

# Gynecological and Obstetric Crisis in Gaza Conflict Area: A Call for Action

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## BACKGROUND

Despite the challenging living conditions in the Gaza Strip, such as high population density, severe poverty, and inadequate sanitation [1], the birth rate remains high at 27.67 births per 1,000 population compared to other countries in the Middle Eastern region which shares some similar geopolitical and socioeconomic challenges with the Gaza Strip such as Jordan and Syria (21,11-22,71/ 1000, respectively) [2], with a fertility rate of 3.38 births per woman in 2022, according to estimates from the U.S Census Bureau [3]. The evident high growth rate in the region is accompanied by a lack of resource allocation and comprehensive strategies, raising concerns about its impact on healthcare. The substantial increase in cesarean section rates, resulting from the escalating birth rate, may pose a risk to maternal and infant health due to the potential surge in demand for such procedures [4]. The strain on the healthcare system is further compounded by overcrowding, limited resources, and the impact of the COVID-19 pandemic, which has affected the quality of maternity care [5]. Figure 1 demonstrates the limitations and challenges of maternal care in the Gaza Strip.

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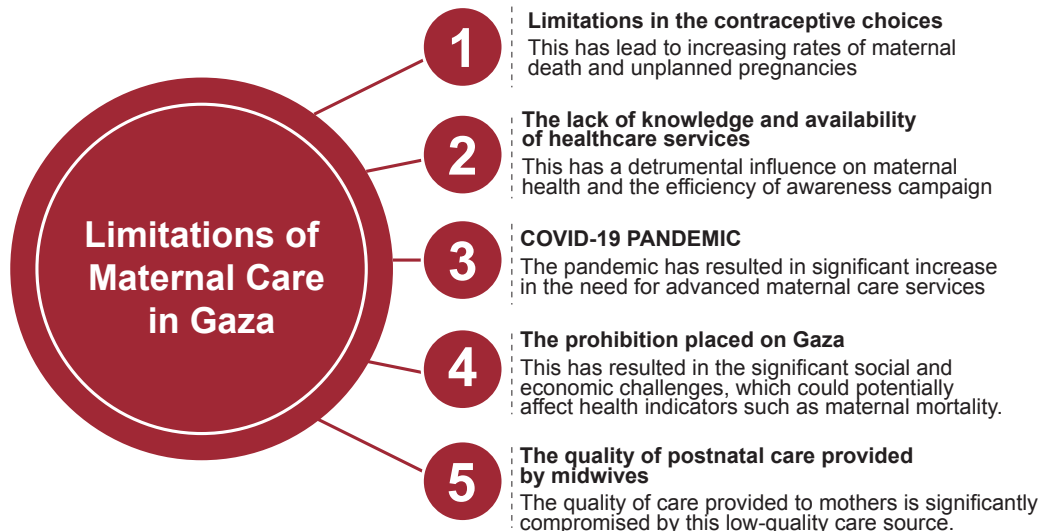
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**Figure 1.** The limitations and challenges of maternal care in Gaza

\*Midwives are women who provide maternity care and assist women with normal vaginal delivery: they are a common profession in the Middle East

## EFFECT OF CONFLICT ON GYNECOLOGICAL AND OBSTETRIC SITUATION IN GAZA

The humanitarian situation in Gaza is truly devastating, as the World Health Organization (WHO) stated that out of the nearly 1.9 million displaced people, around 725,000 are currently residing in 149 United Nations Relief and Works Agency for Palestine Refugees in the middle East (UNRWA) facilities, 122,000 are taking shelter in hospitals, churches, and other public buildings, and approximately 131,134 are in 94 non-UNRWA schools while the rest are staying with host families [6]. The Ministry of Health spokesperson in Gaza (Ashraf Al-qedra) has confirmed that as of December 5th, 15,523 people lost their lives because of Israeli military action in the Gaza Strip, about 70% of them are children and women. According to al-Qedra, the number of healthcare personnel killed has reached 374, with hundreds more injured. In addition, 59 ambulances and an equal number of health facilities have been destroyed. Furthermore, 24 hospitals are currently out of service especially in the Northern Gaza Strip, along with 46 primary care centers. This situation has put additional strain on the remaining hospitals, and urgent action is necessary to address the issue [7].

The current situation is a source of significant concern, particularly for pregnant women and young children. The latest data reveals that

there are more than 50,000 pregnant women and approximately 337,000 children under the age of five who are directly affected [7,8]. These alarming statistics demand urgent attention, given the well-being of this vulnerable segment of the population is in jeopardy.

As per the United Nations and the United Nations Population Fund (UNFPA), it is anticipated that 5,522 pregnant women in Gaza will give birth in the next 30 days, and urgent measures are needed to secure appropriate obstetric care for them [8,9]. Additionally, no fewer than 180 pregnant women will give birth daily in Gaza. 15% of these pregnancies are projected to encounter complications during both the pregnancy and postpartum periods, necessitating advanced medical care. Unfortunately, the existing healthcare infrastructure is on the verge of collapse [10]. Furthermore, many pregnant women do not have access to basic prenatal care, and the overcrowded circumstances, along with restricted access to clean food and water, raise the risk of infection for both the mother and the fetus. Consequently, the risk of postnatal complications such as fever, infection, and bleeding rises [11].

Even when pregnancies are uncomplicated, pregnant women are in urgent need of fundamental medical essentials, including healthcare, nourishment, pain relief, and medications—resources that are currently scarce. Refugee women in

Rafah, situated in southern Gaza, face challenges in obtaining essential items like clothing for their newborns. The scarcity of food and water throughout Gaza will significantly impact the health and overall well-being of pregnant and lactating women, given that they have an elevated daily requirement for water and calories [8].

Globally, disposable menstrual pads are indispensable for women of childbearing potential, and it is estimated that a woman uses approximately 11,400 pads throughout her lifetime [12]. Ensuring the quality and safety of menstrual hygiene products is extremely important because they are in repeated direct contact each month, for a long duration of a woman's life (an average of 40 years). Amidst the ongoing crisis in Gaza, exacerbated by severe shortages of water and hygiene products, women are turning to period-delaying pills as a strategy to avoid menstruation and alleviate menstrual pain [11]. According to UNFPA Palestine, more than 690,000 menstruating women and adolescent girls in Gaza face restricted availability of menstrual hygiene products, coupled with insufficient access to water, hygiene, and privacy. This situation exposes them to potential risks of reproductive and urinary tract infections,

as well as protection-related concerns. [8] The director of Al-shifaa Hospital stated that the rate of cesarean sections has dramatically increased, along with a threefold increase in the incidence of miscarriages compared to the usual rates. Many injuries to pregnant women are complicated by the immediate death of the mother and the fetus. Most of the injured pregnant women are diagnosed with placental abruption. Despite attempts to manage such injuries through surgical interventions, unfortunately, a considerable number of cases ultimately lead to fatalities due to the severity of the injuries. [13].

According to the regional director of the United Nations, pregnant women in Gaza are exposed to very severe complications in their last trimester and early postpartum period. Such complications may involve postpartum hemorrhage, chorioamnionitis, and placental abruption. These risks are exacerbated by insufficient perinatal care, inadequate infection control measures, and a high possibility of trauma [11]. Therefore, we express our concern that due to the limited delivery of life-saving essentials for hygiene and care, coupled with disabled healthcare centers, pregnant women may be at an increased risk of miscarriages, preterm delivery, postpartum complications, and even death.

**Figure 2.** Summary key data in current crisis reports available from the WHO and the Gaza Health Ministry. [6,7]



As the currently working hospitals are overcrowded, women who give birth are not adequately monitored during and after delivery, as once they give birth, they must leave the hospital as soon as possible to accommodate others due to space constraints. Moreover, due to the lack of anesthesia, women might undergo cesarean section without any type of anesthesia, the pain alone from the surgery is life-threatening. [10] This situation echoes times in history when humans underwent surgeries without the aid of anesthesia, potentially taking us back centuries. Due to such conditions, these women cannot even handle their babies properly and they lack regular follow-up after the surgery, including monitoring the healing of surgical wounds and receiving guidance on breastfeeding. [11]. Furthermore, health professionals are currently educating pregnant women on the basics of self-delivery, in cases they are under the rubble or cannot reach the hospitals or if hospitals cannot accommodate them.

Due to the shortage of health facilities, medications, and blood supply, there have been cases of urgent and unusual medical interventions in Gaza. For instance, women who experience postpartum hemorrhage are now being treated with hysterectomy, even though they are still young, just because doctors are unable to manage their complications properly due to the overload and burdened conditions. Postpartum hemorrhage is a serious condition that requires immediate medical attention, and replacing lost blood and fluids is crucial in its management. However, the lack of blood supply in Gaza has made it difficult for hospitals to provide adequate care for patients with postpartum hemorrhage, leading to such extreme measures such as hysterectomy [14,15]. We believe that this circumstance leads to an inability for these women to bear more children, infringing upon their fundamental rights due to inadequate and nonstandard management of this complication. This situation represents a clear violation of women's basic human rights. [16].

Previous research has shown that repeated exposure to war events and violations in Gaza can have a negative impact on the mental health of pregnant women [17]. This can lead to an increase in post-traumatic stress disorder (PTSD), anxiety, and depression during pregnancy and after postpartum. Therefore, it is important to address the mental health needs of pregnant women who are experiencing traumatic events related to war [18]. The effects on mental health can be broken down into two main aspects:

The first aspect is postpartum anxiety and depression. The heightened rate of cesarean sections, prevalent in high-conflict areas and coupled with

exposure to war trauma, is identified as a significant factor contributing to increased postpartum anxiety among Palestinian women in the Gaza Strip. The insufficient capacity in hospitals has led to the premature discharge of women, occurring as swiftly as three hours after giving birth, further exacerbating the condition. Moreover, the challenging economic landscape, characterized by high unemployment rates and unstable job opportunities, poses an additional threat to the mental health of new mothers. The United Nations reports that by the end of 2023, approximately 1.9 million people, constituting nearly 85% of Gaza's total population, were estimated to be internally displaced, with only a fraction of them maintaining a stable income. Displaced women face challenges in maintaining privacy, as they live in sub-standard temporary shelters being confined in less space for each individual, further increasing their vulnerability to mental problems and infections. This intricate web of factors underscores the multifaceted challenges faced by mothers in the region during the perinatal period [17,19,20].

The second aspect is the impact on children. A comprehensive analysis and synthesis of data up to June 2020 revealed a collective prevalence of 36% for post-traumatic stress disorder (PTSD) among children and adolescents in Gaza and the West Bank, who have been exposed to political violence [19]. The population of children under 18 years old in Gaza alone surpasses 1 million. The entirety of the attack on Gaza has led to the displacement of 1 million individuals from the north to the south of the Gaza Strip. The number of children who have lost one or both parents is estimated at 24,000 to 25,000. Given these circumstances, it is highly probable that nearly all Gazan children have encountered traumatic events, contributing to severe childhood trauma. Such experiences pose a significant risk for the development of PTSD, anxiety, depression, and other psychiatric disorders. Moreover, with an estimated 50,000 pregnant women in Gaza, there is a potential transfer of mental health challenges to the next generations. Even before the current conflict, children's mental health in Gaza was in a precarious state, as evidenced by reports indicating 80% experiencing mental distress, 79% exhibiting bedwetting, and 59% displaying reactive mutism [21,22].

## RECOMMENDATIONS

In response to the ongoing humanitarian crisis in Gaza, urgent recommendations are proposed to address health challenges.

- Prioritizing immediate and substantial humanitarian aid for health services, clean water, and hygiene.



- Allocating resources to enhance health-care infrastructure, focusing on restoring damaged hospitals.
- Mobilizing international support, particularly for maternity care.
- Implementing targeted maternal and child health programs to ensure access to antenatal care, safe deliveries, and postnatal support.
- Establishing efficient supply chain management for medical necessities.
- Conducting educational programs on women's health, covering prenatal and postnatal care.
- Prioritizing mental health support, especially for pregnant women with conditions like PTSD. According to the Geneva Conventions, women and mothers with dependent infants who are arrested, detained, or interned due to conflict-related reasons must be given the highest priority [24]. Therefore, it is crucial that international laws are respected by the occupational forces and that this group of people is treated with respect.
- Implementing security measures for healthcare facilities.
- Emphasizing long-term planning for sustainable healthcare solutions in Gaza, addressing conflict and displacement challenges.

These actions aim to provide immediate relief and establish a foundation for lasting healthcare improvements, particularly in maternal and child health, mental health, and infrastructure. As individuals, we must reclaim our sense of humanity for the well-being of future generations.

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