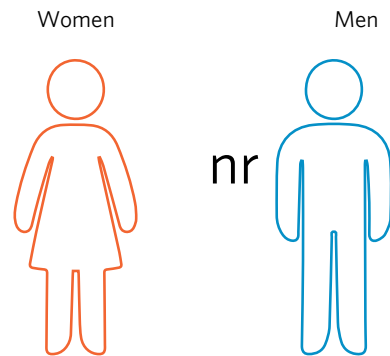
The 'needed' numbers represent the number of DSEs necessary to achieve universal coverage of essential RMNCAH interventions. Need is allocated to occupations according to competencies they should have if educated and regulated according to global standards.

MIDWIVES DEMOGRAPHY

Age distribution



Gender distribution



Source: **If in bold type: WHO National Health Workforce Accounts (NHWA) data platform, accessed Dec 2020, most recent year**
If not in bold type: communication with UNFPA Country Office Sept. 2021

ENABLING ENVIRONMENT

Policy environment

National policy guideline that recommends midwife-led care for pregnancy and/or childbirth and/or postnatal period for mother only, or both mother and newborn? *

Pregnancy	Childbirth	Postnatal
nr	nr	nr

Number of midwives in leadership roles in national MoH / sub-national MoH / regulatory authorities

National MoH	Sub-national MoH	Regulatory authorities
0	5	0

Education

National policy / guideline on education of midwifery care providers based on ICM competencies? *

nr

Midwifery education pathway (direct entry / post-nursing / combined)

Direct entry	Post-nursing	Combined
no	yes	no

Duration of direct entry / post-nursing / combined education programme (months)

Direct entry	Post-nursing	Combined
na	24	na

% of midwifery educators who are midwives

100

Regulation

National policy sets a competency framework for maternal and/or newborn care? *

nr

National policy on regulation of midwifery care providers based on ICM competencies? *

nr

Regulatory system for midwifery practice?

yes

Is licensing compulsory prior to practise? / Is there periodic relicensing? / Is continuing professional development a requirement for relicensing?

License compulsory	Periodic relicensing	Continuing development requirement
yes	yes	no

Association

Is there a professional association specifically for midwives? Is there another professional association open to midwives?

Association specifically for midwives	Other association open to midwives
yes	no

POTENTIAL MET NEED

Potential to meet NEED =

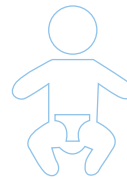
Workforce time available

Workforce time needed for universal coverage of essential SRMNAH interventions

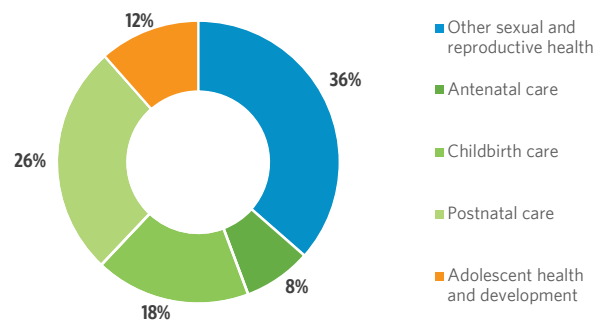
2015
nr

2021
99%

2030
99%



% OF NEED AT EACH STAGE ON CONTINUUM OF CARE



Total need for SRMNAH worker time to deliver essential interventions is

6 million hours per year

EXPLANATORY NOTES

There are 3 post-nursing midwife education programmes: (1) a 24-month Bachelor's programme in nursing (with midwifery and neonate major), (2) an 18-month Higher Diploma Nursing (with midwifery specialization) and (3) an 18-month Diploma in midwifery.

Source: **If in bold type: validated data from 2020 ICM survey, except those marked * which are from 2018 2019 WHO SRMNAH policy survey**
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Key:
na = not applicable dk = don't know nr = not reported MoH = Ministry of Health

Estimated population	2020	36,910,558
Women of reproductive age (aged 15 - 49)	2020	9,579,449
Adolescents (aged 10 - 19)	2020	6,097,196
Total fertility rate (births per woman)	2015-2020	2.42
Live births	2020	665,360
Pregnancies	2020	909,604
Adolescent birth rate (births per 1,000 women aged 15-19)	2017	19.0
Maternal mortality ratio (maternal deaths per 100,000 live births)	2017	70
Neonatal mortality rate (deaths within 28 days per 1,000 live births)	2019	14
Stillbirth rate (per 1,000 total births)	2019	14
Births attended by skilled health personnel (%)	2013	87%
Modern contraceptive prevalence rate (% using modern method)	2020	36%
Unmet need for family planning (% of women of reproductive age)	2020	7%
Caesarean section rate (% of live births)	2018	21.54%
Coverage for 4+ antenatal care visits (% of live births)	2018	54%

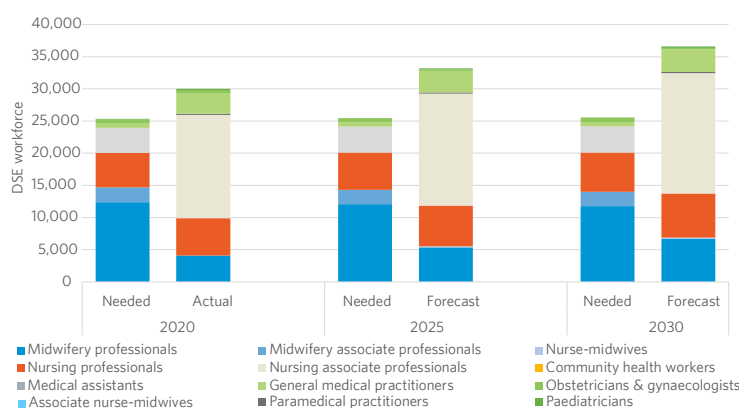
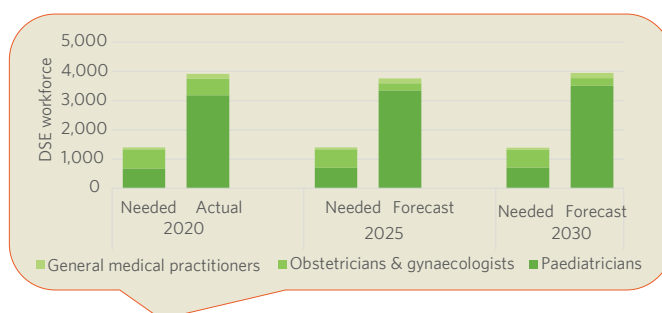
FULL RMNCAH WORKFORCE AVAILABILITY

Occupation	Year	Headcount	Percentage of time on RMNCAH	Dedicated RMNCAH Equivalent (DSE)	Graduates		Density per 10,000 population
					Year	Number	
		(A)	(B)	(A*B)			
Midwifery professionals	2017	4,086	100%	4,086	2018	450	1.1
Midwifery associate professionals	nr	nr	na	nr	nr	nr	nr
Nurse-midwives	nr	nr	na	nr	nr	nr	nr
Associate nurse-midwives	nr	nr	na	nr	nr	nr	nr
Nursing professionals	2017	13,285	44%	5,845	nr	nr	3.6
Nursing associate professionals	2017	32,041	50%	16,021	nr	nr	8.7
Community health workers	nr	nr	na	nr	nr	nr	nr
Paramedical practitioners	nr	nr	na	nr	nr	nr	nr
Medical assistants	2017	530	30%	159	nr	nr	0.1
General medical practitioners	2017	9,094	35%	3,183	nr	nr	2.5
Obstetricians & gynaecologists	2017	1,141	50%	571	nr	nr	0.3
Paediatricians	2017	1,132	15%	170	nr	nr	0.3
Total RMNCAH workforce		61,309		30,034			16.6

Source: **If in bold type: WHO National Health Workforce Accounts (NHWA) data platform, accessed Dec 2020, most recent year**
 If not in bold type: communication with UNFPA Country Office Sept. 2021

These charts compare estimates of the number of DSE workers needed with the number available. On each chart, the first pair of bars show the baseline year, the second pair shows projections to 2025, and the third pair shows projections to 2030.

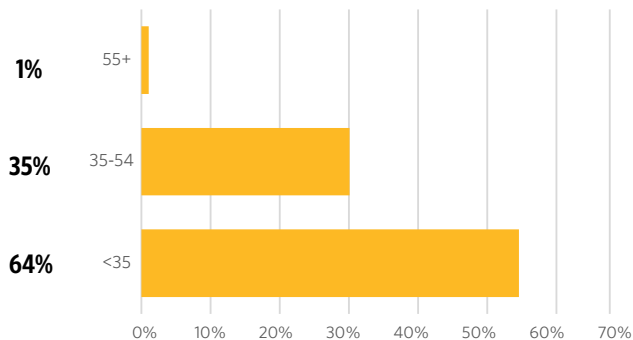
The chart below shows all RMNCAH occupations. The chart to the right highlights RMNCAH doctors (as these numbers are difficult to see on the main chart)



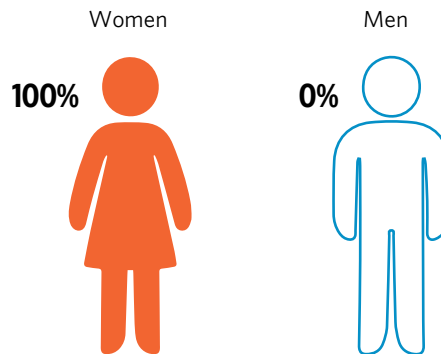
The 'needed' numbers represent the number of DSEs necessary to achieve universal coverage of essential RMNCAH interventions. Need is allocated to occupations according to competencies they should have if educated and regulated according to global standards.

MIDWIVES DEMOGRAPHY

Age distribution



Gender distribution



Source: **If in bold type: WHO National Health Workforce Accounts (NHWA) data platform, accessed Dec 2020, most recent year**
If not in bold type: communication with UNFPA Country Office Sept. 2021

ENABLING ENVIRONMENT

Policy environment

National policy guideline that recommends midwife-led care for pregnancy and/or childbirth and/or postnatal period for mother only, or both mother and newborn? *

Pregnancy	Childbirth	Postnatal
mother only	mother & newborn	mother & newborn

Number of midwives in leadership roles in national MoH / sub-national MoH / regulatory authorities

National MoH	Sub-national MoH	Regulatory authorities
4	4	2

Education

National policy / guideline on education of midwifery care providers based on ICM competencies? *

yes

Midwifery education pathway (direct entry / post-nursing / combined)

Direct entry	Post-nursing	Combined
yes	no	no

Duration of direct entry / post-nursing / combined education programme (months)

Direct entry	Post-nursing	Combined
36	na	na

% of midwifery educators who are midwives

100

Regulation

National policy sets a competency framework for maternal and/or newborn care? *

yes

National policy on regulation of midwifery care providers based on ICM competencies? *

yes

Regulatory system for midwifery practice?

yes

Is licensing compulsory prior to practise? / Is there periodic relicensing? / Is continuing professional development a requirement for relicensing?

License compulsory	Periodic relicensing	Continuing development requirement
yes	yes	yes

Association

Is there a professional association specifically for midwives? Is there another professional association open to midwives?

Association specifically for midwives	Other association open to midwives
yes	yes

POTENTIAL MET NEED

Potential to meet NEED =

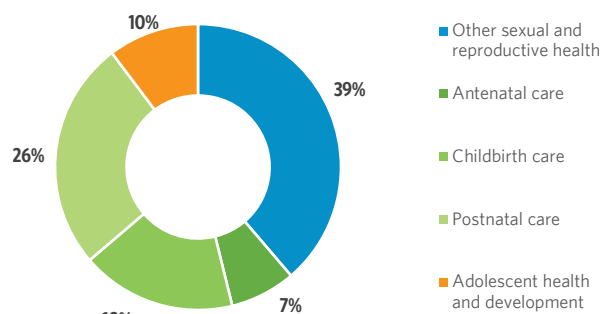
Workforce time available

Workforce time needed for universal coverage of essential SRMNAH interventions

2015 **2021** **2030**
67% **87%** **94%**



% OF NEED AT EACH STAGE ON CONTINUUM OF CARE



Total need for SRMNAH worker time to deliver essential interventions is **32 million hours per year**

EXPLANATORY NOTES

Source: **If in bold type: validated data from 2020 ICM survey, except those marked * which are from 2018 2019 WHO SRMNAH policy survey**
If not in bold type: either communication with UNFPA Country Office Sept. 2021 or unvalidated data from 2020 ICM survey

Key: na = not applicable dk = don't know nr = not reported MoH = Ministry of Health

Estimated population	2020	5,106,622
Women of reproductive age (aged 15 - 49)	2020	980,330
Adolescents (aged 10 - 19)	2020	530,304
Total fertility rate (births per woman)	2015-2020	2.93
Live births	2020	87,360
Pregnancies	2020	128,946
Adolescent birth rate (births per 1,000 women aged 15-19)	2019	8
Maternal mortality ratio (maternal deaths per 100,000 live births)	2017	19
Neonatal mortality rate (deaths within 28 days per 1,000 live births)	2019	5
Stillbirth rate (per 1,000 total births)	2019	6
Births attended by skilled health personnel (%)	2019	99%
Modern contraceptive prevalence rate (% using modern method)	2020	14%
Unmet need for family planning (% of women of reproductive age)	2020	15%
Caesarean section rate (% of live births)	2014	19%
Coverage for 4+ antenatal care visits (% of live births)	2019	74%

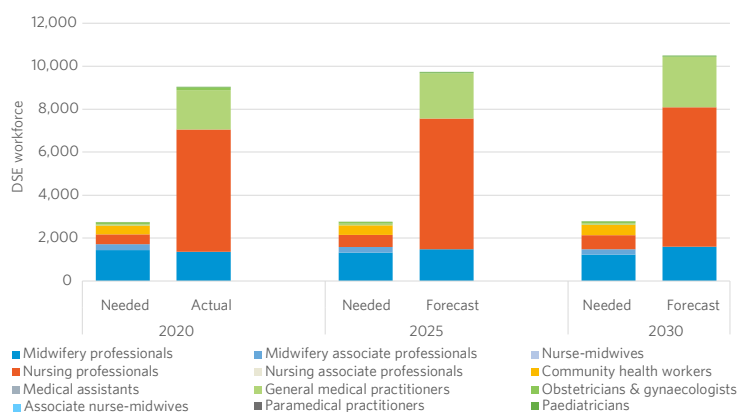
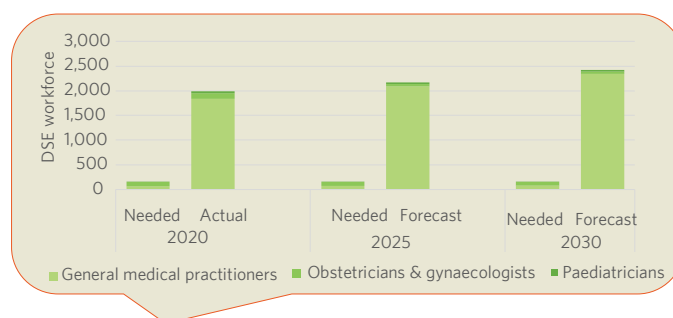
FULL RMNCAH WORKFORCE AVAILABILITY

Occupation	Year	Headcount	Percentage of time on RMNCAH	Dedicated RMNCAH Equivalent (DSE)	Graduates		Density per 10,000 population
					Year	Number	
		(A)	(B)	(A*B)			
Midwifery professionals	2019	1,367	100%	1,367	2019	47	2.7
Midwifery associate professionals	nr	nr	na	nr	nr	nr	nr
Nurse-midwives	nr	nr	na	nr	nr	nr	nr
Associate nurse-midwives	nr	nr	na	nr	nr	nr	nr
Nursing professionals	2019	18,956	30%	5,687	2019	599	37.1
Nursing associate professionals	nr	nr	na	nr	nr	nr	nr
Community health workers	nr	nr	na	nr	nr	nr	nr
Paramedical practitioners	nr	nr	na	nr	nr	nr	nr
Medical assistants	nr	nr	na	nr	nr	nr	nr
General medical practitioners	2019	5,245	35%	1,836	2019	258	10.3
Obstetricians & gynaecologists	2019	225	50%	113	2019	2	0.4
Paediatricians	2019	265	15%	40	2019	5	0.5
Total RMNCAH workforce		26,058		9,042			51.0

Source: **If in bold type: WHO National Health Workforce Accounts (NHW) data platform, accessed Dec 2020, most recent year**
 If not in bold type: communication with UNFPA Country Office Sept. 2021

These charts compare estimates of the number of DSE workers needed with the number available. On each chart, the first pair of bars show the baseline year, the second pair shows projections to 2025, and the third pair shows projections to 2030.

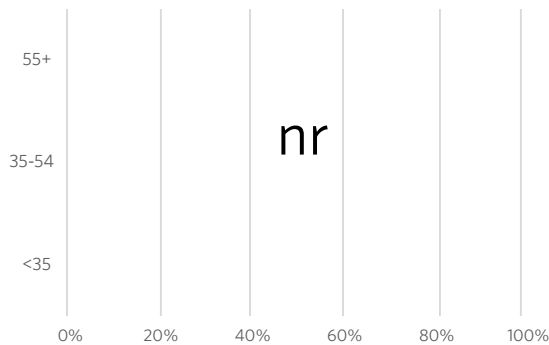
The chart below shows all RMNCAH occupations. The chart to the right highlights RMNCAH doctors (as these numbers are difficult to see on the main chart)



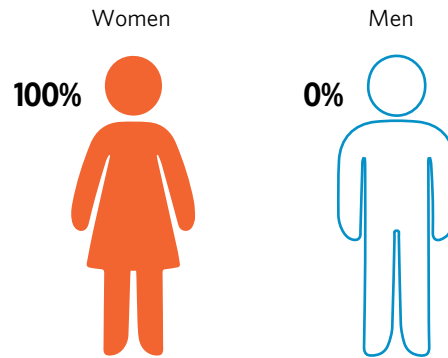
The 'needed' numbers represent the number of DSEs necessary to achieve universal coverage of essential RMNCAH interventions. Need is allocated to occupations according to competencies they should have if educated and regulated according to global standards.

MIDWIVES DEMOGRAPHY

Age distribution



Gender distribution



Source: **If in bold type: WHO National Health Workforce Accounts (NHWA) data platform, accessed Dec 2020, most recent year**
 If not in bold type: communication with UNFPA Country Office Sept. 2021

ENABLING ENVIRONMENT

Policy environment

National policy guideline that recommends midwife-led care for pregnancy and/or childbirth and/or postnatal period for mother only, or both mother and newborn? *

Pregnancy **no** Childbirth **no** Postnatal **no**

Number of midwives in leadership roles in national MoH / sub-national MoH / regulatory authorities

MoH **nr** MoH **nr** authorities **nr**

Education

National policy / guideline on education of midwifery care providers based on ICM competencies? *

yes

Midwifery education pathway (direct entry / post-nursing / combined)

Direct entry **nr** Post-nursing **nr** Combined **nr**

Duration of direct entry / post-nursing / combined education programme (months)

Direct entry **nr** Post-nursing **nr** Combined **nr**

% of midwifery educators who are midwives

nr

Regulation

National policy sets a competency framework for maternal and/or newborn care? *

yes

National policy on regulation of midwifery care providers based on ICM competencies? *

yes

Regulatory system for midwifery practice?

nr

Is licensing compulsory prior to practise? / Is there periodic relicensing? / Is continuing professional development a requirement for relicensing?

License compulsory **nr** Periodic relicensing **nr** Continuing development requirement **nr**

Association

Is there a professional association specifically for midwives? Is there another professional association open to midwives?

Association specifically for midwives **nr** Other association open to midwives **nr**

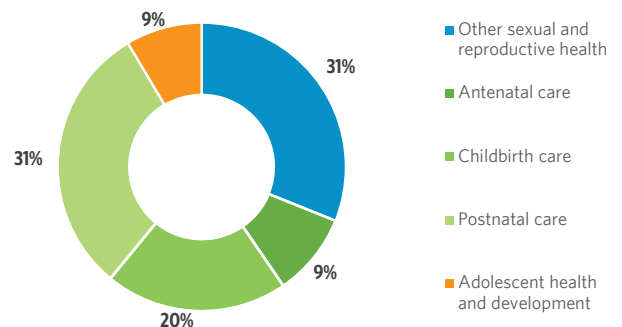
POTENTIAL MET NEED

Potential to meet NEED = $\frac{\text{Workforce time available}}{\text{Workforce time needed for universal coverage of essential SRMNAH interventions}}$

2015 **100%** 2021 **100%** 2030 **100%**



% OF NEED AT EACH STAGE ON CONTINUUM OF CARE



Total need for SRMNAH worker time to deliver essential interventions is **3 million hours per year**

EXPLANATORY NOTES

Source: **If in bold type: validated data from 2020 ICM survey, except those marked * which are from 2018 2019 WHO SRMNAH policy survey**
 If not in bold type: either communication with UNFPA Country Office Sept. 2021 or unvalidated data from 2020 ICM survey

Key:
 na = not applicable dk = don't know nr = not reported MoH = Ministry of Health

Palestine

Estimated population	2020	5,101,416
Women of reproductive age (aged 15 - 49)	2020	1,276,536
Adolescents (aged 10 - 19)	2020	1,109,493
Total fertility rate (births per woman)	2015-2020	3.67
Live births	2020	144,840
Pregnancies	2020	213,788
Adolescent birth rate (births per 1,000 women aged 15-19)	2018	43
Maternal mortality ratio (maternal deaths per 100,000 live births)	2017	27
Neonatal mortality rate (deaths within 28 days per 1,000 live births)	2019	11
Stillbirth rate (per 1,000 total births)	2019	10
Births attended by skilled health personnel (%)	2014	100%
Modern contraceptive prevalence rate (% using modern method)	2020	31%
Unmet need for family planning (% of women of reproductive age)	2020	8%
Caesarean section rate (% of live births)	2014	20%
Coverage for 4+ antenatal care visits (% of live births)	2014	96%

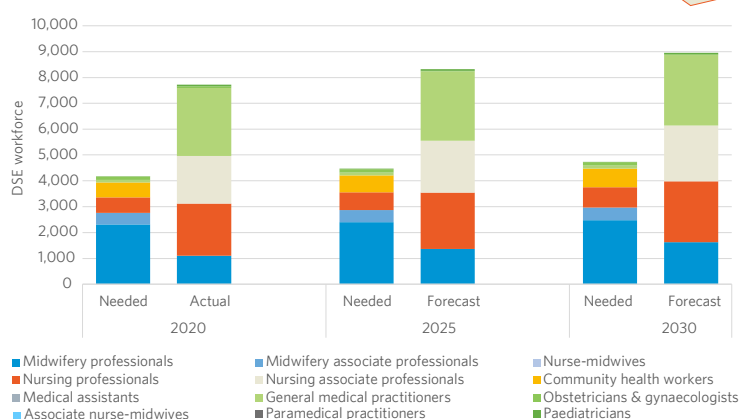
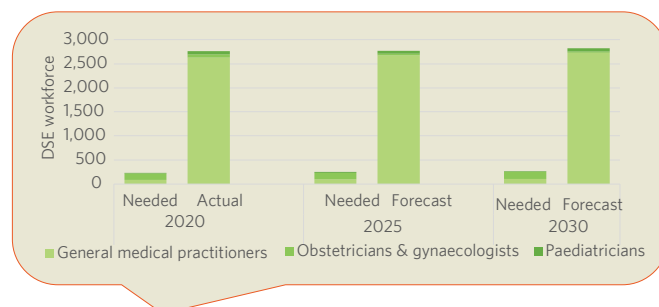
FULL RMNCAH WORKFORCE AVAILABILITY

Occupation	Year	Headcount	Percentage of time on RMNCAH	Dedicated RMNCAH Equivalent (DSE)	Graduates		Density per 10,000 population
					Year	Number	
		(A)	(B)	(A*B)			
Midwifery professionals	2018	1,099	100%	1,099	nr	nr	2.2
Midwifery associate professionals	nr	nr	na	nr	nr	nr	nr
Nurse-midwives	nr	nr	na	nr	nr	nr	nr
Associate nurse-midwives	nr	nr	na	nr	nr	nr	nr
Nursing professionals	2018	4,586	44%	2,018	nr	nr	9.0
Nursing associate professionals	2018	3,700	50%	1,850	nr	nr	7.3
Community health workers	nr	nr	na	nr	nr	nr	nr
Paramedical practitioners	nr	nr	na	nr	nr	nr	nr
Medical assistants	nr	nr	na	nr	nr	nr	nr
General medical practitioners	2018	7,507	35%	2,627	nr	nr	14.7
Obstetricians & gynaecologists	2014	140	50%	70	nr	nr	0.3
Paediatricians	2018	419	15%	63	nr	nr	0.8
Total RMNCAH workforce		17,451		7,727			34.2

Source: **If in bold type: WHO National Health Workforce Accounts (NHWA) data platform, accessed Dec 2020, most recent year**
 If not in bold type: communication with UNFPA Country Office Sept. 2021

These charts compare estimates of the number of DSE workers needed with the number available. On each chart, the first pair of bars show the baseline year, the second pair shows projections to 2025, and the third pair shows projections to 2030.

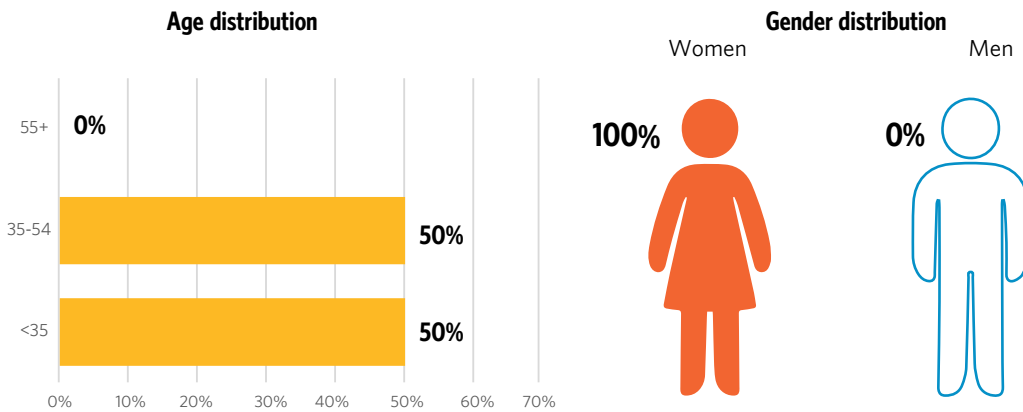
The chart below shows all RMNCAH occupations. The chart to the right highlights RMNCAH doctors (as these numbers are difficult to see on



the main chart)

The 'needed' numbers represent the number of DSEs necessary to achieve universal coverage of essential RMNCAH interventions. Need is allocated to occupations according to competencies they should have if educated and regulated according to global standards.

MIDWIVES DEMOGRAPHY



Source: **If in bold type: WHO National Health Workforce Accounts (NHWA) data platform, accessed Dec 2020, most recent year**
 If not in bold type: communication with UNFPA Country Office Sept. 2021

ENABLING ENVIRONMENT POTENTIAL MET NEED

Policy environment

National policy guideline that recommends midwife-led care for pregnancy and/or childbirth and/or postnatal period for mother only, or both mother and newborn? *

Pregnancy **mother only** Childbirth **mother only** Postnatal **mother only**

	National MoH	Sub-national MoH	Regulatory authorities
Number of midwives in leadership roles in national MoH / sub-national MoH / regulatory authorities	2	0	2

Education

National policy / guideline on education of midwifery care providers based on ICM competencies? *

yes

Midwifery education pathway (direct entry / post-nursing / combined)	Direct entry	Post-nursing	Combined
	yes	yes	no

Duration of direct entry / post-nursing / combined education programme (months)	Direct entry	Post-nursing	Combined
	48	18	na

% of midwifery educators who are midwives	
	100

Regulation

National policy sets a competency framework for maternal and/or newborn care? *

dk

National policy on regulation of midwifery care providers based on ICM competencies? *

yes

Regulatory system for midwifery practice?

yes

Is licensing compulsory prior to practise? / Is there periodic relicensing? / Is continuing professional development a requirement for relicensing?	License compulsory	Periodic relicensing	Continuing development requirement
	yes	yes	nr

Association

Is there a professional association specifically for midwives? Is there another professional association open to midwives?

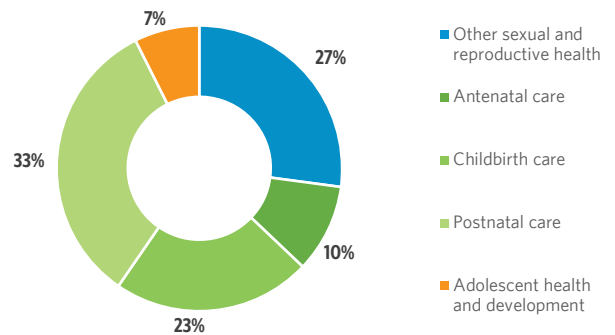
Association specifically for midwives **no** Other association open to midwives **yes**

Potential to meet NEED = $\frac{\text{Workforce time available}}{\text{Workforce time needed for universal coverage of essential SRMNAH interventions}}$

2015 100% **2021** 98% **2030** 99%



% OF NEED AT EACH STAGE ON CONTINUUM OF CARE



Total need for SRMNAH worker time to deliver essential interventions is **5 million hours per year**

EXPLANATORY NOTES

Source: **If in bold type: validated data from 2020 ICM survey, except those marked * which are from 2018 2019 WHO SRMNAH policy survey**
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 Key: na = not applicable dk = don't know nr = not reported MoH = Ministry of Health

Estimated population	2020	2,881,060
Women of reproductive age (aged 15 - 49)	2020	450,083
Adolescents (aged 10 - 19)	2020	228,400
Total fertility rate (births per woman)	2015-2020	1.88
Live births	2020	26,520
Pregnancies	2020	39,144
Adolescent birth rate (births per 1,000 women aged 15-19)	2018	7
Maternal mortality ratio (maternal deaths per 100,000 live births)	2017	9
Neonatal mortality rate (deaths within 28 days per 1,000 live births)	2019	3
Stillbirth rate (per 1,000 total births)	2019	5
Births attended by skilled health personnel (%)	2017	100%
Modern contraceptive prevalence rate (% using modern method)	2020	25%
Unmet need for family planning (% of women of reproductive age)	2020	10%
Caesarean section rate (% of live births)	2012	20%
Coverage for 4+ antenatal care visits (% of live births)	2012	85%

FULL RMNCAH WORKFORCE AVAILABILITY

Occupation	Year	Headcount	Percentage of time on RMNCAH	Dedicated RMNCAH Equivalent (DSE)	Graduates		Density per 10,000 population
					Year	Number	
		(A)	(B)	(A*B)			
Midwifery professionals	nr	nr	na	nr	nr	nr	nr
Midwifery associate professionals	2018	308	100%	308	nr	nr	1.1
Nurse-midwives	nr	nr	na	nr	nr	nr	nr
Associate nurse-midwives	nr	nr	na	nr	nr	nr	nr
Nursing professionals	2018	19,357	30%	5,807	2017	13	67.2
Nursing associate professionals	2018	355	40%	142	nr	nr	1.2
Community health workers	nr	nr	na	nr	nr	nr	nr
Paramedical practitioners	nr	nr	na	nr	nr	nr	nr
Medical assistants	nr	nr	na	nr	nr	nr	nr
General medical practitioners	2018	1,305	35%	457	nr	nr	4.5
Obstetricians & gynaecologists	2018	274	50%	137	nr	nr	1.0
Paediatricians	2018	259	15%	39	nr	nr	0.9
Total RMNCAH workforce		21,858		6,890			75.9

Source: **If in bold type: WHO National Health Workforce Accounts (NHWA) data platform, accessed Dec 2020, most recent year**
 If not in bold type: communication with UNFPA Country Office Sept. 2021

These charts compare estimates of the number of DSE workers needed with the number available. On each chart, the first pair of bars show the baseline year, the second pair shows projections to 2025, and the third pair shows projections to 2030.

The chart below shows all RMNCAH occupations. The chart to the right highlights RMNCAH doctors (as these numbers are difficult to see on the main

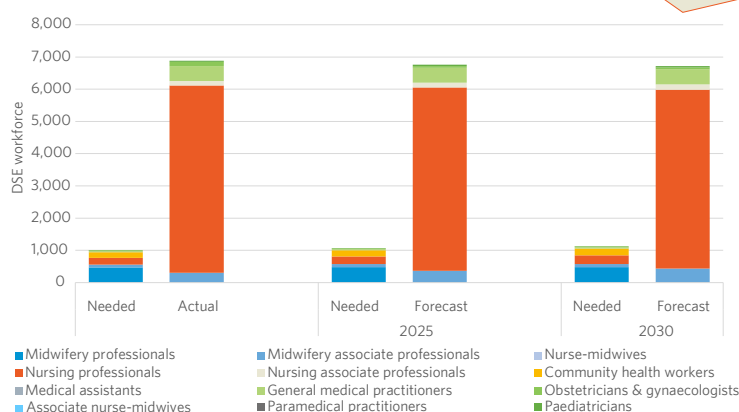
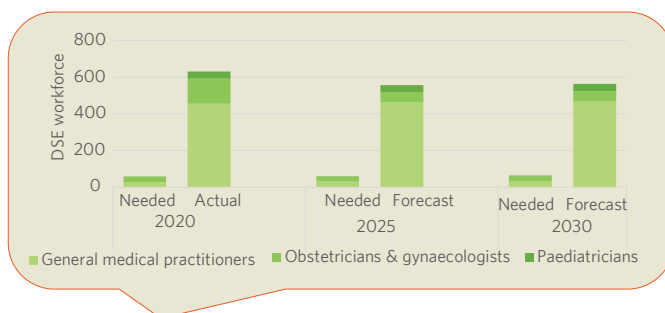
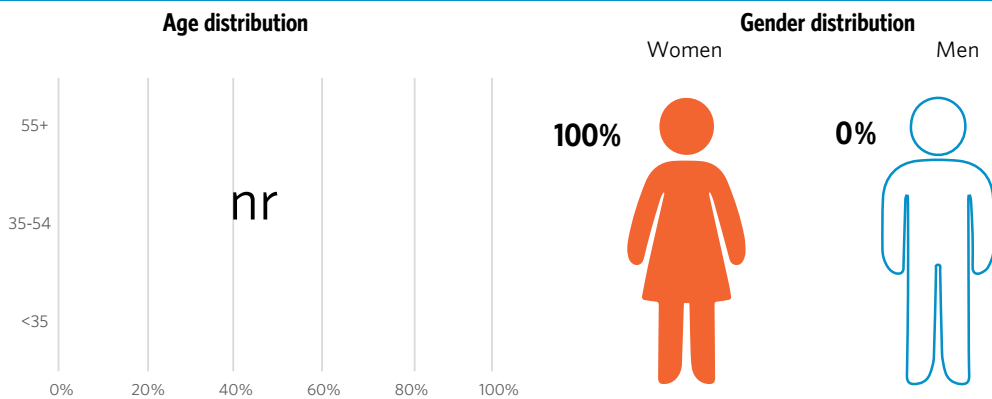


chart)

The 'needed' numbers represent the number of DSEs necessary to achieve universal coverage of essential RMNCAH interventions. Need is allocated to occupations according to competencies they should have if educated and regulated according to global standards.

MIDWIVES DEMOGRAPHY



Source: **If in bold type: WHO National Health Workforce Accounts (NHWA) data platform, accessed Dec 2020, most recent year**
 If not in bold type: communication with UNFPA Country Office Sept. 2021

ENABLING ENVIRONMENT **POTENTIAL MET NEED**

Policy environment

National policy guideline that recommends midwife-led care for pregnancy and/or childbirth and/or postnatal period for mother only, or both mother and newborn? *	Pregnancy nr	Childbirth nr	Postnatal nr
Number of midwives in leadership roles in national MoH / sub-national MoH / regulatory authorities	National MoH nr	Sub-national MoH nr	Regulatory authorities nr

Education

National policy / guideline on education of midwifery care providers based on ICM competencies? *	nr		
Midwifery education pathway (direct entry / post-nursing / combined)	Direct entry nr	Post-nursing nr	Combined nr
Duration of direct entry / post-nursing / combined education programme (months)	Direct entry nr	Post-nursing nr	Combined nr
% of midwifery educators who are midwives	nr		

Regulation

National policy sets a competency framework for maternal and/or newborn care? *	nr		
National policy on regulation of midwifery care providers based on ICM competencies? *	nr		
Regulatory system for midwifery practice?	nr		
Is licensing compulsory prior to practise? / Is there periodic relicensing? / Is continuing professional development a requirement for relicensing?	License compulsory nr	Periodic relicensing nr	Continuing development requirement nr

Association

Is there a professional association specifically for midwives? Is there another professional association open to midwives?	Association specifically for midwives nr	Other association open to midwives nr
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Potential to meet NEED = $\frac{\text{Workforce time available}}{\text{Workforce time needed for universal coverage of essential SRMNAH interventions}}$

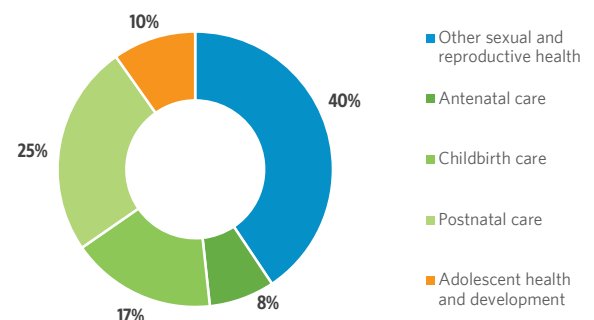
2015
nr

2021
98%

2030
98%



% OF NEED AT EACH STAGE ON CONTINUUM OF CARE



Total need for SRMNAH worker time to deliver essential interventions is **1 million hours per year**

EXPLANATORY NOTES

Source: **If in bold type: validated data from 2020 ICM survey, except those marked * which are from 2018 2019 WHO SRMNAH policy survey**
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Key:
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Saudi Arabia

Estimated population	2020	34,813,867
Women of reproductive age (aged 15 - 49)	2020	8,555,576
Adolescents (aged 10 - 19)	2020	4,860,281
Total fertility rate (births per woman)	2015-2020	2.34
Live births	2020	579,280
Pregnancies	2020	855,034
Adolescent birth rate (births per 1,000 women aged 15-19)	nr	nr
Maternal mortality ratio (maternal deaths per 100,000 live births)	2017	17
Neonatal mortality rate (deaths within 28 days per 1,000 live births)	2019	4
Stillbirth rate (per 1,000 total births)	2019	5
Births attended by skilled health personnel (%)	2018	99%
Modern contraceptive prevalence rate (% using modern method)	2020	15%
Unmet need for family planning (% of women of reproductive age)	2020	16%
Caesarean section rate (% of live births)	nr	nr
Coverage for 4+ antenatal care visits (% of live births)	nr	nr

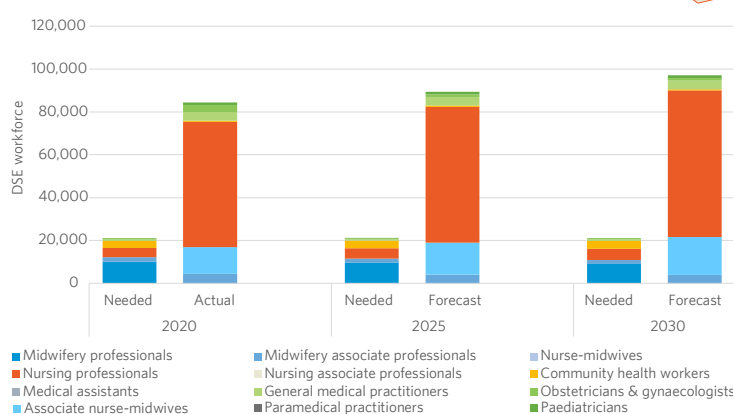
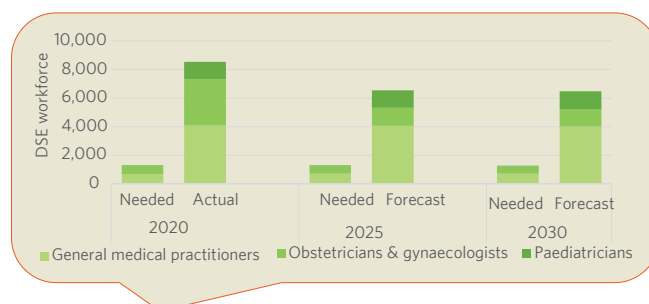
FULL RMNCAH WORKFORCE AVAILABILITY

Occupation	Year	Headcount	Percentage of time on RMNCAH	Dedicated RMNCAH Equivalent (DSE)	Graduates		Density per 10,000 population
					Year	Number	
		(A)	(B)	(A*B)			
Midwifery professionals	2019	31	100%	31	nr	nr	0.0
Midwifery associate professionals	2019	4,415	100%	4,415	2019	0	1.3
Nurse-midwives	nr	nr	na	nr	nr	nr	nr
Associate nurse-midwives	2019	14,736	85%	12,526	nr	nr	4.2
Nursing professionals	2019	194,907	30%	58,472	nr	nr	56.0
Nursing associate professionals	nr	nr	na	nr	nr	nr	nr
Community health workers	2018	4,627	10%	463	nr	nr	1.3
Paramedical practitioners	nr	nr	na	nr	nr	nr	nr
Medical assistants	nr	nr	na	nr	nr	nr	nr
General medical practitioners	2018	11,692	35%	4,092	2019	282	3.4
Obstetricians & gynaecologists	2019	6,451	50%	3,226	nr	nr	1.9
Paediatricians	2019	8,165	15%	1,225	nr	nr	2.3
Total RMNCAH workforce		245,024		84,449			70.4

Source: **If in bold type: WHO National Health Workforce Accounts (NHWA) data platform, accessed Dec 2020, most recent year**
 If not in bold type: communication with UNFPA Country Office Sept. 2021

These charts compare estimates of the number of DSE workers needed with the number available. On each chart, the first pair of bars show the baseline year, the second pair shows projections to 2025, and the third pair shows projections to 2030.

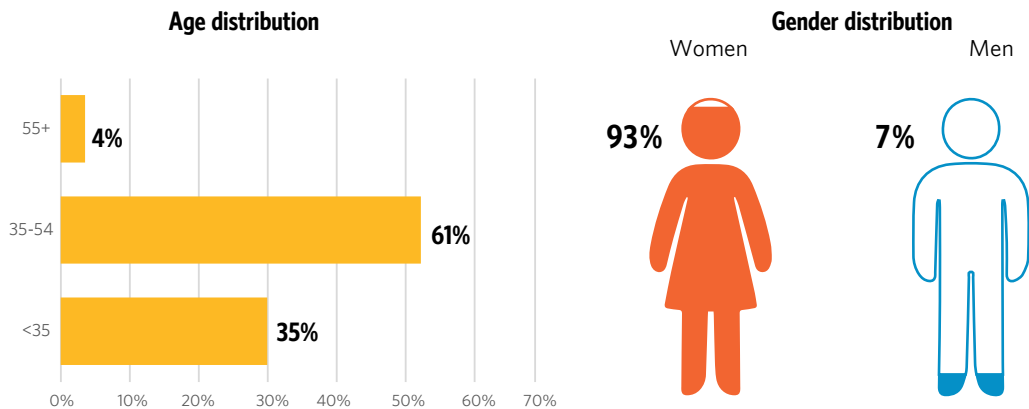
The chart below shows all RMNCAH occupations. The chart to the right highlights RMNCAH doctors (as these numbers are difficult



to see on the main chart)

The 'needed' numbers represent the number of DSEs necessary to achieve universal coverage of essential RMNCAH interventions. Need is allocated to occupations according to competencies they should have if educated and regulated according to global standards.

MIDWIVES DEMOGRAPHY



Source: **If in bold type: WHO National Health Workforce Accounts (NHWA) data platform, accessed Dec 2020, most recent year**
 If not in bold type: communication with UNFPA Country Office Sept. 2021

ENABLING ENVIRONMENT

Policy environment

National policy guideline that recommends midwife-led care for pregnancy and/or childbirth and/or postnatal period for mother only, or both mother and newborn? *

Pregnancy	Childbirth	Postnatal
mother only	dk	dk

Number of midwives in leadership roles in national MoH / sub-national MoH / regulatory authorities

National MoH	Sub-national MoH	Regulatory authorities
1	20	1

Education

National policy / guideline on education of midwifery care providers based on ICM competencies? *

yes

Midwifery education pathway (direct entry / post-nursing / combined)

Direct entry	Post-nursing	Combined
no	yes	no

Duration of direct entry / post-nursing / combined education programme (months)

Direct entry	Post-nursing	Combined
na	24	na

% of midwifery educators who are midwives

dk

Regulation

National policy sets a competency framework for maternal and/or newborn care? *

yes

National policy on regulation of midwifery care providers based on ICM competencies? *

yes

Regulatory system for midwifery practice?

yes

Is licensing compulsory prior to practise? / Is there periodic relicensing? / Is continuing professional development a requirement for relicensing?

License compulsory	Periodic relicensing	Continuing development requirement
yes	yes	yes

Association

Is there a professional association specifically for midwives? Is there another professional association open to midwives?

Association specifically for midwives	Other association open to midwives
yes	no

POTENTIAL MET NEED

Potential to meet NEED =

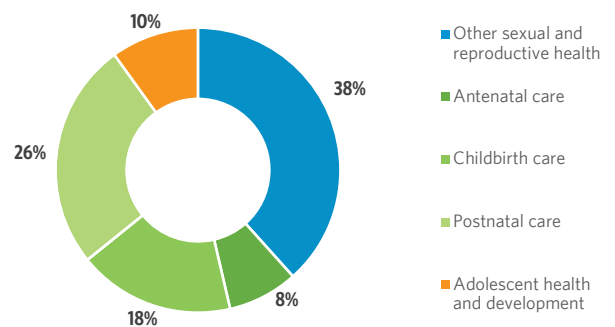
Workforce time available

Workforce time needed for universal coverage of essential SRMNAH interventions

2015	2021	2030
nr	98%	98%



% OF NEED AT EACH STAGE ON CONTINUUM OF CARE



Total need for SRMNAH worker time to deliver essential interventions is

27 million hours per year

EXPLANATORY NOTES

Source: **If in bold type: validated data from 2020 ICM survey, except those marked * which are from 2018 2019 WHO SRMNAH policy survey**
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Key:
 na = not applicable dk = don't know nr = not reported MoH = Ministry of Health

Somalia

Estimated population	2020	15,893,219
Women of reproductive age (aged 15 - 49)	2020	3,574,772
Adolescents (aged 10 - 19)	2020	3,937,590
Total fertility rate (births per woman)	2015-2020	6.12
Live births	2020	669,000
Pregnancies	2020	947,389
Adolescent birth rate (births per 1,000 women aged 15-19)	2017	118
Maternal mortality ratio (maternal deaths per 100,000 live births)	2017	829
Neonatal mortality rate (deaths within 28 days per 1,000 live births)	2019	37
Stillbirth rate (per 1,000 total births)	2019	27
Births attended by skilled health personnel (%)	2019	32%
Modern contraceptive prevalence rate (% using modern method)	2020	7%
Unmet need for family planning (% of women of reproductive age)	2020	16%
Caesarean section rate (% of live births)	2019	2%
Coverage for 4+ antenatal care visits (% of live births)	2019	24%

FULL RMNCAH WORKFORCE AVAILABILITY

Occupation	Year	Headcount	Percentage of time on RMNCAH	Dedicated RMNCAH Equivalent (DSE)	Graduates		Density per 10,000 population
					Year	Number	
		(A)	(B)	(A*B)			
Midwifery professionals	2020	607	100%	607	2022	380	0.4
Midwifery associate professionals	2014	612	100%	612	nr	nr	0.4
Nurse-midwives	2020	120	60%	72	2022	75	0.1
Associate nurse-midwives	nr	nr	na	nr	nr	nr	nr
Nursing professionals	nr	nr	na	nr	nr	nr	nr
Nursing associate professionals	2014	825	50%	413	nr	nr	0.5
Community health workers	nr	nr	na	nr	nr	nr	nr
Paramedical practitioners	nr	nr	na	nr	nr	nr	nr
Medical assistants	nr	nr	na	nr	nr	nr	nr
General medical practitioners	2014	206	35%	72	nr	nr	0.1
Obstetricians & gynaecologists	2014	5	50%	3	nr	nr	0.0
Paediatricians	2014	8	15%	1	nr	nr	0.0
Total RMNCAH workforce		2,383		1,779			1.5

Source: **If in bold type: WHO National Health Workforce Accounts (NHWA) data platform, accessed Dec 2020, most recent year**
 If not in bold type: communication with UNFPA Country Office Sept. 2021

These charts compare estimates of the number of DSE workers needed with the number available. On each chart, the first pair of bars show the baseline year, the second pair shows projections to 2025, and the third pair shows projections to 2030.

The chart below shows all RMNCAH occupations. The chart to the right highlights RMNCAH doctors (as these numbers are difficult to see on the main

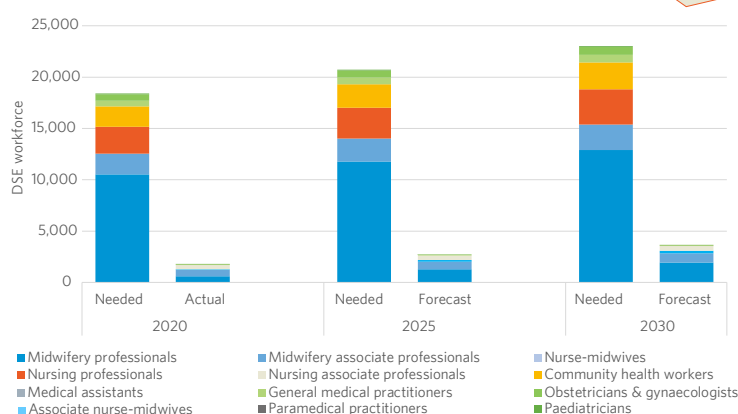
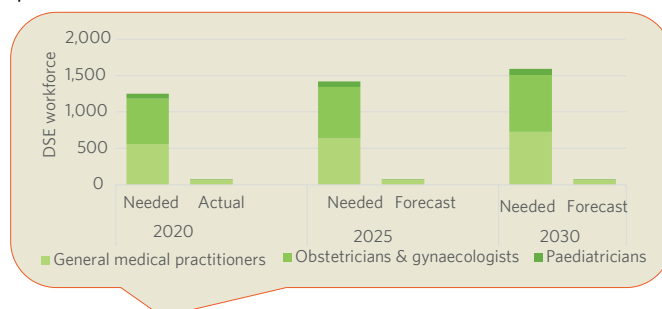
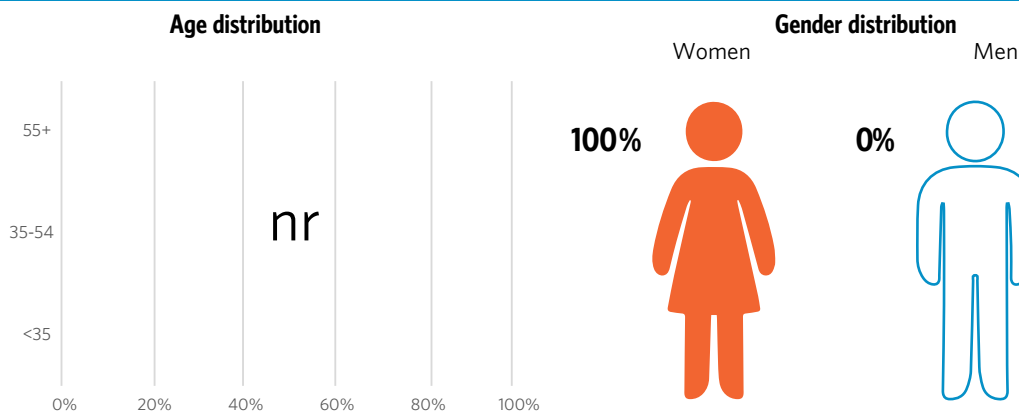


chart)

The 'needed' numbers represent the number of DSEs necessary to achieve universal coverage of essential RMNCAH interventions. Need is allocated to occupations according to competencies they should have if educated and regulated according to global standards.

MIDWIVES DEMOGRAPHY



Source: **If in bold type: WHO National Health Workforce Accounts (NHWA) data platform, accessed Dec 2020, most recent year**
 If not in bold type: communication with UNFPA Country Office Sept. 2021

ENABLING ENVIRONMENT

Policy environment

	Pregnancy	Childbirth	Postnatal
National policy guideline that recommends midwife-led care for pregnancy and/or childbirth and/or postnatal period for mother only, or both mother and newborn? *	no	no	no
Number of midwives in leadership roles in national MoH / sub-national MoH / regulatory authorities	National MoH 15	Sub-national MoH 21	Regulatory authorities 2

Education

National policy / guideline on education of midwifery care providers based on ICM competencies? *	no		
Midwifery education pathway (direct entry / post-nursing / combined)	Direct entry yes	Post-nursing yes	Combined no
Duration of direct entry / post-nursing / combined education programme (months)	Direct entry 24	Post-nursing 18	Combined na
% of midwifery educators who are midwives	50		

Regulation

National policy sets a competency framework for maternal and/or newborn care? *	no		
National policy on regulation of midwifery care providers based on ICM competencies? *	no		
Regulatory system for midwifery practice?	no		
Is licensing compulsory prior to practise? / Is there periodic relicensing? / Is continuing professional development a requirement for relicensing?	License compulsory no	Periodic relicensing na	Continuing development requirement na

Association

Is there a professional association specifically for midwives? Is there another professional association open to midwives?	Association specifically for midwives yes	Other association open to midwives no
--	---	---

Source: **If in bold type: validated data from 2020 ICM survey, except those marked * which are from 2018 2019 WHO SRMNAH policy survey**
 If not in bold type: either communication with UNFPA Country Office Sept. 2021 or unvalidated data from 2020 ICM survey

Key:
 na = not applicable dk = don't know nr = not reported MoH = Ministry of Health

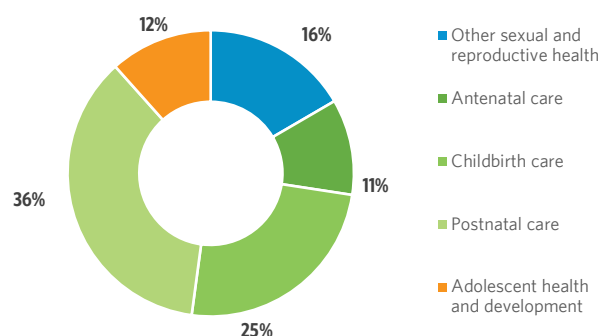
POTENTIAL MET NEED

Potential to meet NEED = $\frac{\text{Workforce time available}}{\text{Workforce time needed for universal coverage of essential SRMNAH interventions}}$

2015 **2021** **2030**
22% **10%** **16%**



% OF NEED AT EACH STAGE ON CONTINUUM OF CARE



Total need for SRMNAH worker time to deliver essential interventions is **23 million hours per year**

EXPLANATORY NOTES

Estimated population	2020	43,849,269
Women of reproductive age (aged 15 - 49)	2020	10,709,481
Adolescents (aged 10 - 19)	2020	10,123,657
Total fertility rate (births per woman)	2015-2020	4.43
Live births	2020	1,394,560
Pregnancies	2020	1,906,483
Adolescent birth rate (births per 1,000 women aged 15-19)	2013	87
Maternal mortality ratio (maternal deaths per 100,000 live births)	2017	295
Neonatal mortality rate (deaths within 28 days per 1,000 live births)	2019	27
Stillbirth rate (per 1,000 total births)	2019	23
Births attended by skilled health personnel (%)	2014	78%
Modern contraceptive prevalence rate (% using modern method)	2020	9%
Unmet need for family planning (% of women of reproductive age)	2020	18%
Caesarean section rate (% of live births)	2014	9%
Coverage for 4+ antenatal care visits (% of live births)	2014	51%

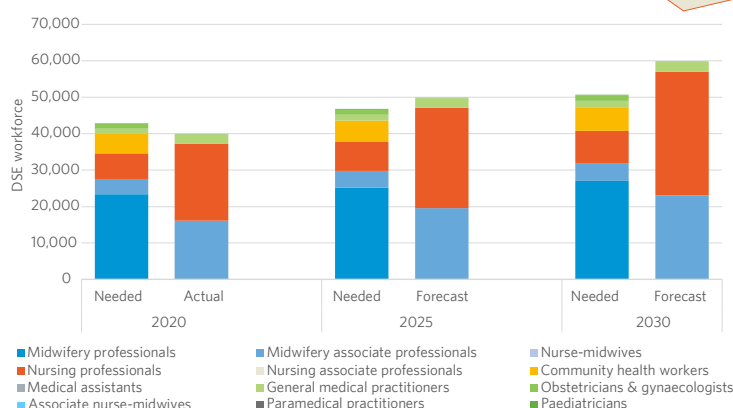
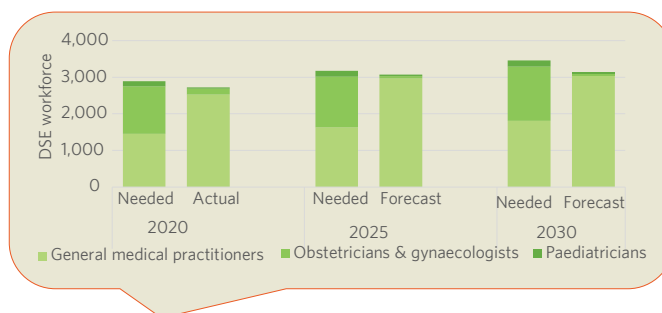
FULL RMNCAH WORKFORCE AVAILABILITY

Occupation	Year	Headcount	Percentage of time on RMNCAH	Dedicated RMNCAH Equivalent (DSE)	Graduates		Density per 10,000 population
					Year	Number	
		(A)	(B)	(A*B)			
Midwifery professionals	nr	nr	na	nr	nr	nr	nr
Midwifery associate professionals	2017	16,138	100%	16,138	nr	nr	3.7
Nurse-midwives	nr	nr	na	nr	nr	nr	nr
Associate nurse-midwives	nr	nr	na	nr	nr	nr	nr
Nursing professionals	2018	47,882	44%	21,068	2018	5,355	10.9
Nursing associate professionals	nr	nr	na	nr	nr	nr	nr
Community health workers	nr	nr	na	nr	nr	nr	nr
Paramedical practitioners	nr	nr	na	nr	nr	nr	nr
Medical assistants	nr	nr	na	nr	nr	nr	nr
General medical practitioners	2014	7,226	35%	2,529	nr	nr	1.6
Obstetricians & gynaecologists	2014	316	50%	158	nr	nr	0.1
Paediatricians	2017	270	15%	40	nr	nr	0.1
Total RMNCAH workforce		71,832		39,934			16.4

Source: **If in bold type: WHO National Health Workforce Accounts (NHWA) data platform, accessed Dec 2020, most recent year**
 If not in bold type: communication with UNFPA Country Office Sept. 2021

These charts compare estimates of the number of DSE workers needed with the number available. On each chart, the first pair of bars show the baseline year, the second pair shows projections to 2025, and the third pair shows projections to 2030.

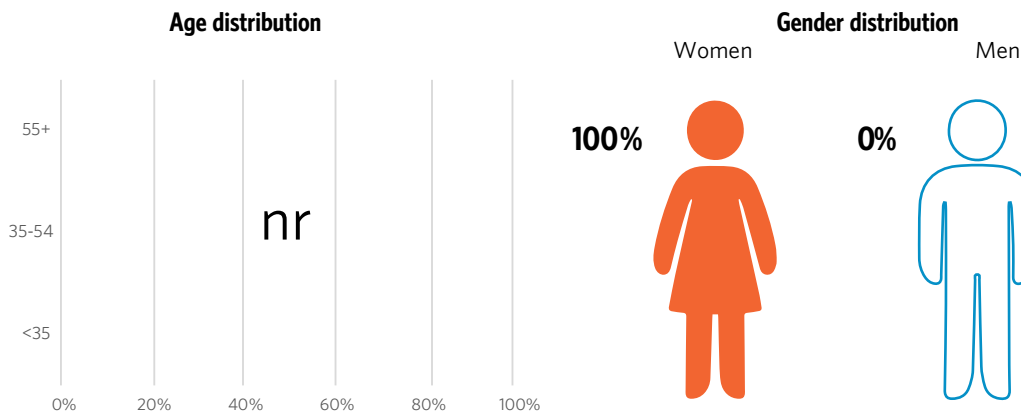
The chart below shows all RMNCAH occupations. The chart to the right highlights RMNCAH doctors (as these numbers are difficult



to see on the main chart)

The 'needed' numbers represent the number of DSEs necessary to achieve universal coverage of essential RMNCAH interventions. Need is allocated to occupations according to competencies they should have if educated and regulated according to global standards.

MIDWIVES DEMOGRAPHY



Source: **If in bold type: WHO National Health Workforce Accounts (NHWA) data platform, accessed Dec 2020, most recent year**
 If not in bold type: communication with UNFPA Country Office Sept. 2021

ENABLING ENVIRONMENT

Policy environment

National policy guideline that recommends midwife-led care for pregnancy and/or childbirth and/or postnatal period for mother only, or both mother and newborn? *

Pregnancy	Childbirth	Postnatal
mother & newborn	mother & newborn	mother & newborn

Number of midwives in leadership roles in national MoH / sub-national MoH / regulatory authorities

National MoH	Sub-national MoH	Regulatory authorities
1	60	1

Education

National policy / guideline on education of midwifery care providers based on ICM competencies? *

no

Midwifery education pathway (direct entry / post-nursing / combined)

Direct entry	Post-nursing	Combined
yes	yes	no

Duration of direct entry / post-nursing / combined education programme (months)

Direct entry	Post-nursing	Combined
46	12	na

% of midwifery educators who are midwives

dk

Regulation

National policy sets a competency framework for maternal and/or newborn care? *

no

National policy on regulation of midwifery care providers based on ICM competencies? *

no

Regulatory system for midwifery practice?

yes

Is licensing compulsory prior to practise? / Is there periodic relicensing? / Is continuing professional development a requirement for relicensing?

License compulsory	Periodic relicensing	Continuing development requirement
yes	yes	yes

Association

Is there a professional association specifically for midwives? Is there another professional association open to midwives?

Association specifically for midwives	Other association open to midwives
yes	yes

POTENTIAL MET NEED

Potential to meet NEED =

Workforce time available

Workforce time needed for universal coverage of essential SRMNAH interventions

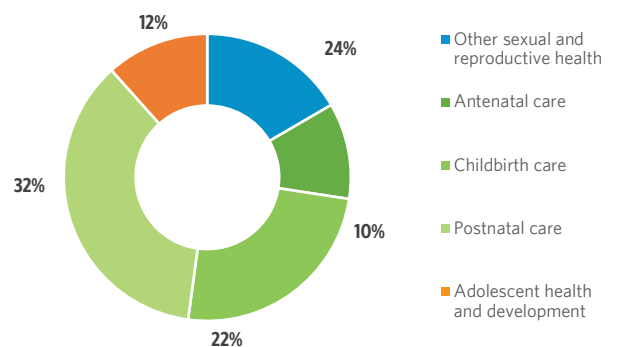
2015
32%

2021
70%

2030
70%



% OF NEED AT EACH STAGE ON CONTINUUM OF CARE



Total need for SRMNAH worker time to deliver essential interventions is **54 million hours per year**

EXPLANATORY NOTES

Source: **If in bold type: validated data from 2020 ICM survey, except those marked * which are from 2018 2019 WHO SRMNAH policy survey**
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Key:

na = not applicable

dk = don't know

nr = not reported

MoH = Ministry of Health

Syrian Arab Republic

Estimated population	2020	17,500,657
Women of reproductive age (aged 15 - 49)	2020	4,727,170
Adolescents (aged 10 - 19)	2020	3,325,125
Total fertility rate (births per woman)	2015-2020	2.84
Live births	2020	429,360
Pregnancies	2020	633,748
Adolescent birth rate (births per 1,000 women aged 15-19)	nr	nr
Maternal mortality ratio (maternal deaths per 100,000 live births)	2017	31
Neonatal mortality rate (deaths within 28 days per 1,000 live births)	2019	11
Stillbirth rate (per 1,000 total births)	2019	11
Births attended by skilled health personnel (%)	nr	nr
Modern contraceptive prevalence rate (% using modern method)	2020	27%
Unmet need for family planning (% of women of reproductive age)	2020	8%
Caesarean section rate (% of live births)	nr	nr
Coverage for 4+ antenatal care visits (% of live births)	nr	nr

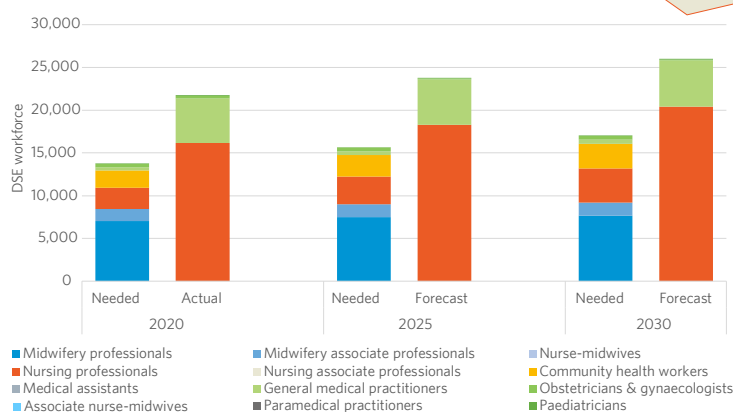
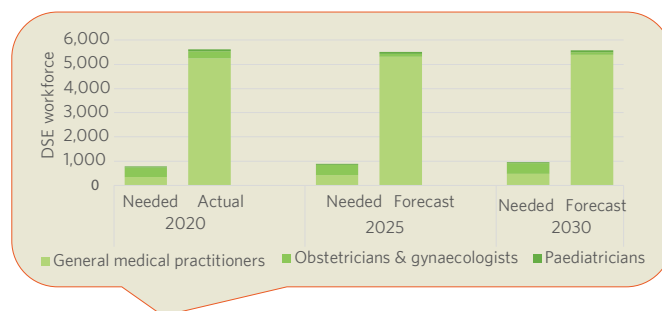
FULL RMNCAH WORKFORCE AVAILABILITY

Occupation	Year	Headcount	Percentage of time on RMNCAH	Dedicated RMNCAH Equivalent (DSE)	Graduates		Density per 10,000 population
					Year	Number	
		(A)	(B)	(A*B)			
Midwifery professionals	nr	nr	na	nr	nr	nr	nr
Midwifery associate professionals	nr	nr	na	nr	nr	nr	nr
Nurse-midwives	nr	nr	na	nr	nr	nr	nr
Associate nurse-midwives	nr	nr	na	nr	nr	nr	nr
Nursing professionals	2016	26,908	60%	16,145	2018	1,412	15.4
Nursing associate professionals	nr	nr	na	nr	nr	nr	nr
Community health workers	nr	nr	na	nr	nr	nr	nr
Paramedical practitioners	nr	nr	na	nr	nr	nr	nr
Medical assistants	nr	nr	na	nr	nr	nr	nr
General medical practitioners	2016	15,005	35%	5,252	nr	nr	8.6
Obstetricians & gynaecologists	2016	555	50%	278	nr	nr	0.3
Paediatricians	2016	568	15%	85	nr	nr	0.3
Total RMNCAH workforce		43,036		21,759			24.6

Source: **If in bold type: WHO National Health Workforce Accounts (NHWA) data platform, accessed Dec 2020, most recent year**
If not in bold type: communication with UNFPA Country Office Sept. 2021

These charts compare estimates of the number of DSE workers needed with the number available. On each chart, the first pair of bars show the baseline year, the second pair shows projections to 2025, and the third pair shows projections to 2030.

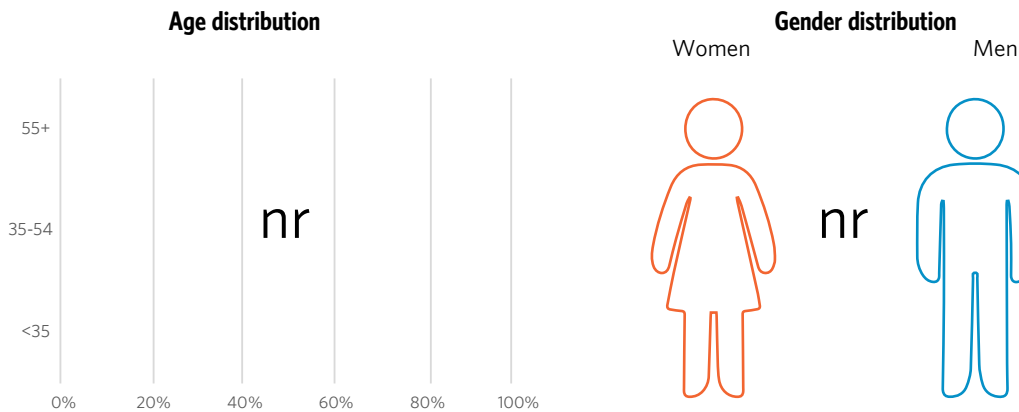
The chart below shows all RMNCAH occupations. The chart to the right highlights RMNCAH doctors (as these numbers are difficult to see on



the main chart)

The 'needed' numbers represent the number of DSEs necessary to achieve universal coverage of essential RMNCAH interventions. Need is allocated to occupations according to competencies they should have if educated and regulated according to global standards.

MIDWIVES DEMOGRAPHY



Source: **If in bold type: WHO National Health Workforce Accounts (NHWA) data platform, accessed Dec 2020, most recent year**
 If not in bold type: communication with UNFPA Country Office Sept. 2021

ENABLING ENVIRONMENT

Policy environment

National policy guideline that recommends midwife-led care for pregnancy and/or childbirth and/or postnatal period for mother only, or both mother and newborn? *

Pregnancy	Childbirth	Postnatal
mother & newborn	mother & newborn	mother & newborn

Number of midwives in leadership roles in national MoH / sub-national MoH / regulatory authorities

National MoH	Sub-national MoH	Regulatory authorities
2	6	15

Education

National policy / guideline on education of midwifery care providers based on ICM competencies? *

yes

Midwifery education pathway (direct entry / post-nursing / combined)

Direct entry	Post-nursing	Combined
no	no	yes

Duration of direct entry / post-nursing / combined education programme (months)

Direct entry	Post-nursing	Combined
na	na	42

% of midwifery educators who are midwives

45

Regulation

National policy sets a competency framework for maternal and/or newborn care? *

yes

National policy on regulation of midwifery care providers based on ICM competencies? *

dk

Regulatory system for midwifery practice?

yes

Is licensing compulsory prior to practise? / Is there periodic relicensing? / Is continuing professional development a requirement for relicensing?

License compulsory	Periodic relicensing	Continuing development requirement
yes	no	na

Association

Is there a professional association specifically for midwives? Is there another professional association open to midwives?

Association specifically for midwives	Other association open to midwives
no	yes

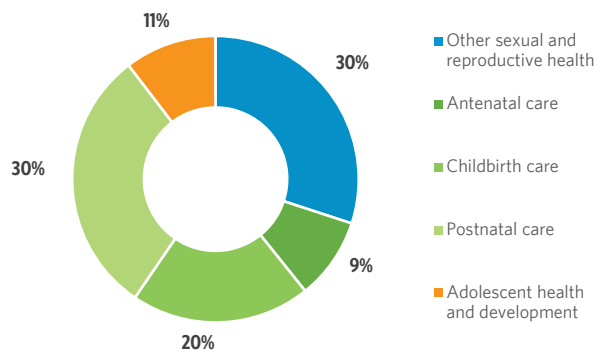
POTENTIAL MET NEED

Potential to meet NEED = $\frac{\text{Workforce time available}}{\text{Workforce time needed for universal coverage of essential SRMNAH interventions}}$

2015 **2021** **2030**
nr **98%** **98%**



% OF NEED AT EACH STAGE ON CONTINUUM OF CARE



Total need for SRMNAH worker time to deliver essential interventions is **17 million hours per year**

EXPLANATORY NOTES

Source: **If in bold type: validated data from 2020 ICM survey, except those marked * which are from 2018 2019 WHO SRMNAH policy survey**

If not in bold type: either communication with UNFPA Country Office Sept. 2021 or unvalidated data from 2020 ICM survey

Key:

na = not applicable dk = don't know nr = not reported MoH = Ministry of Health

Estimated population	2020	11,818,618
Women of reproductive age (aged 15 - 49)	2020	3,012,680
Adolescents (aged 10 - 19)	2020	1,639,938
Total fertility rate (births per woman)	2015-2020	2.20
Live births	2020	192,920
Pregnancies	2020	263,738
Adolescent birth rate (births per 1,000 women aged 15-19)	2017	7
Maternal mortality ratio (maternal deaths per 100,000 live births)	2017	43
Neonatal mortality rate (deaths within 28 days per 1,000 live births)	2019	12
Stillbirth rate (per 1,000 total births)	2019	11
Births attended by skilled health personnel (%)	2018	100%
Modern contraceptive prevalence rate (% using modern method)	2020	26%
Unmet need for family planning (% of women of reproductive age)	2020	8%
Caesarean section rate (% of live births)	2018	43%
Coverage for 4+ antenatal care visits (% of live births)	2018	84%

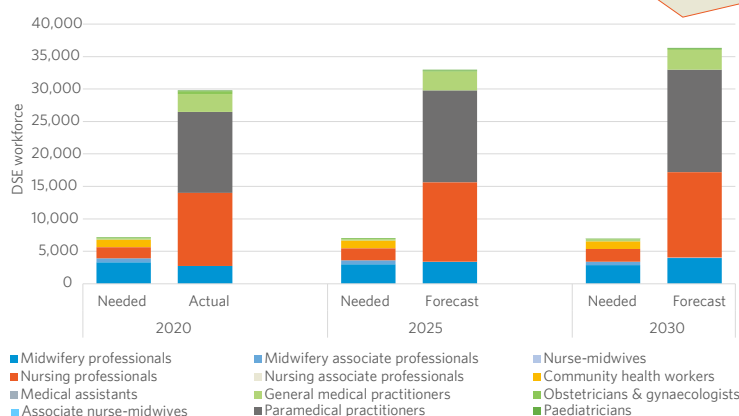
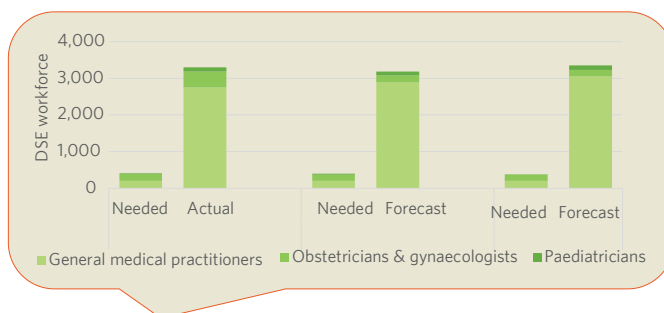
FULL RMNCAH WORKFORCE AVAILABILITY

Occupation	Year	Headcount	Percentage of time on RMNCAH	Dedicated RMNCAH Equivalent (DSE)	Graduates		Density per 10,000 population
					Year	Number	
		(A)	(B)	(A*B)			
Midwifery professionals	2019	2,760	100%	2,760	nr	nr	2.3
Midwifery associate professionals	nr	nr	na	nr	nr	nr	nr
Nurse-midwives	nr	nr	na	nr	nr	nr	nr
Associate nurse-midwives	nr	nr	na	nr	nr	nr	nr
Nursing professionals	2019	25,518	44%	11,228	nr	nr	21.6
Nursing associate professionals	nr	nr	na	nr	nr	nr	nr
Community health workers	nr	nr	na	nr	nr	nr	nr
Paramedical practitioners	2019	41,727	30%	12,518	nr	nr	35.3
Medical assistants	nr	nr	na	nr	nr	nr	nr
General medical practitioners	2019	7,842	35%	2,745	2021	359	6.6
Obstetricians & gynaecologists	2019	882	50%	441	nr	nr	0.7
Paediatricians	2019	740	15%	111	nr	nr	0.6
Total RMNCAH workforce		79,469		29,803			67.2

Source: **If in bold type: WHO National Health Workforce Accounts (NHWA) data platform, accessed Dec 2020, most recent year**
 If not in bold type: communication with UNFPA Country Office Sept. 2021

These charts compare estimates of the number of DSE workers needed with the number available. On each chart, the first pair of bars show the baseline year, the second pair shows projections to 2025, and the third pair shows projections to 2030.

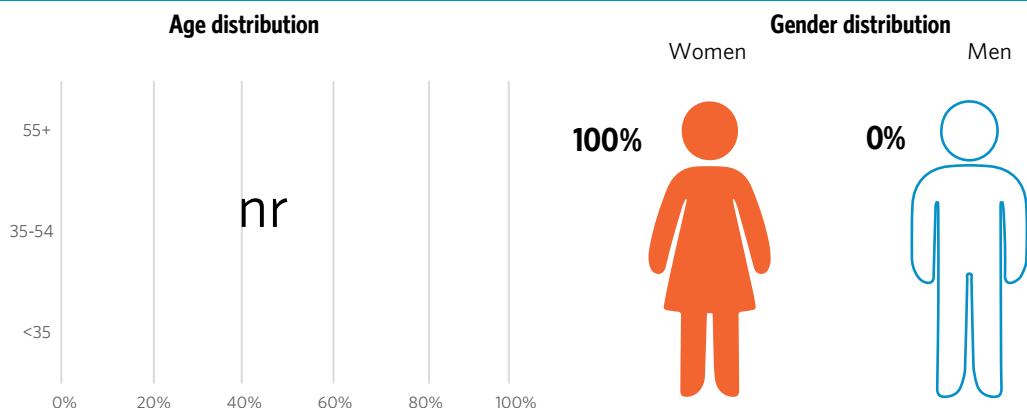
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to see on the main chart)

The 'needed' numbers represent the number of DSEs necessary to achieve universal coverage of essential RMNCAH interventions. Need is allocated to occupations according to competencies they should have if educated and regulated according to global standards.

MIDWIVES DEMOGRAPHY



Source: **If in bold type: WHO National Health Workforce Accounts (NHWA) data platform, accessed Dec 2020, most recent year**
 If not in bold type: communication with UNFPA Country Office Sept. 2021

ENABLING ENVIRONMENT

Policy environment

National policy guideline that recommends midwife-led care for pregnancy and/or childbirth and/or postnatal period for mother only, or both mother and newborn? *	Pregnancy	Childbirth	Postnatal
	no	no	no
Number of midwives in leadership roles in national MoH / sub-national MoH / regulatory authorities	National MoH 5	Sub-national MoH 48	Regulatory authorities 0

Education

National policy / guideline on education of midwifery care providers based on ICM competencies? *	nr		
Midwifery education pathway (direct entry / post-nursing / combined)	Direct entry yes	Post-nursing no	Combined no
Duration of direct entry / post-nursing / combined education programme (months)	Direct entry 36	Post-nursing na	Combined na

% of midwifery educators who are midwives	100
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Regulation

National policy sets a competency framework for maternal and/or newborn care? *	no		
National policy on regulation of midwifery care providers based on ICM competencies? *	no		
Regulatory system for midwifery practice?	yes		
Is licensing compulsory prior to practise? / Is there periodic relicensing? / Is continuing professional development a requirement for relicensing?	License compulsory no	Periodic relicensing na	Continuing development requirement na

Association

Is there a professional association specifically for midwives? Is there another professional association open to midwives?	Association specifically for midwives yes	Other association open to midwives yes
--	--	---

Source: **If in bold type: validated data from 2020 ICM survey, except those marked * which are from 2018 2019 WHO SRMNAH policy survey**

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Key:

na = not applicable

dk = don't know

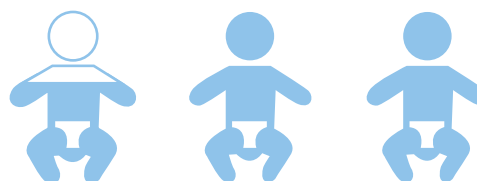
nr = not reported

MoH = Ministry of Health

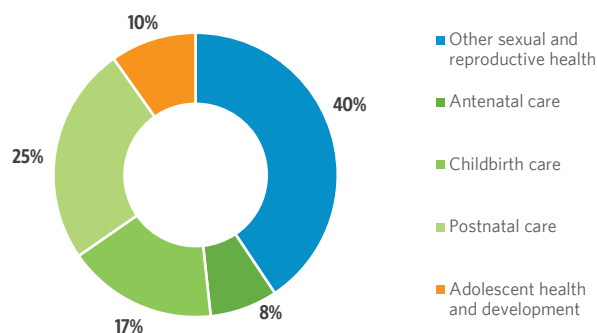
POTENTIAL MET NEED

Potential to meet NEED = $\frac{\text{Workforce time available}}{\text{Workforce time needed for universal coverage of essential SRMNAH interventions}}$

2015 56% **2021** 99% **2030** 100%



% OF NEED AT EACH STAGE ON CONTINUUM OF CARE



Total need for SRMNAH worker time to deliver essential interventions is

9 million hours per year

EXPLANATORY NOTES

United Arab Emirates

Estimated population	2020	9,890,400
Women of reproductive age (aged 15 - 49)	2020	2,045,066
Adolescents (aged 10 - 19)	2020	842,991
Total fertility rate (births per woman)	2015-2020	1.42
Live births	2020	100,000
Pregnancies	2020	147,603
Adolescent birth rate (births per 1,000 women aged 15-19)	2018	4
Maternal mortality ratio (maternal deaths per 100,000 live births)	2017	3
Neonatal mortality rate (deaths within 28 days per 1,000 live births)	2019	4
Stillbirth rate (per 1,000 total births)	2019	5
Births attended by skilled health personnel (%)	2018	99%
Modern contraceptive prevalence rate (% using modern method)	2020	28%
Unmet need for family planning (% of women of reproductive age)	2020	12%
Caesarean section rate (% of live births)	nr	nr
Coverage for 4+ antenatal care visits (% of live births)	nr	nr

FULL RMNCAH WORKFORCE AVAILABILITY

Occupation	Year	Headcount	Percentage of time on RMNCAH	Dedicated RMNCAH Equivalent (DSE)	Graduates		Density per 10,000 population
					Year	Number	
		(A)	(B)	(A*B)			
Midwifery professionals	nr	nr	na	nr	nr	nr	nr
Midwifery associate professionals	nr	nr	na	nr	nr	nr	nr
Nurse-midwives	nr	nr	na	nr	nr	nr	nr
Associate nurse-midwives	nr	nr	na	nr	nr	nr	nr
Nursing professionals	nr	nr	na	nr	2018	365	nr
Nursing associate professionals	2018	55,158	40%	22,063	nr	nr	55.8
Community health workers	nr	nr	na	nr	nr	nr	nr
Paramedical practitioners	2017	22,252	30%	6,676	nr	nr	22.5
Medical assistants	nr	nr	na	nr	nr	nr	nr
General medical practitioners	2018	6,382	35%	2,234	2018	359	6.5
Obstetricians & gynaecologists	2018	966	50%	483	nr	nr	1.0
Paediatricians	2018	912	15%	137	nr	nr	0.9
Total RMNCAH workforce		85,670		31,592			86.6

Source: **If in bold type: WHO National Health Workforce Accounts (NHWA) data platform, accessed Dec 2020, most recent year**
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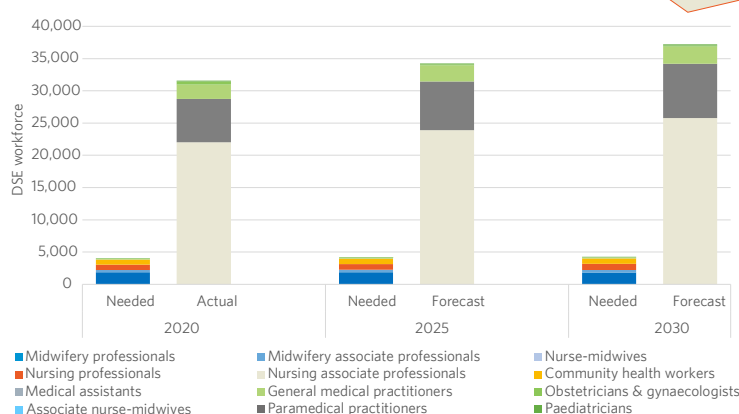
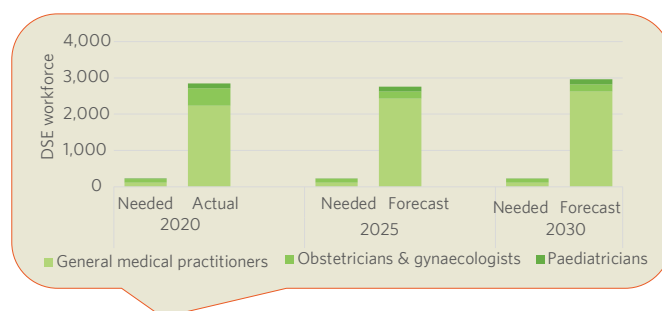
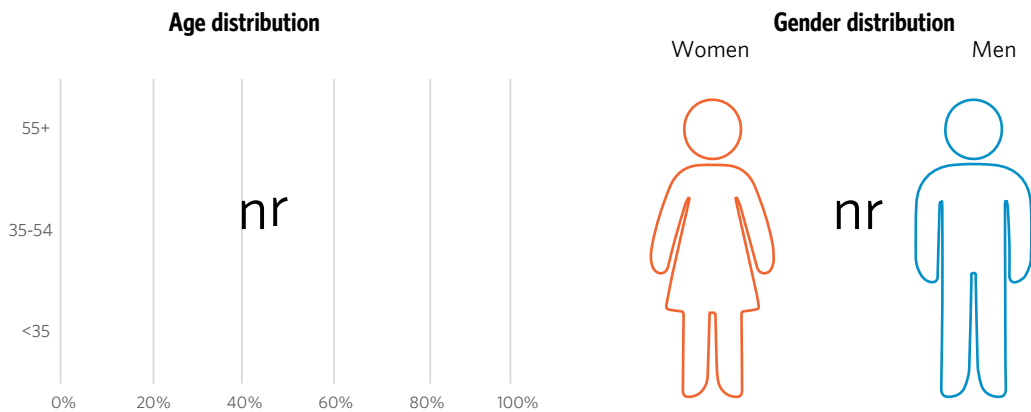


chart)

The 'needed' numbers represent the number of DSEs necessary to achieve universal coverage of essential RMNCAH interventions. Need is allocated to occupations according to competencies they should have if educated and regulated according to global standards.

MIDWIVES DEMOGRAPHY



Source: **If in bold type: WHO National Health Workforce Accounts (NHWA) data platform, accessed Dec 2020, most recent year**
 If not in bold type: communication with UNFPA Country Office Sept. 2021

ENABLING ENVIRONMENT

Policy environment

National policy guideline that recommends midwife-led care for pregnancy and/or childbirth and/or postnatal period for mother only, or both mother and newborn? *

Pregnancy **dk** Childbirth **mother only** Postnatal **dk**

Number of midwives in leadership roles in national MoH / sub-national MoH / regulatory authorities

National MoH **nr** Sub-national MoH **nr** Regulatory authorities **nr**

Education

National policy / guideline on education of midwifery care providers based on ICM competencies? *

dk

Midwifery education pathway (direct entry / post-nursing / combined)

Direct entry **nr** Post-nursing **nr** Combined **nr**

Duration of direct entry / post-nursing / combined education programme (months)

Direct entry **nr** Post-nursing **nr** Combined **nr**

% of midwifery educators who are midwives

nr

Regulation

National policy sets a competency framework for maternal and/or newborn care? *

yes

National policy on regulation of midwifery care providers based on ICM competencies? *

dk

Regulatory system for midwifery practice?

nr

Is licensing compulsory prior to practise? / Is there periodic relicensing? / Is continuing professional development a requirement for relicensing?

License compulsory **nr** Periodic relicensing **nr** Continuing development requirement **nr**

Association

Is there a professional association specifically for midwives? Is there another professional association open to midwives?

Association specifically for midwives **nr** Other association open to midwives **nr**

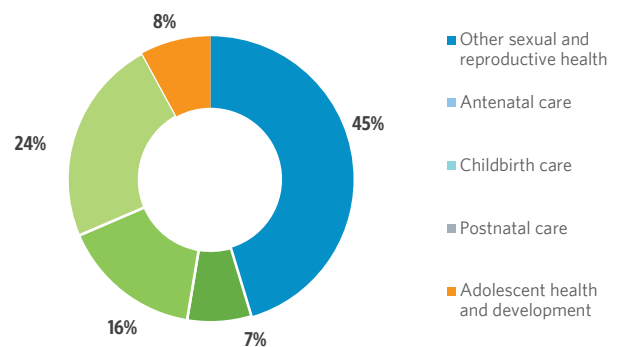
POTENTIAL MET NEED

Potential to meet NEED = $\frac{\text{Workforce time available}}{\text{Workforce time needed for universal coverage of essential SRMNAH interventions}}$

2015 **nr** 2021 **98%** 2030 **98%**



% OF NEED AT EACH STAGE ON CONTINUUM OF CARE



Total need for SRMNAH worker time to deliver essential interventions is **5 million hours per year**

EXPLANATORY NOTES

Source: **If in bold type: validated data from 2020 ICM survey, except those marked * which are from 2018 2019 WHO SRMNAH policy survey**
 If not in bold type: either communication with UNFPA Country Office Sept. 2021 or unvalidated data from 2020 ICM survey

Key: na = not applicable dk = don't know nr = not reported MoH = Ministry of Health

Estimated population	2020	29,825,968
Women of reproductive age (aged 15 - 49)	2020	7,622,513
Adolescents (aged 10 - 19)	2020	6,750,274
Total fertility rate (births per woman)	2015-2020	3.84
Live births	2020	873,680
Pregnancies	2020	1,289,576
Adolescent birth rate (births per 1,000 women aged 15-19)	2012	67
Maternal mortality ratio (maternal deaths per 100,000 live births)	2017	164
Neonatal mortality rate (deaths within 28 days per 1,000 live births)	2019	27
Stillbirth rate (per 1,000 total births)	2019	24
Births attended by skilled health personnel (%)	2013	45%
Modern contraceptive prevalence rate (% using modern method)	2020	20%
Unmet need for family planning (% of women of reproductive age)	2020	15%
Caesarean section rate (% of live births)	2013	5%
Coverage for 4+ antenatal care visits (% of live births)	2013	25%

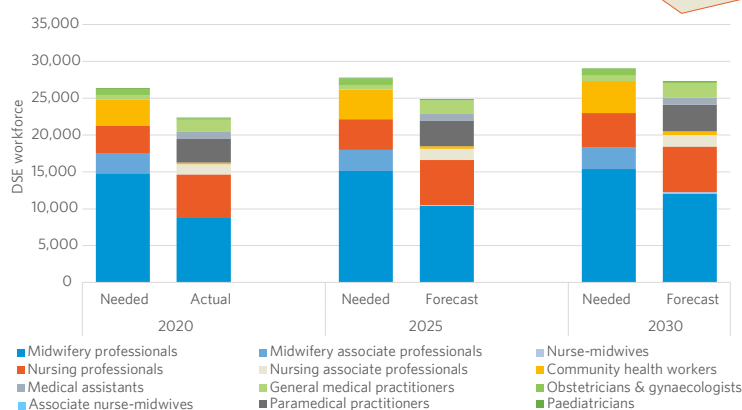
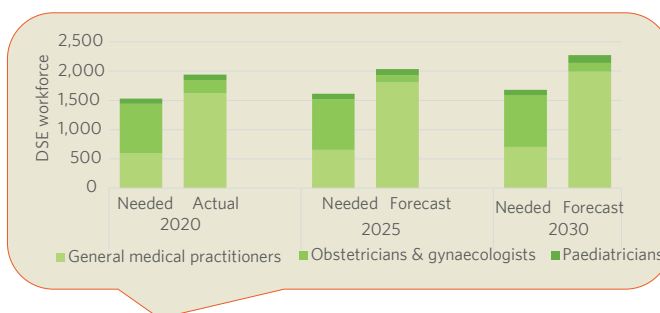
FULL RMNCAH WORKFORCE AVAILABILITY

Occupation	Year	Headcount	Percentage of time on RMNCAH	Dedicated RMNCAH Equivalent (DSE)	Graduates		Density per 10,000 population
					Year	Number	
		(A)	(B)	(A*B)			
Midwifery professionals	2020	8,750	100%	8,750	2020	710	2.9
Midwifery associate professionals	2020	0	na	0	nr	nr	0.0
Nurse-midwives	2020	0	na	0	nr	nr	0.0
Associate nurse-midwives	2020	0	na	0	nr	nr	0.0
Nursing professionals	2019	13,421	44%	5,905	2020	340	4.5
Nursing associate professionals	2018	2,768	50%	1,384	nr	nr	0.9
Community health workers	2019	2,117	10%	212	2019	1,217	0.7
Paramedical practitioners	2019	10,782	30%	3,235	2020	310	3.6
Medical assistants	2019	3,181	30%	954	2020	18	1.1
General medical practitioners	2019	4,632	35%	1,621	2020	190	1.6
Obstetricians & gynaecologists	2020	453	50%	227	2020	50	0.2
Paediatricians	2020	613	15%	92	2020	40	0.2
Total RMNCAH workforce		46,717		22,379			15.7

Source: **If in bold type: WHO National Health Workforce Accounts (NHWA) data platform, accessed Dec 2020, most recent year**
 If not in bold type: communication with UNFPA Country Office Sept. 2021

These charts compare estimates of the number of DSE workers needed with the number available. On each chart, the first pair of bars show the baseline year, the second pair shows projections to 2025, and the third pair shows projections to 2030.

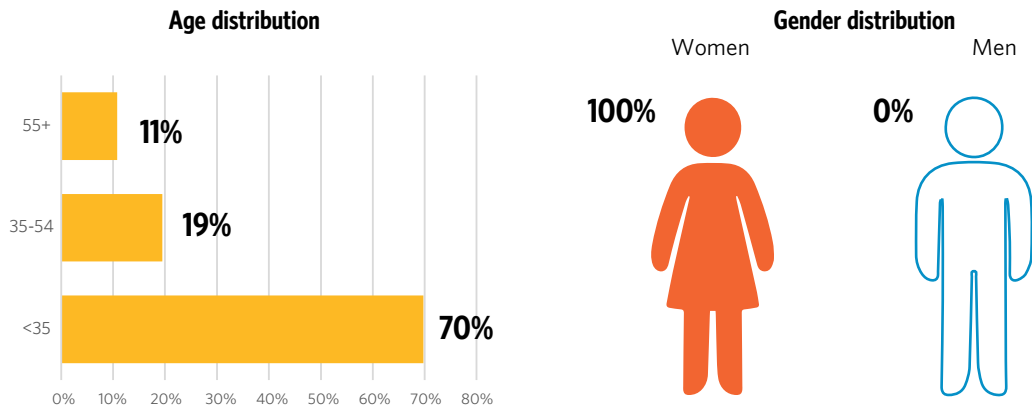
The chart below shows all RMNCAH occupations. The chart to the right highlights RMNCAH doctors (as these numbers are difficult to see on



the main chart)

The 'needed' numbers represent the number of DSEs necessary to achieve universal coverage of essential RMNCAH interventions. Need is allocated to occupations according to competencies they should have if educated and regulated according to global standards.

MIDWIVES DEMOGRAPHY



Source: **If in bold type: WHO National Health Workforce Accounts (NHWA) data platform, accessed Dec 2020, most recent year**
 If not in bold type: communication with UNFPA Country Office Sept. 2021

ENABLING ENVIRONMENT

Policy environment

National policy guideline that recommends midwife-led care for pregnancy and/or childbirth and/or postnatal period for mother only, or both mother and newborn? *

Pregnancy mother & newborn	Childbirth mother & newborn	Postnatal mother & newborn
National MoH 4	Sub-national MoH 58	Regulatory authorities 4

Number of midwives in leadership roles in national MoH / sub-national MoH / regulatory authorities

Education

National policy / guideline on education of midwifery care providers based on ICM competencies? *

partial

Midwifery education pathway (direct entry / post-nursing / combined)

Direct entry yes	Post-nursing no	Combined no
Direct entry 36	Post-nursing na	Combined na

Duration of direct entry / post-nursing / combined education programme (months)

% of midwifery educators who are midwives

100

Regulation

National policy sets a competency framework for maternal and/or newborn care? *

yes

National policy on regulation of midwifery care providers based on ICM competencies? *

dk

Regulatory system for midwifery practice?

no

Is licensing compulsory prior to practise? / Is there periodic relicensing? / Is continuing professional development a requirement for relicensing?

License compulsory	Periodic relicensing	Continuing development requirement
partial	dk	no

Association

Is there a professional association specifically for midwives? Is there another professional association open to midwives?

Association specifically for midwives	Other association open to midwives
yes	no

Source: **If in bold type: validated data from 2020 ICM survey, except those marked * which are from 2018 2019 WHO SRMNAH policy survey**
 If not in bold type: either communication with UNFPA Country Office Sept. 2021 or unvalidated data from 2020 ICM survey

Key:

na = not applicable dk = don't know nr = not reported MoH = Ministry of Health

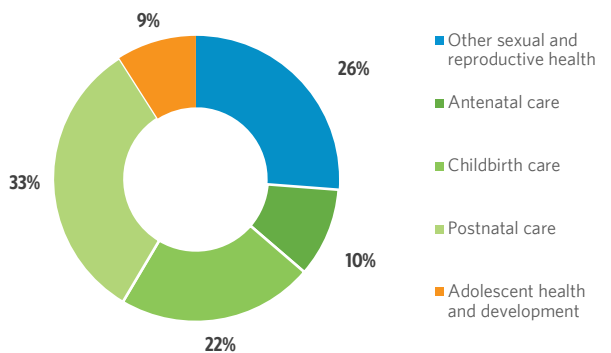
POTENTIAL MET NEED

Potential to meet NEED = $\frac{\text{Workforce time available}}{\text{Workforce time needed for universal coverage of essential SRMNAH interventions}}$

2015	2021	2030
57%	82%	93%



% OF NEED AT EACH STAGE ON CONTINUUM OF CARE



Total need for SRMNAH worker time to deliver essential interventions is

33 million hours per year

EXPLANATORY NOTES

Glossary



Adolescent	A person aged between 10 and 19 years (inclusive)
Adolescent birth rate	The number of births to women aged 15-19 years per 1,000 women in that age group ¹
Caesarean section rate	The percentage of pregnant women who give birth via caesarean section
Coverage for 4+ antenatal care visits	The percentage of women aged 15-49 years with a live birth in a given time who received antenatal care four or more times ²
Dedicated RMNCAH equivalent (DSE)*	Headcount adjusted for % of clinical time spent on RMNCAH care, to estimate the amount of health worker clinical time available to deliver RMNCAH interventions
Gender	The characteristics of women, men, girls and boys that are socially constructed. As a social construct, gender varies from society to society, and can also change over time. Gender is hierarchical and produces inequalities that intersect with other social and economic inequalities. Gender interacts with but is different from sex, which refers to the different biological and physiological characteristics of females, males and intersex persons, such as chromosomes, hormones and reproductive organs ³
Leadership role (in relation to midwives)*	<p>“Leadership role” as defined in the ICM survey may refer to a number of management, supervisory and executive titles, including midwives:</p> <ul style="list-style-type: none"> ▪ in Ministry of Health positions (e.g. Chief Midwife, midwife advisor, national midwife director, maternity advisory positions) ▪ leading regional or local maternity facilities (e.g. midwife director, midwife advisor to chief executive or senior team, midwives in charge of maternity units/wards) ▪ leading professional midwives’ associations (e.g. President, Chief Executive/Director) ▪ leading midwifery regulatory authorities (e.g. Chair of Midwifery Council, Chief Executive/Director) ▪ leading midwifery education programmes (e.g. Head of Midwifery School, Director of Midwifery, Head of Midwifery Programme)
Live birth	The complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of pregnancy, which after such separation breathes or shows any evidence of life, such as a heartbeat, pulsation of the umbilical cord or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached ⁴
Maternal mortality ratio	The number of maternal deaths during a given time period per 100,000 live births during the same period ⁵

1 Adolescent birth rate. New York: United Nations Department of Economic and Social Affairs; 2021 (<https://www.un.org/en/development/desa/population/publications/dataset/fertility/adolescent-rate.asp#:~:text=The%20adolescent%20birth%20rate%20measures,women%20in%20that%20age%20group>, accessed 26 November 2021)

2 Antenatal care coverage – at least four visits (%). Geneva: World Health Organization; 2021 (<https://www.who.int/data/gho/indicator-metadata-registry/imr-details/80>, accessed 26 November 2021)

3 Gender and health. Geneva: World Health Organization; 2021 (https://www.who.int/health-topics/gender#tab=tab_1, accessed 26 November 2021)

4 Natality. New York: United Nations Department of Economic and Social Affairs; 2017 (<https://unstats.un.org/unsd/demographic/sconcerns/natality/natmethods.htm>, accessed 26 November 2021).

5 Maternal mortality ratio (per 100,000 live births). Geneva: World Health Organization; 2021 (<https://www.who.int/data/gho/indicator-metadata-registry/imr-details/26>, accessed 26 November 2021)

Midwife	A responsible and accountable professional who works in partnership with women to give the necessary support, care and advice during pregnancy, labour and the postpartum period, to conduct births on the midwife's own responsibility and to provide care for the newborn and the infant. This care includes preventative measures, the promotion of normal birth, the detection of complications in mother and child, the accessing of medical care or other appropriate assistance and the carrying out of emergency measures. The midwife has an important task in health counselling and education, not only for the woman, but also within the family and the community. This work should involve antenatal education and preparation for parenthood and may extend to women's health, sexual or reproductive health and childcare. A midwife may practise in any setting including the home, community, hospitals, clinics or health units ⁶
Midwife-led care	The midwife is the lead health-care professional, responsible for planning, organizing and delivering care ⁷
Modern contraceptive prevalence rate	The percentage of women currently using, or whose sexual partner is currently using, at least one modern method of contraception. Modern methods include: oral contraceptive pills, implants, injectables, contraceptive patch and vaginal ring, intrauterine device, female and male condoms, female and male sterilization, vaginal barrier methods (including the diaphragm, cervical cap and spermicidal agents), lactational amenorrhoea method, emergency contraception pills, standard days method, basal body temperature method, TwoDay method and sympto-thermal method ⁸
Need for RMNCAH workers*	The amount of RMNCAH worker time needed to achieve universal coverage of the essential RMNCAH interventions listed in the <i>Global Strategy for Women's, Children's and Adolescents' Health</i>
Neonatal mortality rate	Number of deaths during the first 28 completed days of life per 1,000 live births in a given year or period ⁹
Nurse	A person who has successfully completed a programme of basic, generalized nursing education and is authorized by the appropriate regulatory authority to practise nursing. Basic nursing education is a formally recognized programme of study providing a broad and sound foundation in the behavioural, life and nursing sciences for the general practice of nursing, for a leadership role, and for post-basic education for specialty or advanced nursing practice. The nurse is prepared and authorized (i) to engage in the general scope of nursing practice, including the promotion of health, prevention of illness, and care of physically ill, mentally ill and disabled people of all ages and in all health-care and other community settings; (ii) to carry out health-care teaching; (iii) to participate fully as a member of the health-care team; (iv) to supervise and train nursing and health-care auxiliaries; and (v) to be involved in research ¹⁰

6 International definition of the midwife. The Hague: International Confederation of Midwives; 2017 (https://www.internationalmidwives.org/assets/files/definitions-files/2018/06/eng-definition_of_the_midwife-2017.pdf, accessed 26 November 2021)

7 Position statement: midwifery led care, the first choice for all women. The Hague: International Confederation of Midwives; 2017 (<https://www.internationalmidwives.org/assets/files/statement-files/2018/04/eng-midwifery-led-care-the-first-choice-for-all-women.pdf>, accessed 26 November 2021)

8 Contraceptive prevalence - use of modern methods (%). Geneva: World Health Organization; 2021 (<https://www.who.int/data/gho/indicator-metadata-registry/imr-details/3334>, accessed 26 November 2021)

9 Neonatal mortality rate (per 1000 live births). Geneva: World Health Organization; 2006 (<https://www.who.int/whosis/whostat2006NeonatalMortalityRate.pdf?ua=1>, accessed 26 November 2021)

10 Definition of a nurse. Geneva: International Council of Nurses; 1987 (<https://www.icn.ch/nursing-policy/nursing-definitions>, accessed 26 November 2021)

Nurse-midwife*	In National Health Workforce Accounts, countries reported how many of their professional and association professional nurses had “midwifery training”, defined as having “successfully completed a midwifery education programme and acquired the requisite qualifications to be registered and/or legally licensed to practise as a midwife”. In this report, these “nurses with midwifery training” are referred to as “nurse-midwives”, but it is recognized that not all countries use this terminology and that those in the “nurse-midwives” category are not necessarily all engaged in providing midwifery care
Nursing workforce excluding those with midwifery training*	All persons with a nursing qualification (professional or associate professional) with the exception of nurse professionals or nurse associate professionals with formal midwifery training who are counted as part of the midwifery workforce and subtracted from the overall nursing workforce
Potential met need (PMN)*	The percentage of health worker time needed for universal coverage of essential RMNCAH interventions that could be delivered by the current workforce if it was educated to global standards, equitably distributed and working within an enabling environment
Sexual, reproductive, maternal, newborn and adolescent health (RMNCAH) care	The continuum of sexual and reproductive health care and maternal and newborn health care, including for adolescents. Sexual health care involves the enhancement of life and personal relationships, not merely counselling and care related to procreation and sexually transmitted infections. Reproductive health enables people to have a responsible, satisfying and safe sex life, to have children, and to decide if, when and how often to do so ¹¹
RMNCAH doctors*	Generalist medical practitioners, obstetricians and gynaecologists, and paediatricians
Stillbirth rate	Number of babies born with no sign of life at 28 weeks or more of gestation, per 1,000 total births ¹²
Supply of health workers	The number of health workers available to provide clinical services
Total fertility rate	The average number of children a hypothetical cohort of women would have at the end of their reproductive period if they were subject during their whole lives to the fertility rates of a given period and if they were not subject to mortality. It is expressed as children per woman ¹³
Unmet need for family planning	The percentage of women of reproductive age who have an unmet need for family planning, i.e. those wishing to stop or delay childbearing but not using any method of contraception ¹⁴

* This term is specific to the *State of the World's Midwifery* (SoWMy) series of reports: it is not standard terminology.

11 Sexual and reproductive health. Geneva: World Health Organization; 2021 (<https://www.euro.who.int/en/health-topics/Life-stages/sexual-and-reproductive-health/sexual-and-reproductive-health>, accessed 26 November 2021)

12 Stillbirths. New York: UNICEF; 2021 (<https://data.unicef.org/topic/child-survival/stillbirths/>, accessed 26 November 2021)

13 Total fertility rate (births per woman). Geneva: World Health Organization; 2021 ([https://www.who.int/data/gho/data/indicators/indicator-details/GHO/total-fertility-rate-\(per-woman\)](https://www.who.int/data/gho/data/indicators/indicator-details/GHO/total-fertility-rate-(per-woman)), accessed 26 November 2021)

14 Unmet need for family planning. New York: United Nations Department of Economic and Social Affairs; 2014 (https://www.un.org/en/development/desa/population/publications/dataset/contraception/wcu2014/Metadata/WCU2014_UNMET_NEED_metadata.pdf, accessed 26 November 2021)

Technical annex



Table A.1 defines the health occupations considered to be part of the RMNCAH workforce for the purposes of this report.

Table A.1: RMNCAH workforce occupation definitions

Occupation	Definition
Midwifery professionals	Midwifery professionals plan, manage and provide midwifery care services before, during and after pregnancy and childbirth. They provide delivery care to reduce health risks to women and newborn children according to the practice and standards of modern midwifery, working autonomously or in teams with other health-care providers. They may conduct research on midwifery practices and procedures, and implement midwifery education activities in clinical and community settings.
Midwifery associate professionals	Midwifery associate professionals provide basic health care and advice before, during and after pregnancy and childbirth. They provide advice to women, families and communities on birth and emergency plans, breastfeeding, infant care, family planning and related topics; monitor health status during pregnancy and childbirth; and implement care, treatment and referral plans usually established by medical, midwifery and other health professionals.
Nurse-midwives	Nursing professionals who have successfully completed a midwifery education programme and have the requisite qualifications to be registered and/or licensed to practise midwifery. Usually this is achieved by qualifying as a nursing professional and then acquiring a further qualification in midwifery.
Associate nurse-midwives	Nursing associate professionals who have also successfully completed formal education to provide basic health care and advice before, during and after pregnancy and childbirth. They provide advice to women, families and communities on birth and emergency plans, breastfeeding, infant care, family planning and related topics; monitor health status during pregnancy and childbirth; and implement care, treatment and referral plans usually established by medical, midwifery and other health professionals.
Nursing professionals	Nursing professionals provide treatment, support and care services for people in need of nursing care due to the effects of ageing, injury, illness or other physical or mental impairment, or potential risks to health, according to the practice and standards of modern nursing. They assume responsibility for the planning and management of patient care, including the supervision of other health-care workers, working autonomously or in teams with medical doctors and others in the practical application of preventive and curative measures in clinical and community settings.

Occupation	Definition
Nursing associate professionals	Nursing associate professionals provide basic nursing and personal care for people needing such care due to effects of ageing, illness, injury or other physical or mental impairment. They provide health advice to patients and families, monitor patients' conditions, and implement care, treatment and referral plans usually established by medical, nursing and other health professionals.
Community health workers	Community health workers provide health education, referral and follow-up, case management, and basic preventive health care and home visiting services to specific communities. They support and assist individuals and families in navigating the health and social services systems.
Paramedical practitioners	Paramedical practitioners provide advisory, diagnostic, curative and preventive medical services more limited in scope and complexity than those carried out by medical doctors. They work autonomously or with limited supervision by medical doctors, and perform clinical, therapeutic and surgical procedures to treat and prevent diseases, injuries and other physical or mental impairments common to specific communities.
Medical assistants	Medical assistants perform basic clinical and administrative tasks to support patient care under the direct supervision of a medical practitioner or other health professional. They perform routine tasks and procedures such as measuring patients' vital signs, administering medications and injections, recording information in medical record-keeping systems, preparing and handling medical instruments and supplies, and collecting and preparing specimens of bodily fluids and tissues for laboratory testing.
General medical practitioners	General medical practitioners (including family and primary-care doctors) diagnose, treat and prevent illness, disease, injury and other physical and mental impairments, and maintain general health in humans by applying the principles and procedures of modern medicine. They plan, supervise and evaluate the implementation of care and treatment plans by other health-care providers. They do not limit their practice to particular disease categories or methods of treatment, and may assume responsibility for providing continuing and comprehensive medical care to individuals, families and communities.
Obstetricians & gynaecologists	Doctors in obstetric and gynaecological specialties and related branches focusing on the care of women's reproductive systems including before, during and after pregnancy and childbirth.
Paediatricians	Doctors in paediatrics and related specialties focusing on the prevention, diagnosis and treatment of health problems in infants, children and adolescents.

The methods used to produce the analyses in this report closely follow those described in the [SoWMy 2021 webappendices](#), with two exceptions. First, in SoWMy 2021 it was assumed that, on average, general medical practitioners devote 20% of their clinical work time to RMNCAH interventions. In this regional report, the assumption was that they devote 35% of their time to RMNCAH. This change was made on the advice of UNFPA country offices in the region.

Second, some of the data sources used to estimate the level of need for RMNCAH worker time were updated after the publication of SoWMy 2021. Table A.2 shows the interventions affected by the change, and cites the updated data sources. If an intervention is not shown in Table A.2, there has been no update since SoWMy 2021 and the same data source was used as shown in [SoWMy 2021 webappendix 5](#).

Table A.2: Data sources updated since SoWMy 2021 which affected estimates of health worker time needed to deliver essential RMNCAH interventions

Intervention	Number and average duration of contacts needed with an RMNCAH worker	Data requirements and sources
WOMEN (INCLUDING PRE-PREGNANCY INTERVENTIONS)		
Delivery of condoms, vaginal barriers, vaginal tablets	Three contacts per year totalling 35 minutes per WRA using condoms, estimated as follows: WRA x (contraceptive prevalence rate (CPR) + unmet need) x % of female contraceptive users who use male or female condoms	Indicator: CPR (any method), 2019-2030. Source: UN Department of Economic and Social Affairs family planning indicators (https://www.un.org/en/development/desa/population/theme/family-planning/cp_model.asp), accessed 29 September 2021. A regional mean was applied for countries not included within this source.
Delivery of contraceptive pills and injectables	Three contacts per year totalling 40 minutes per WRA using pills or injectables, estimated as follows: WRA x (CPR + unmet need) x % of female contraceptive users who use pills or injectables	Indicator: Unmet need for contraception (%). Source: UN Department of Economic and Social Affairs family planning indicators as above.
Insertion and extraction of contraceptive implants	One 60-minute contact every 5 years per WRA using implants (assuming Jadelle), estimated as follows: WRA x (CPR + unmet need) x % of female contraceptive users who use implants	Indicator: % of female contraceptive users (aged 15-49) who use each type. Source: UN Department of Economic and Social Affairs World Contraceptive Use dataset 2019 (https://www.un.org/en/development/desa/population/publications/dataset/contraception/wcu2019.asp), accessed 29 September 2021. A regional mean was applied for countries not included within this source.
Intrauterine device (IUD) insertion	One 55-minute contact every 10 years per WRA using IUD (assuming Copper T 380-A-IUD), estimated as follows: WRA x (CPR + unmet need) x % of female contraceptive users who use IUDs	
Female sterilization	One 100-minute contact per unsterilized WRA requesting sterilization, estimated as follows: (New members of the WRA cohort, i.e. 20% of women aged 15-19) x (CPR + unmet need) x (% of female contraceptive users who use female sterilization)	
PREGNANCY (ANTENATAL CARE)		
Prevention of malaria, including insecticide-treated nets and intermittent preventive treatment	Contacts totalling 6-minutes per pregnant woman living in areas of high malaria transmission, estimated as follows: pregnancies x % of population living in areas of high malaria transmission	Indicator: % of population living in areas of high malaria transmission. Source: WHO (2020) World Malaria Report (https://www.who.int/teams/global-malaria-programme/reports/world-malaria-report-2020), accessed 23 November 2021. Assumed 0% for countries not included in the report.
Treatment of malaria in pregnancy	One 4-minute contact per pregnant woman with malaria, estimated as follows: pregnancies x incidence of presumed and confirmed malaria cases	Indicator: Incidence of presumed and confirmed malaria cases (%). Source: WHO (2020) World Malaria Report as above, 2019 values.
POSTNATAL (MOTHER)		
Response to intimate partner violence (IPV)	Contacts totalling 35 minutes per new mother experiencing IPV, estimated as follows: (live births + stillbirths) x lifetime prevalence of IPV among women aged 15-49.	Indicator: Lifetime prevalence of IPV among women aged 15-49. Source: WHO (2021) Global database on the prevalence of violence against women (https://srhr.org/vaw-data/data). A regional mean was applied for countries not included within this source.
ADOLESCENT SEXUAL AND REPRODUCTIVE HEALTH		
Prevention of harmful practices such as female genital mutilation (FGM) and early and forced marriage	Contacts totalling 5 minutes for all 10-19 year-old girls living in countries with prevalence of FGM >0 (on the assumption that this intervention will be delivered in groups of 30, each lasting 2.5 hours)	Indicator: FGM prevalence (%). Source: World Bank World Development Indicators (https://databank.worldbank.org/source/world-development-indicators), accessed 29 September 2021.

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