Maternal Health in Gaza: Situation Analysis

Key words: Maternal, Obstetrics, Mortality, Morbidity, Near-miss, Midwives, Gaza

Background and introduction

The United Nations Population Fund (UNFPA) is an international development agency exists to promote the right of women, men, youth and children to enjoy quality healthy life and equal opportunity. Throughout more than thirty years of its developmental and humanitarian work in Palestine, UNFPA contributed to the development of Sexual and Reproductive Health (RH) and Rights strategies, upgraded the provision of maternity services and contributed to capacity building of individuals and institutions. UNFPA/Palestine country program is well-recognized as an essential actor in advocating and supporting RH including maternal health, family planning and sexual health. Over the past decade, UNFPA/Palestine program has significantly contributed to the progress in RH status especially in the reduction of maternal mortality, improving the quality of obstetric care and supporting family planning services, however, still, there are many structural gaps in access, clinical governance and quality of RH services.

This situation analysis explores the key challenges and opportunities for the provision of maternal health care as an integral part of RH services. The assessment recognizes good practices in maternity and obstetric care, identifies gaps in the availability, accessibility and quality of services and provides cognizant recommendations to sustainably promote equitable access to high quality services in congruence with the international standards. It focuses on three main themes namely; maternal death surveillance and response system, obstetric care and midwifery.

Epistemologically, a triangulated approach was followed utilizing different data collection methods and diverse verification means. The assessment used a mixed-methods approach involving a literature review and analysis, quantitative data collection from medical records and available databases and qualitative data collected through Key informant interviews with policy makers and service providers. Field visits were conducted to a sample of facilities providing maternity care. The data collected were triangulated to produce a layered analysis, enabling us to more fully explore maternity and obstetric care.

Key findings

Maternal death surveillance system

Maternal Mortality Rate (MMR) is a widely used proxy outcome indicator that reflects the interplay of many factors including socioeconomic, contextual, political, cultural and healthcare system related factors. It is well-known that maternal mortality reviews are critically useful to assess the quality of health care system, but do not necessarily reflect the scope of complications in obstetrics which are more reflected in Maternal Near Miss (MMN) reviews.

As of 2008, UNFPA and its national partners developed a national surveillance system for maternal mortality and linked it to mainstream information system of MOH. Prior to that, maternal death reviews were sporadic, even rarely conducted. Also UNFPA applied different strategies to reduce maternal deaths including capacity building, standardization and supporting maternity units. UNFPA led efforts to launch a MMR committee, currently; the committee includes representatives from different governmental and non-governmental maternities, Primary Health Care (PHC) sector and

---

1 Dr Bassam Abu Hamad, Dr Shahd Abu Hamad and Kefah Bani Oda
UNRWA. Although the committee incorporates few nurses/midwives, most of the members are obstetricians; nevertheless, the committee doesn’t involve epidemiologists, researchers or health planners. The MMR committee conducts investigations about every maternal death-reported to it and looks to the case history, services provided and then conclude lessons learned and possible recommendations. Credit should be given to UNFPA for supporting the MM committee which has contributed to a significant reduction in maternal mortality especially in the past three years. However, still MMR committee deals with cases reported to it mainly by hospitals or through informal channels (including grapevine information, social media and networking), at least hypothetically, it is possible that some cases are skipped especially complicated cases that are referred for treatment outside Gaza and die there. Also, the TOR of the committee is not that detailed (only one page document) and its scope is reactive, rarely it proactively intervenes to set protective policies or conducts clinical audits. It is important to reinforce the protective aspects of its work through re-directing its orientations more towards prevention and control of MM and to look to MM within an integrated RH frame. Moreover, the TOR needs to incorporate a clear mechanism for systematic tracking of mortalities.

Despite the significant improvement made, the reported MMR in Palestine still varies widely due gaps in documentation and classification of maternal deaths. However, the officially reported figures indicate that the overall MMR in both the WB and Gaza has significantly improved from more than 55 per 100,000 live births in 1999 to around 23 in 2014. In Gaza it reached 16 in 2015 and 10.3 in 2017, while it reached 3.8 in the West Bank in the same year (2018)\(^2\), which is much better than the acceptable global range recommended by the WHO and the SDGs (50 and 70 per 100,000 live births consecutively)\(^3\).

![Figure 1: Trends of MMR for the years 1980-2014](image)

Possibly, fertility reduction (from 6.5 per woman in 1994 to less than 4 in 2016) has directly impacted MMR in the West Bank and Gaza. Still, the analysis of MMR tells us that intensive support is needed to accelerate the reduction at the country level to achieve the SDGs recommended reduction by 2/3 by 2030. It could be argued that achieving further reduction requires transformational changes in the services as the already tried improvements strategies reached its maximum capacity/threshold, it can’t produce more (marginal effect), and therefore it is time now to try different intervention modalities. More worryingly, the health care system is not financially sustainable, rather it is donor’s dependent which may jeopardize all the achievements made recently including the reduction in MMR.

Also, the recent cuts of UNRWA’s funds may threaten the sustainability of the health system and negatively affects achievements in RH services and outcomes. Already, service providers report drug and supplies shortages and staff shortage. A closer look to the MMR data in Gaza shows that there is a fluctuation in the MMR in the past 12 years, although it has been significantly reduced recently (figure 1). This fluctuation may reflect common cause variations which indicates inherent gaps in the system, lack of standardization, system’s fragility and lack of institutionalization of improvement strategies with high possibility for easy relapse and drawbacks especially during crises. For instance, the 51 days of hostilities on the Gaza Strip in 2014 led to an increase in the MMR (20 women died during the war) due to disturbed capacity and deterioration of quality of care during the war. This year, the number of women who died due to maternal cause in Gaza is almost double number who died in the last year.

**Figure 2: MMR trends in Gaza between the years 2005 through 2017**

![MMR Trends Graph]

Having said that, it could be claimed that, officially reported figures about MMR are possibly biased, as these figures are based on recording cases of maternal deaths occurring at hospitals and therefore, under-reporting is expected. Possibly, the increase in certain years is due to the improvement in the reporting of cases, not necessarily an actual increase in maternal deaths; the same applies to the reduction which might reflect improvement in RH services; but still under reporting and misclassification can’t be excluded. It is believed that material and capacity building support provided by UNFPA and other developmental actors has been vital in remarkable reduction in maternal mortality and improving the quality of obstetric care. However, still there are many caveats and gaps in the system that should be addressed immediately.

Reviews of maternal death certificates indicated that the underlying cause of maternal death was inaccurate in 40.7% of death certificates, while pregnancy status was not clarified in 44.4% of the certificates belonging to deceased women. The leading causes of maternal deaths in Palestine include hemorrhage, hypertension, embolism, sepsis and death of associated diseases especially cardiac diseases (ibid). In 2016, the leading causes of maternal mortality in Gaza were cardiac arrest (45%), hemorrhage (27.5%) respiratory problems (18%) and septicemia (9%). In 2017, the leading causes of death were hemorrhage, puerperal sepsis, thromboembolic disease, PIH, obstructed labor and unsafe termination of pregnancy.

The highest maternal mortality was observed with increased age of mothers (above 30 years), during labor or the postpartum period, and when caesarean section was the mode of delivery. In 2011, around 18% died at home and the rest at hospitals, nevertheless in 2017, 80% died in the hospital or

---

4 UNFPA, WHO and MOH (2014), Victims in the Shadows: Gaza Post Crisis Reproductive Health Assessment.
6 See footnote 2
in their way to hospital, none died at home\textsuperscript{7}. In the past decade, the majority of maternal deaths occurred among multipara, in 2017, half of deaths occurred among prime-para or prime-gravida. With regard to risk assessment, despite being assessed as risky cases (deaths of the year 2017), only one was regarded as normal pregnancy\textsuperscript{8}. Unfortunately, the judgement of obstetric experts indicates that all deaths that occurred in 2017 are avoidable if adequate measures were taken except one case which has been regarded as unavoidable death due to the presence of organs failures attributed to congenital anomalies. Around one third of deaths occurred due to direct obstetric causes and the majority due to indirect causes like pulmonary embolism, heart disease, and liver disease that have been provoked by pregnancy or labor. This raises important questions related to the availability of integrated support system at maternities. Governmental variations are visible in the maternal deaths in 2016 where it was the higher in Salfit, Jericho & Al-Aghwar, Qalqelia, Jerusalem Gaza and Hebron. Review of maternal deaths indicates that there are deficiencies in the clinical management of key pregnancy-related complications, and lack of adequate medical record keeping and supervision, which hinder the provision of standardized services according to safe protocols\textsuperscript{9}.

Despite the good progress made in the past decade, still safe delivery is not guaranteed, there are many caveats in maternity services which constitute a source of discomfort to women, public and policy makers. Efforts need to focus on improving the quality of services, adherence to appropriate standards and perhaps most importantly strengthening management and governance systems and enhancing supervisory and accountability practices at maternities. Also, service providers recommended securing the essential resources like equipment and drugs. Strengthening the links between PHC and hospitals and promoting COC within an integrated RH frame is essential. It is critically important to promote documentation practices at maternities with accelerating the shift from paper-based documentation to electronic documentation as this is going to give more credible information about maternal mortality and morbidity. To avoid missing any maternal mortality, it is recommended to set a policy to regard any maternal death at the reproductive age as maternal death unless proven otherwise.

\textbf{Obstetric care}

Maternal mortality is known to represent the “tip of the iceberg”. Despite the reported reduction in MMR, still complications are frequently occur during pregnancy, delivery and during the puerperium. There is a consensus that for each case of mortality, 30 cases of morbidity develop\textsuperscript{10}. There is no precise morbidity estimates for Palestinian women; which raises a big concern about the quality of obstetric care.

At the plus side, ANC in Palestine is mainly provided by medical doctors, nurses and midwives while a minority of women receive care from a traditional birth attendant. There is a significant improvement regarding the timing of seeking ANC after the onset of pregnancy with 85% of mothers seeking ANC services within the first trimester; 10 years ago, nearly half of women did not receive ANC services within their first trimester and 7.9% had not benefited from ANC services until the last trimester\textsuperscript{11}. According to recent reports, the proportion of pregnant mothers from the West Bank (93%) who approached ANC services in the first trimester is higher than those from Gaza (76%)\textsuperscript{12}. Timely utilization was more prominent among educated, wealthy and residents of rural areas (ibid).

\begin{thebibliography}{99}
\bibitem{7} See footnote 2
\bibitem{8} See footnote 2
\bibitem{9} See footnote 4
\bibitem{10} UNFPA (2016) Palestine 2030. Demographic Change: Opportunities for Development. Palestine: UNFPA
\bibitem{11} PCBS(2007), Family Health Survey 2006. Ramallah: PCBS
\bibitem{12} PCBS(2015), Family Health Survey 2014. Ramallah: PCBS
\end{thebibliography}
For instance, the timely utilization in the first trimester reached 95.3% among the richest quintile and 76.6% among the poorest one (ibid). In average, the median duration of pregnancy at the first ANC visit is 2 months (ibid). Despite the high coverage, the noticeable quality gaps in ANC include lack of adequate preconception care, weak counselling, inadequate genetic counselling, in adequate imaging services (ultrasound) and inadequate access to information. As a proxy indicator to measure the content of ANC, PCBS estimated that around a quarter of mothers didn’t receive the following three designated tests combined altogether during pregnancy namely, blood pressure, urine testing and blood testing with more quality gaps in Gaza in the proportion of women who performed all the three tests in comparison to the West Bank (69.6% performed the three components in Gaza and 77.6% in the West Bank)\(^{13}\). Interestingly, in 2014, the proportions of pregnant women for whom these tests were conducted were much higher in Gaza (98.1%) than in the West Bank (93.9%)\(^ {14}\). This difference possibly attributed to the easier physical access in Gaza and the contribution of the UNRWA which provides free of charge services in Gaza to 66% of the population. In the WB, the contribution of UNRWA is much less and also the Israeli measures such as checkpoints and the wall impairs access especially in areas categorized as C.

According to MOH reports, high risk pregnancy represents around 19% of the total newly registered pregnant women. UNRWA, which uses a different classification system for estimating risks reported that agency-wide, 16.1% of women were classified as high risk (13.3% in the West Bank and 15.6% in Gaza), while 26.9% were considered alert risk cases\(^ {15}\) (24% in both West Bank and Gaza). The differences in methods used for estimating risks is just an example of fragmentation and lack of standardization. More worryingly, there is no available data to demonstrate the effectiveness and the use of the referral system or how it works. How, and by whom, high risk pregnancies are managed is unclear. High risk pregnancy programs have been implemented in several health centers however, there is no available data to demonstrate the effectiveness and the use of the referral system or how it works. How, and by whom, high risk pregnancies are managed is unclear. There is a lack of essential information and an inability to track referrals and management of high risk pregnancies. According to the MARAM perinatal study, 75.1% of the pregnant women reported that they suffered from at least one pregnancy complication during their pregnancy. In the PFS 2010, women were asked if they were experienced any complications during pregnancy. Around 23% stated suffering from severe headache, 23% suffered from upper abdominal pain, and 17% suffered from urination pains\(^ {16}\). Results show that more women in the West Bank suffered complications during their pregnancy than women in the Gaza Strip. Published reports indicate that the most commonly reported health problems during pregnancy are; infections (urinary tract infections and reproductive tract infections), anemia and pregnancy induced hypertension\(^ {17}\). The PCBS report indicates that 16% of women reported experiencing headache, swelling (11.5%), upper abdominal pain (11%), headache (11%), painful urination 9.9% and breathing problem (8.6%), all as reported by women themselves\(^{18}\). Among refugee Gazans women served by UNRWA, 8.7% suffered from hypertension during pregnancy (4.7% in the West Bank), the story of diabetes among pregnant women is different which was doubled in the West Bank in comparison to Gaza (6.6% in the West Bank and 3.6% in Gaza).

Almost all Palestinian women deliver at health facilities (99.4%) and their deliveries are attended by skilled birth attendants usually a doctor and/or a nurse/midwife\(^ {19}\). Contrarily, problems include, weak counselling, and inadequate access to information. Postnatal care remains unsatisfactory, with many

\(^{13}\)PCBS, (2013). Family Health Survey. Ramallah: PCBS

\(^{14}\)see note 17

\(^{15}\)UNRWA (2018), Annual Report of Health Department 2017. UNRWA

\(^{16}\)see note 18

\(^{17}\)See footnote 9

\(^{18}\)PCBS, (2013). Family Health Survey. Ramallah: PCBS

\(^{19}\)see footnote 10
women post-delivery not receiving appropriate care for themselves. Availability and accessibility of delivery services in Gaza are reasonable, but quality of care is often sub-optimal as illustrated later on. While women in labor are generally able to access basic maternity services under ordinary conditions, access becomes very challenging during renewed outbreaks of conflicts especially for women living near the borders or in remote areas. Access to advanced maternity services inside and outside Gaza remains very challenging due to limited staff capacities, inadequate capacity building, limited number of specialized staff, inability of facilities to cope with such large number of deliveries (55,000-60000 annually) and inadequate emergency preparedness (Figure 3) due to limited resources and weak governance systems20. In the West Bank, in 2015, 71,710 live births were registered while the number was 69,889 in 2014, average 6000 per month21.

Figure 3: Number of deliveries in Gaza by year

Unlike women in the WB who utilize the private sector more, more than two thirds of Gazan’s women (77%) deliver in governmental hospitals (47% in the West Bank), 17% at private centres (33% in the West Bank) and 5% at NGOs (13% in the West Bank)22. With regard to the mode of delivery, in 2006, 15% of births were performed through caesarean section which has increased to 17% in 2010 and 20% in 2015 (17% in Gaza and 22% in the West Bank); it is more than the WHO recommended standard (less than 15%)21. CS rates reported by UNRWA in 2018 were slightly higher (19% in Gaza and 27.3% in the West Bank). The increasing trend in the rate of caesarean section is un-justifiably high due to lack of clear policies and protocols, over-medicalization of the obstetric services; predisposing women to unnecessarily increased mortality and morbidity. Also, the poorly regulated and overwhelmingly available IVF services increased the demand for CS deliveries (Figure 4). A clinical audit was conducted to assess adherence to the WHO guidelines for the prevention of surgical site infections and results have shown poor adherence24 in general.

Shortcomings during delivery include routine unnecessary interventions, frequent examinations, lack of privacy, lack of respect, overcrowded delivery areas, and overstretched obstetricians (who practice in more than one institution)25. Shallaby assessed the quality of natal care at maternity hospital that IV fluids were used for 60% of women during delivery, Cardio-tocograph-Parto-gram was filled in 35% of cases, and labor was augmented with oxytocin in 62.5% of cases as observed and in 52% as

20 See footnote 2
23 See footnote 11
24 Peer, B (2017) Prevention of surgical site infection in CS in Gaza: Clinical Audit. ICPIC
25 See footnote 9
documented and with artificial rupture of membranes in 77.5% of them\textsuperscript{26}. Ironically, blood pressure was measured only for 37.5% of cases as observed, but documented in 72.5%. The overall completeness of records was found to be poor (46.4%) (ibid). These findings flag important gaps in obstetric care and call for taken urgent measures to address them.

**Figure 4: Proportions of CS deliveries in Gaza during the years 1996 through 2017**

Perineal trauma management is lacking systematic and evidence-based clinical practice. A recent interventional study conducted in maternities showed that obstetric anal sphincter injuries (OASIS) rate was higher in phase 2 (2.8%) and phase 3 (3.1%) than phase 1 (0.5%). The rate of OASIS was higher among primi-parous women\textsuperscript{27}. The quality improvement intervention improved OASIS detection mainly in the research fellows’ maternity units. A mandatory national program in obstetric perineal trauma assessment and management is essential to mitigate the risk of missing significant degrees of trauma and to manage these traumas (ibid).

Studying near miss is new, evolving and is more important than studying maternal death as it gives better understanding of the determinants of mortality, especially its more frequently happening than maternal mortality. Its value is not only related to its usefulness for assessing the quality of obstetric care, but more importantly, the woman herself can be a source of rich data. In a study conducted in the West Bank in 2010, 2% the total births were suspected as MNM cases. Of the recognized MNM cases 42% were pre-eclampsia, 30% ante-partum hemorrhage, 18% post-partum hemorrhage, 6% anemia, 3% ante-partum and post-partum hemorrhage. Of the MNM 21% were admitted to ICUs\textsuperscript{28}. The 39 cases of post-partum hemorrhage were managed with oxytocin or methylergometrine (85%) and misoprostol (69%). Blood transfusion was administered to 41% of the cases, and 13% had hysterectomies and internal iliac artery ligation. Moreover, the management of MNM showed suboptimum compliance with the Palestinian Ministry of Health’s National Obstetrical Emergencies Guidelines and Protocols (November, 2008).

Shnaina reviewed the maternity files in Gaza and reported that the rate of Near miss is 6.9/1000 delivery, which is much more than what has been reported in 2016 and 2017 (0.6 and 0.7 per 1000)\textsuperscript{29}. This huge variation is possibly attributed to differences in the methods used for estimating the prevalence of MNM. The causes which led to the near-miss scenario in Gaza included severe hemorrhage (70.8%), hypertension (16%), uterine rupture (3.7%), sepsis (3.7%) and HELLP syndrome.

\textsuperscript{26}Shallaby, S (2012), Evaluation of Natal-Care Services Provided by Governmental Hospitals in Gaza Governorates.
\textsuperscript{29}Shnaina, Y. (2014), Risk Factors for Maternal Near miss in Gaza Strip: Case Control Study. Master thesis Al-Quds University
(3.7%)\(^{30}\). Furthermore, near miss reviews conclude that it is more associated with primiparity, previous obstetric problems, previous medical problems, previous cesarean section, poor quality antenatal care, history of abortion and preterm labor ≤ 36 weeks (ibid). The same study indicates that due to the severity of their conditions, 32.9% of cases were admitted to ICU, 63.8% of the cases received blood and blood products, 31.7% were intubated and ventilated, 11.5% of cases had hysterectomy and unfortunately, 1.2% developed renal failure and started kidney dialysis (ibid).

The recent launching out of near miss committee in Gaza reflects a growing concern to improve the quality of obstetric care. The committee is diversified in terms of sector’s representativeness and professional background of its members as it contains doctors, nurses, from PHC and hospitals representing MOH and UNRWA. In the past year, activities of the committee including case presentations at hospitals, regular meetings, conducting case studies, organizing workshops, study days and conducting research studies. Still, the committee should be upgraded to incorporate more nurses, involve the private sector, researchers, policy makers, epidemiologists and to focus on proactive identification of cases. More importantly, the method used to identify and classify cases are not standardized and don’t necessarily follow the WHO criteria. The method used to identify and report near miss cases is totally unclear and mostly subjective and recall-based, much liable for recall bias with many cases are missed.

With regard to abortion, which is an important component of RH, there is no available credible data on unsafe abortion or cases that has been prosecuted as a result. Abortion is an important public health issue in the occupied Palestinian territories (OPT), where it is illegal in most cases. Some women put their lives at risk by trying to terminate their unwanted pregnancies by using herbs, violent exercises and other risky methods. The only estimate for the period 1995-2000 gave 9,815 cases of both safe and unsafe abortions with 141 fatalities due to unsafe abortion. Among those who aborted, 66.3% had more than one abortion, 11.3% had an induced abortion and 60.5% had a spontaneous abortion\(^{31}\). Around 50% of women received treatment for incomplete abortion, which ranked first in service utilization of post-abortion care. In addition, the most common complication was severe vaginal bleeding, which was experienced by a majority (52.2%). Furthermore, 67.6% of the conducted abortions were clandestine, carried out covertly with the prior knowledge of only the woman herself. However, measuring the level of unsafe abortion in Palestine where pertinent laws are highly restrictive remains difficult. Procedures are often carried out outside the formal health system and are not reflected in health records. A recent study\(^{32}\) conducted in Palestine in 2017 showed that the main themes arising from the interviews were; the centrality of religion in affecting women’s choices and views on abortion; the importance of community norms in regulating perspectives on elective abortion; and the impact of the unique medico-legal situation of the OPT on access to abortion under occupation. Limitations to safe abortion access included: legal restrictions; significant social consequences from the discovery of an abortion by one’s community or family; and different levels of access to abortion depending on whether a woman lived in East Jerusalem, the West Bank, or Gaza. This knowledge should be incorporated to work towards a legal and medical framework in Palestine that would allow for safe abortions for women in need.

MDM-France assessment in the middle area of Gaza in 2013 showed that many women faced with an unintended (unwanted or mistimed) pregnancies, and some of them had resorted to unsafe abortions exposing their health at risk such as inserting traditional concoction into the uterus, application of external force (Jar of gas on lower abdomen) or by using drugs as Misoprostol (cytotec). The National Reproductive Health Strategy developed in 2014, explicitly refers to ‘Making pregnancy and childbirth

\(^{30}\)see footnote 19

\(^{31}\)Miftah et al (2015), Country Assessment towards Monitoring and Reporting Sexual and Reproductive Health and Rights in Palestine

safe’ through improving access, availability and quality of post abortion services’. The later strategy document incorporates development and dissemination of protocols for the care and counselling post abortion\textsuperscript{33}. Collaboration of the different stakeholders is essential in developing safe abortion policy including the religious institutions, MOH, human rights and women organizations, Ministry of Justice.

To promote the quality of obstetric care and reduce the rate of near miss, still further work is needed to build capacities, reinforce compliance with the recently developed protocols (by UNFPA in 2016) through active dissemination, training, on-the-job training, provision of job aids and more importantly improve the monitoring and surveillance system at maternity and PHC system. The quality of maternity care at primary and secondary level, including emergency obstetric care, remain a challenge and it is recommended for UNFPA to leverage its work on policy setting, strengthening clinical supervision, conducting clinical audit, and support and leverage Midwifery program. Efforts to promote quality of services include reduction in the use of unnecessarily measures like induction, reduce the rate of Cesarean section, rational use of IVs and drugs, improving privacy, safe abortion care and establishing accountability practices. More importantly, strengthening management and governance systems including enhancing documentation, records keeping, and enhancing monitoring and evaluation which is key for establishing accountability mechanisms. Priority areas include improving the quality of ANC, effective strategies for prevention, early recognition and treatment of obstetric hemorrhage including supporting blood banking services, improving resources in hospitals and better referral systems to ensure continuity of care. The establishment of rapid response team to reduce the risk of overt cardiopulmonary arrest and improve outcomes in patients who are progressively deteriorating or exhibiting clinical instability by a multidisciplinary assessment and intervention might be a good idea that worthwhile to be piloted in Gaza.

\textbf{Midwifery program}

Although generally, the distribution of health personnel per population is reasonable in Palestine, still it is less than the developed countries and even less than some other Arab countries (Lebanon and Qatar). In 2014, there were 7,510 physicians at a rate of 1.7 physicians per 1,000 Inhabitants in the country as a whole and (surprisingly) a much better situation in the Gaza Strip than in the West Bank, with almost twice more physicians in the Gaza Strip (2.2) than in the West Bank (1.3)\textsuperscript{34}. Nurses play an integral role in the healthcare system; they have been recognized as the heart of healthcare. Although it has been significantly improved (almost doubled) in the past 15 years, nurse proportions (including midwives) according to the population are significantly low with around 29 nurses per 10,000 people. Nearly half of the nurses in Palestine are females. The current ratio per population in Gaza (40.6) is twice the ratio in the West Bank (21.6). However, proportions reported in other countries are much higher: 100 in UK and U.S., and 91 in OECD countries. Nevertheless, specialty and subspecialty areas, including midwifery are greatly under-represented. As of 2016, and with only 2 midwives for each 10000 population, Palestine has at least 3000 deficit in midwives to reach international standard\textsuperscript{35}.

More importantly, the utilization of midwives in providing reproductive health services is limited, the system is hyper-medicalized and a physician dominated one which limits the space for positioning midwives as the key practitioner and care provider in RH. For instance, midwives can’t perform normal delivery independently although they are entitled to that, they can’t do episiotomy or repair unless the available obstetricians are supportive to that and they can’t insert IUDs at governmental health facilities. Globally, the literature indicates that midwives are capable of safely providing 80-90% of SRH functions.

\textsuperscript{33}Miftah et al (2015), Country Assessment towards Monitoring and Reporting Sexual and Reproductive Health and Rights in Palestine,

\textsuperscript{34}UNFPA (2016) Palestine 2030. Demographic Change: Opportunities for Development. Palestine: UNFPA

\textsuperscript{35}UNFPA (2018). UNFPA website
Through active promotion of midwifery as a health profession and in partnership with national midwifery education institutes and midwifery association, UNFPA and Palestinian Partners succeeded in increasing enrollment in midwifery education from around 45 in 2008 to 90 in 2015. With the development of unified national curriculum for midwifery at BA level, Palestine has achieved standardization of skills base that midwives possess and this has led to better ability to advocate for positioning of midwives in the health service provision. Also, the integration of midwives into the nursing association “union”, has played an important role in supporting midwives. Midwives at the governmental sector, universities and UNRWA had benefited more from the training and capacity building than their counterparts from NGO or private hospital. Both the dearth in the number of midwives in Palestine and the limited space given to them, has triggered developmental agencies particularly UNFPA, WHO, Norwegian agencies and others to launch initiatives to support midwifery education and practice. These organizations are actively involved in advocacy with stakeholders towards adoption of task shifting and sharing, especially in the area of obstetric care, family planning and counselling. The implementation of midwifery led model in Khanyounis Hospital in Gaza was a good step for the recognition of the role of midwives and also represented a pilot that has been expanded to other hospitals. Currently, in some MOH hospitals there is a department at maternities designated for the delivery of normal cases by midwives which contributes to reduction of invasive and instrumental delivery such as augmentation of labor and caesarean section. For instance, in December 2017, out of the 1209 total admissions to the labor room of Khanyounis Hospital, 304 deliveries were conducted by midwives which represents 25% of all the admissions, in May 2018, out of the 1089 total admissions to the labor room, 246 deliveries were conducted by midwives (22.6%) and 18% of the total admission (1089) were delivered by midwives in April 2018. Still, more effort are needed to recognize the role of midwife and to expand their practice in all maternities. Interestingly, the MOH senior management is very supportive to midwives and further efforts are needed to translate that commitment to actions and polices. Currently, 4 colleges in the West Bank and 3 in Gaza offer midwifery education.

Taking Gaza as an example, the analysis of data pertaining to the number of midwives in Gaza reflects the growing interest in this profession by stakeholders including developmental agencies. Looking to the data in 2010, there were only around 130 midwives in Gaza, at a rate of 1.23 per 10,000 who were mainly working with UNRWA, which has increased to 1.5 per 10,000 in 2012 and to around 2 per 10,000 in 2016. Still, despite the increase in the population midwives density, according to these figures the midwifery sector in Gaza is disadvantaged, the density per population is just around half of that in Norway (4.6 per 10,000).

Currently, with the support of the international donors, the story is different, as the total number of midwives has significantly improved till it reached 1132 with a rate of 5.6 per 10,000. Unfortunately, less than half of the graduate midwives are currently working with the other half are unemployed. The current total number of employed midwives is only 425, of them, 273 are working at MOH in Gaza and additional 424 are working at MOH in the West Bank (Figure 4). In Gaza, MOH is the main employer of midwives as it employs 64% of all the employed midwives followed by UNRWA which employs around 22%. The breakdown of the midwives working in MOH is as follows; 47 are working in PHC and the rest are working at hospitals (226). Graduates of the 2-year diploma represent 62% of the total employed midwives in all the sectors. This raises important questions related to the regulatory and licensing frame of midwifery practice especially there is growing concern about the quality of the graduates of the two year midwifery program.

36 MOH birth log book
37 UNFPA https://palestine.unfpa.org/en/sexual-reproductive-health August 2018
38 See footnote 4
In Gaza and the West Bank, currently 7 colleges that offer midwifery education and implement 4 types of different programs; namely 2 year diploma, direct entry bachelor degree in midwifery, post graduate diploma in midwifery and midwifery upgrading program to BSc which is offered to nurses (Figure 5). These variations in qualifications don’t only reflect inadequate regulation, but also lack of clear identity about how midwifery practice in Palestine should look like. Unfortunately, more than half (55.3%) of the total midwives in Gaza are holding 2 year diploma program which is less than the universally acceptable minimal professional entry level. In Norway, most midwives are originally nurses who got postgraduate diploma in midwifery which increases their capacity to effectively deal with the wide spectrum health challenges women face during labor. Till, now, none in Gaza is holding a PhD in midwifery and only one holds a master degree in midwifery, however, many midwives are holding PhDs or master degrees but not in midwifery, therefore it is worth investing in educating a number of midwives to act as champions for leading change in midwifery.
In the past year (2017), UNFPA supported the development of job description for midwives, but still more efforts are needed to put that into practice. It is worth noting that many of the two year diploma candidates join the program as a tactic to bypass the Ministry of Education bylaws preventing them from joining BSc programs at universities because their grades are low in secondary school therefore they join bridging programs after graduation from the diploma to get the BSc degrees which are regarded as more prestigious. Unfortunately, formal arrangements between the health sector and the universities or educational institutions that produce midwives are unavailable. The issue of accreditation and licensing of colleges and its curricula is managed by the Ministry of Education with little or no involvement of the health sector therefore the match between demand and supply is missing in terms of numbers and qualities of midwives. There are structural gaps in licensing midwives and nurses. There is no one standardized licensing procedure that is applied to all those who want to practice. Also, the minimal professional entry level is not standardized yet. In 1998, a presidential decree was made to initiate professional regulatory bodies in the form of boards. Unfortunately, only the medical board is currently functioning whereas the others including the nursing and midwifery board were collapsed. To guarantee quality and safe practice, it is crucially important to set more standardized rigorous accreditation and licensing system for colleges, programs, personnel and health services.

Stakeholders including MOH and developmental agencies need to invest more in supporting midwifery education and practice through setting more effective regulatory frame. The development of a unified curriculum with support from UNFPA was a good step but still more is needed to ensure that graduates are equipped with the needed skills to practice. Further investment is needed to support enhance midwives’ clinical practice, improve their counseling and informing skills in essential. The reported discomfort resulted from the inappropriate communication and interactions of midwives with clients, needs to be addressed through developing professional code of conduct, training and more effective supervision. Although there is a noticeable contribution of midwives to maternal mortality and near miss committees, still this is not enough. More work at the policy making level is needed to promote and set policies to widen the scope of midwifery involvement in RH at the policy making level. Promoting governance and leadership in midwifery is essential through investing in education, establishing midwifery role models, reforming regulatory mechanism for education and practice and strengthening linkages with the international experiences.