

THE MAGNITUDE AND SEVERITY OF ABORTION-RELATED COMPLICATIONS

Referral Hospital in Jigawa State, a fragile setting
– Results of the AMoCo study



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INTRODUCTION

Abortion complications remain a major cause of global maternal mortality, and abortion-related mortality has decreased very little over the last decade, unlike maternal mortality linked to other main causes such as haemorrhage, infection, or obstructed labour (1). Global estimates suggest that most abortion-related deaths are the result of unsafe induced abortions, 97% of which occur in low- and middle-income countries (2) and these could largely be prevented by providing comprehensive abortion care – including post-abortion care, contraceptive services, and safe abortion care.

With 917 deaths for every 100 000 live births, Nigeria has one of the world’s highest maternal mortality ratios; 23% of all global maternal deaths occurred in Nigeria in 2017 (3). Abortion complications are a major contributor to maternal mortality in Nigeria, estimated at nearly 1 in every 13 maternal deaths in a previous nationwide study (4). Nigeria ranks as the 12th most fragile state in the world (5). Currently in Jigawa state, Nigeria, abortion is only legal when performed to save a woman’s life.

Within Nigeria, there is huge diversity between areas – Jigawa state is one of the most fragile states in the country with some of the worst health indicators of all Nigerian states. In this poor rural state of northwest Nigeria, 87% of the population live below the poverty line (7)

and 75% of women of reproductive age never attended formal school (8). Jigawa State has reported frequent floodings (9; 10), herders-farmers clashes, kidnappings and influxes of displaced people because of conflicts between different armed groups including Boko Haram, the Islamic State in West Africa Province and various communal militia in the neighbouring States of Yobe, Katsina and Borno (11). Maternal mortality is estimated to be significantly higher than the Nigerian average at 1,026 per 100 000 live births (12).

A dearth of evidence on abortion complications in fragile settings limits the understanding of women’s needs in access to comprehensive abortion care in contexts like Jigawa state. This study describes the burden of abortion-related complications and their contributing factors in the maternity ward in an MSF-supported referral hospital in Jigawa state, Nigeria. This evidence brief presents selected results for three components of the AMoCo study (Abortion-related Morbidity and Mortality in Conflict-affected and Fragile Settings):

1. A quantitative observational study of clinical characteristics of women presenting with any type of abortion complications,
2. A quantitative survey with a sub-group of these women who were hospitalized, and
3. A qualitative study among selected women with very severe complications (potentially life-threatening and near-miss complications)

METHODS

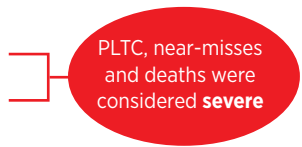
This study took place in an MSF-supported referral hospital in Jigawa-state, Nigeria. This hospital is well known locally. In 2020, this facility supported 7670 deliveries (more than 70% arrived with pregnancy complications) and 513 women seeking post-abortion care (13).

Using similar methodology to the World Health Organisation (WHO) multi-country study on abortion (WHO-MSA) – based on the WHO near-miss approach (14) – we conducted a prospective medical record review of 520 women presenting with abortion-related complications between February 2020 and July 2021 (with a 4 month pause during the first COVID wave).

We used descriptive analysis methods to examine the clinical characteristics and care of these women.

We categorised the severity of their complications into four categories based on WHO-MCS-A classification:

1. mild,
2. moderate,
3. potentially life-threatening (PLTC),
4. life-threatening (near-miss) and deaths (15)



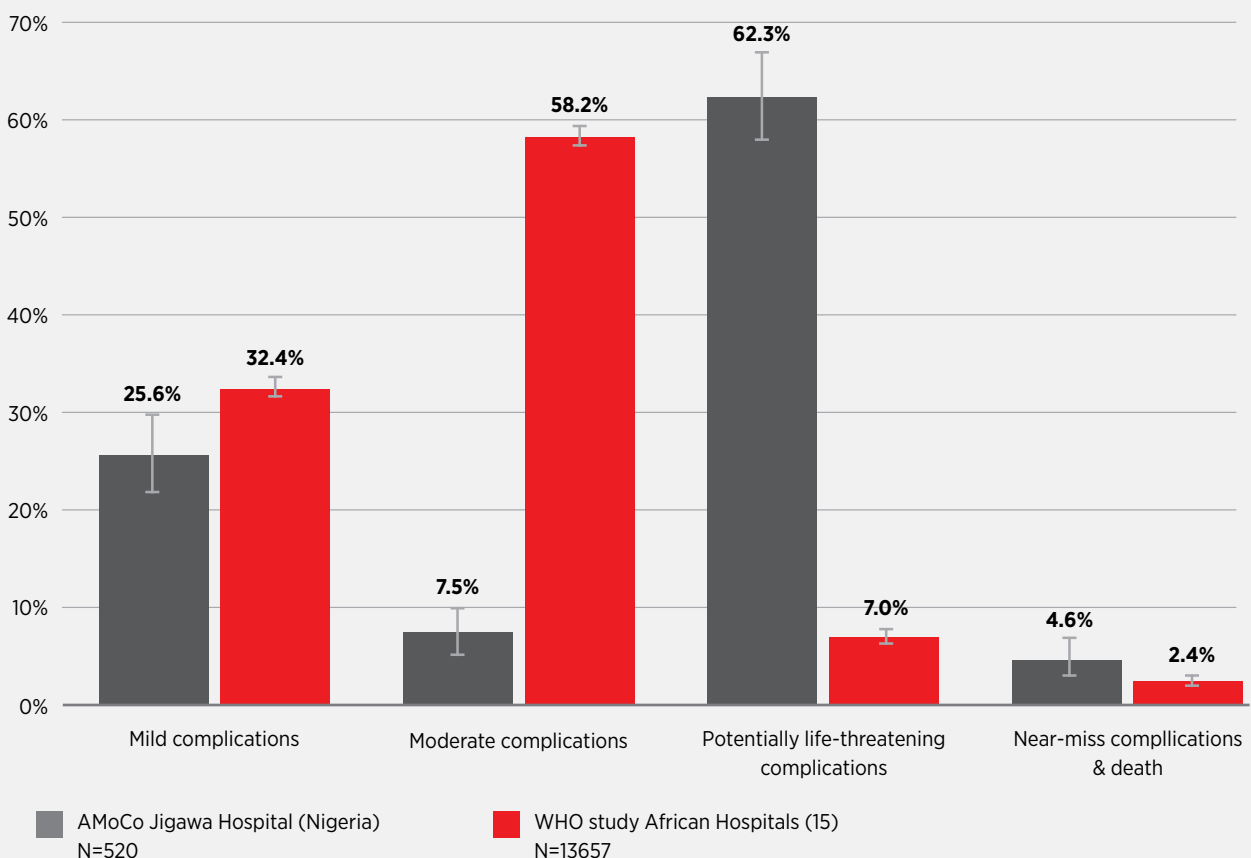
A subset of 360 women hospitalised with complications were interviewed using a standardized quantitative questionnaire to understand their reproductive characteristics, a detailed history of their current condition, their exposure to violence, their delays to accessing care and their experiences of care while hospitalised.

Finally, 61 women that suffered from severe complications also participated in qualitative in-depth semi-structured interviews to explore the conditions and factors that may have contributed to hospitalisation, including decision-making processes, access, timing, and pathways to abortion and post-abortion care, as well as perceptions of post-abortion care and treatment.

KEY FINDINGS

- Admissions for abortion complications accounted for 4% of all pregnancy-related admissions during the study period – similar to other Nigerian hospitals (16).
- Over 80% of women presenting with abortion complications were older than 20 years (433/520), married (240/293 women with marital status data available) and already had at least one previous pregnancy (429/517 women with pregnancy data available).
- Women with abortion complications (N=488 where gestational age data was available) presented at relatively advanced gestations: 61% (n=300) were in the second trimester (13-28 weeks), 39% (n=188) in the first trimester (<13 weeks).
- Among women included in the study (N=520), **two thirds (67%) had a severe complication**: either potentially life-threatening (62%; n=324), life-threatening (near-miss) (4.4%; n= 23) or death (0.2%; n = 1). The remaining women had either moderate (7.5%, n = 39) or mild abortion complications (25.6%; n=133) according to the original WHO near-miss criteria (14).
- Along with the other AMoCo study sites, this is one of the first studies conducted using WHO-MCS-A methodology in fragile/conflict-affected settings.
- The data from this study show a much higher rate of severe complications in this maternity compared to other maternities in stable settings in Sub-Saharan Africa: **near-miss complications were 1.9 times more frequent and potentially life-threatening complications were 8.9 times more frequent** in this maternity compared to the African hospitals in stable settings in the WHO study (15).
- For the 520 women who presented to the hospital with abortion complications, 72% (n=374) presented with severe bleeding or hemorrhage and 19% (n=97) with an infection such as endometritis, peritonitis, or sepsis.
- Women had underlying health conditions that increased their risk of severe complications: 4 out of 5 of the 520 women presenting to the hospital had anaemia (82%; n=424); 1 in 4 had severe anaemia (26%; n=136). Anaemia was present in 2 out of 3 women despite NO history of severe bleeding, nor severe bleeding during hospitalization (67%; 96/144) suggesting a high burden of chronic underlying anaemia among these women.

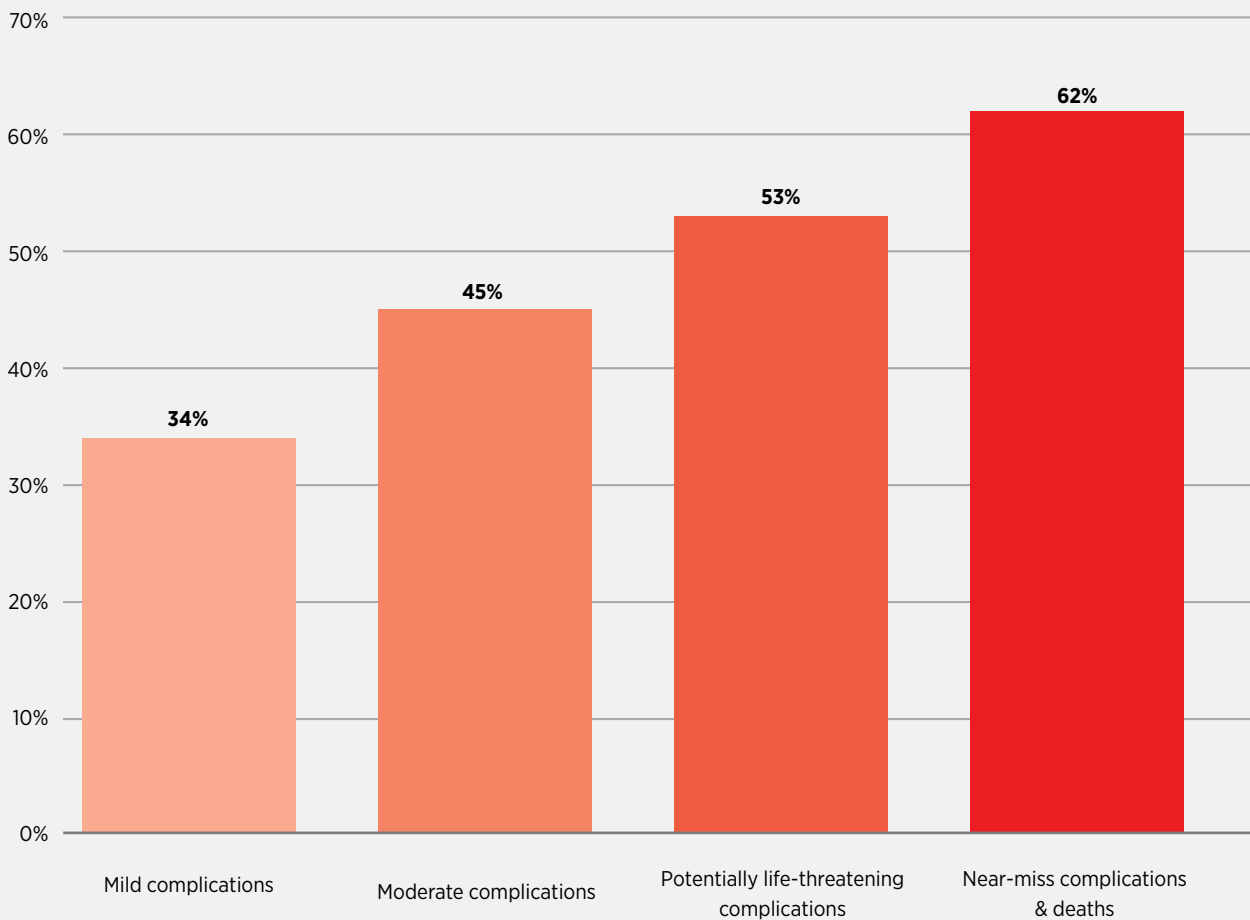
Women in this hospital suffered from more severe abortion complications than those treated in more stable settings across Africa.



Almost 1 in 4 women interviewed induced their abortion; fewer than 3% did it safely.

- 23% (n=84) of the hospitalized women who participated in the quantitative survey (N=360) reported having done something to induce their abortion. As abortion is highly stigmatized, it is likely that women were reluctant to answer the questions completely, and we therefore hypothesize that induced abortion was often not reported.
- 88% (n=74) of the 84 women in the quantitative survey that reported inducing their abortion had their abortion performed or supported by community members: traditional healers (n=36), community health workers (n=19), family members (n=15), friends (n=14), traditional birth attendants (n=8) or teachers (n=6). Only 6% (n=5) reported having seen doctors, midwives or nurses. Three women reported having self-managed their induced abortion.
- 75% of the women who reported having induced their abortion used traditional substances (herbs, potions) orally or vaginally (n=63).
- 31% (n=26) reported having used safe abortion medications (misoprostol +/- mifepristone) but almost always in combination with other less safe methods.
- 50% (n=42) used other types of medicines.
- Only 1 reported having used an instrumental uterine evacuation in combination with several other traditional substances.
- **Overall, less than 2.5% (n=2) reported having had a safe induced abortion** according to WHO definition (17).
- Women who said they did not want to be pregnant in the quantitative survey (N=360) were more likely to have had a severe abortion complication compared with women that said they wanted to be pregnant (Pearson chi2 = 13.9, p=0.003).

The percentage of women who said they did not want to be pregnant increases with the severity level of complications.



It took the majority of women days to reach care.

- 1 in 2 hospitalized women (55%; n=182) in the quantitative survey (N=334) took 2 or more days to reach adequate care after the onset of symptoms; 1 in 4 women (27%, n=90) took 6 or more days to reach adequate care. Delays were divided into first, second, and third delay (18).
- In our study, first delay was anything that resulted in delays in the decision to seek care – recognizing that there was a problem that needed medical attention – by either the woman or others. Second delay was classified as anything that resulted in a delay from the moment they decided they needed medical attention until they arrived at the referral hospital that provided the adequate care. Third delay was any delay to adequate care on arrival at the referral hospital.

First Delay: Amongst women who reported that they took too long to make the decision to seek care (44% of the 360 women who could answer this question; N=158), the main reasons were:

1. the condition was not perceived as serious (48%; n=76),
2. they had family constraints (40%; n=63), and/or
3. they did not have enough money (27%; n=43).

Second Delay: Amongst the 38% women who reported that they took too long to arrive at the health care facility once they had decided to seek care (123 of the 323 women who answered this question), the main reasons were:

1. the health facility was far away (62%; n=76),
2. there was a lack of or difficulty in access transportation (46%; n=57),
3. they did not have enough money (19%; n=23), and/or
4. they went to other health facilities before arriving at the hospital (17%; n=21).

Third Delay: 82% (n= 292) of the hospitalized women who answered this question (N=358) reported that they waited for a very short or short time before being seen by the health provider at presentation.



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DELAYS IN CARE

61 women who suffered from severe complications (potentially life-threatening & near-miss) participated in a qualitative interview to better understand their pathways and barriers to accessing care.

First Delay

In the in-depth interviews, women gave more details on the obstacles to the decision to seek care observed in the quantitative survey: delay in perceiving the condition as serious.

The things that happened to me were just...I was sitting down when suddenly the bleeding started. "I assumed or thought that I was not pregnant. As such, I did not bother about it." After two days that was when it became serious, it was during that moment that the bleeding became profuse and persistent."

Age 30, 9th pregnancy, gestational age missing, near-miss.

They [husband and mother-in-law] were thinking it was not serious that I had to sleep in my blood while the bleeding persisted till the next day.

Age 20, 2nd pregnancy, 12 weeks gestation, potentially life-threatening complication.

Women also told us important factors that weren't mentioned in the quantitative interview: to trust in the plan of Allah rather than seek medical care, and that hospital medicine was not always able to identify and treat their condition:

I believe what happened was predestined by Allah [...] I would say that the bleeding was as a result of an illness that Allah has bestowed upon me.

Age 24, 4th pregnancy, 16 weeks gestation, near-miss.

The reason I did not go to the hospital was that my husband [...] the people around were saying that it was the influence of an evil spirit. They said a lot of people suffer from the evil spirit possession and that even though we decide to go to the hospital, they [healthcare providers] would not be able to detect what was happening to me or the name of the sickness. Now, because of that, we did not go to the hospital [sooner].

Age 30, 9th pregnancy, gestational age missing, near-miss.



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Second delay

Although distance to the hospital was described in the quantitative survey (N=123) as the most common barrier for second delay (62%; n=76), it was not frequently mentioned by the women with the most severe complications in the qualitative interviews.

More commonly mentioned were lack of transportation and money.

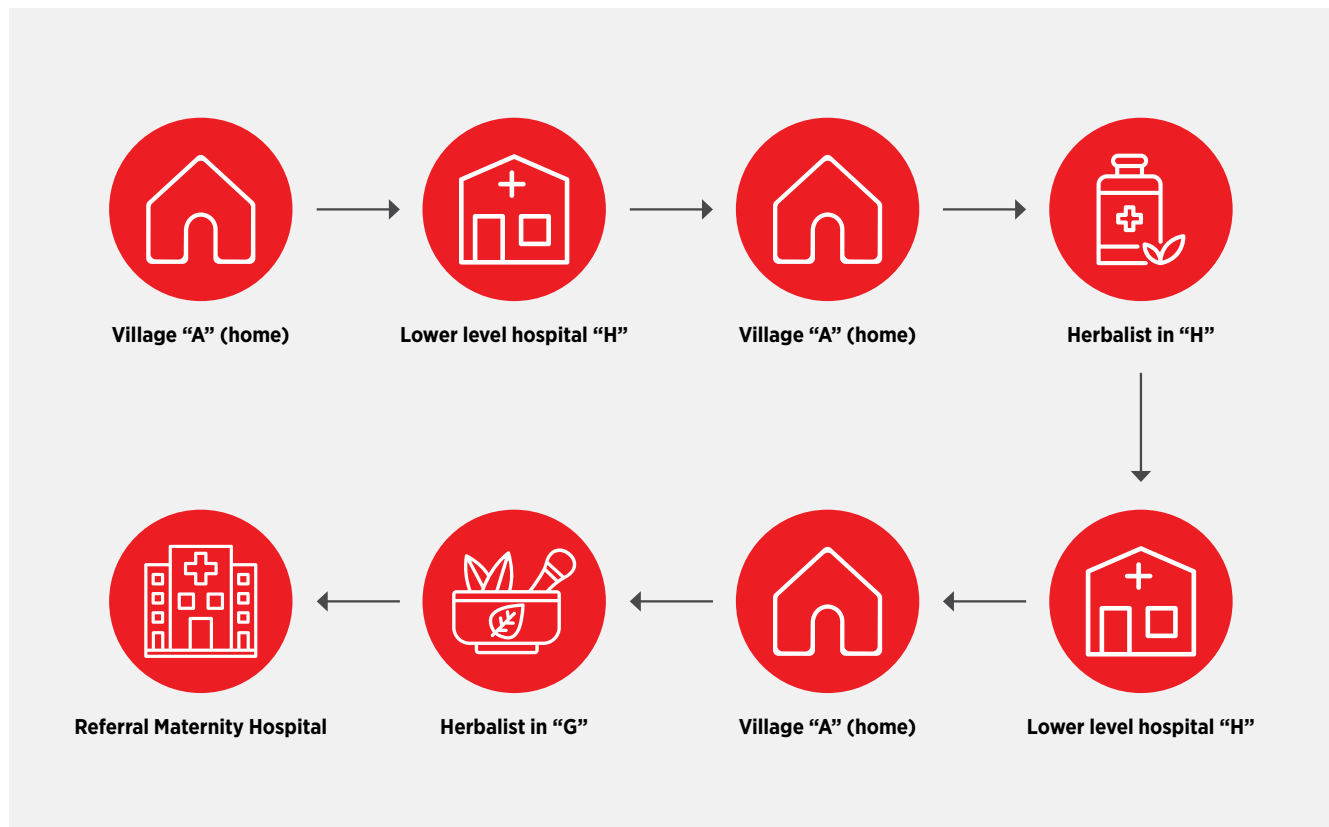
Where were you expecting us to get a motorcyclist? [...] Since we are staying in a village and other smaller villages are surrounding us, that would be very difficult to achieve. [...] You will have to use [animal] cart and that will be stressful.

Age 30, 7th pregnancy, 14 weeks gestation, near-miss.

You know until one gets money first, there was no money to go to the hospital, no money these days.

Age 32, 6th pregnancy, missing gestational age, near-miss.

Women with the most severe complications also repeatedly described the difficulties in getting the right care – through difficulties in navigating the health care system (including traditional methods) and lack of referral pathways – all of which added time until definitive treatment was obtained for their life-threatening complication. A typical example of the complex pathways to care that some women experienced is shown below:

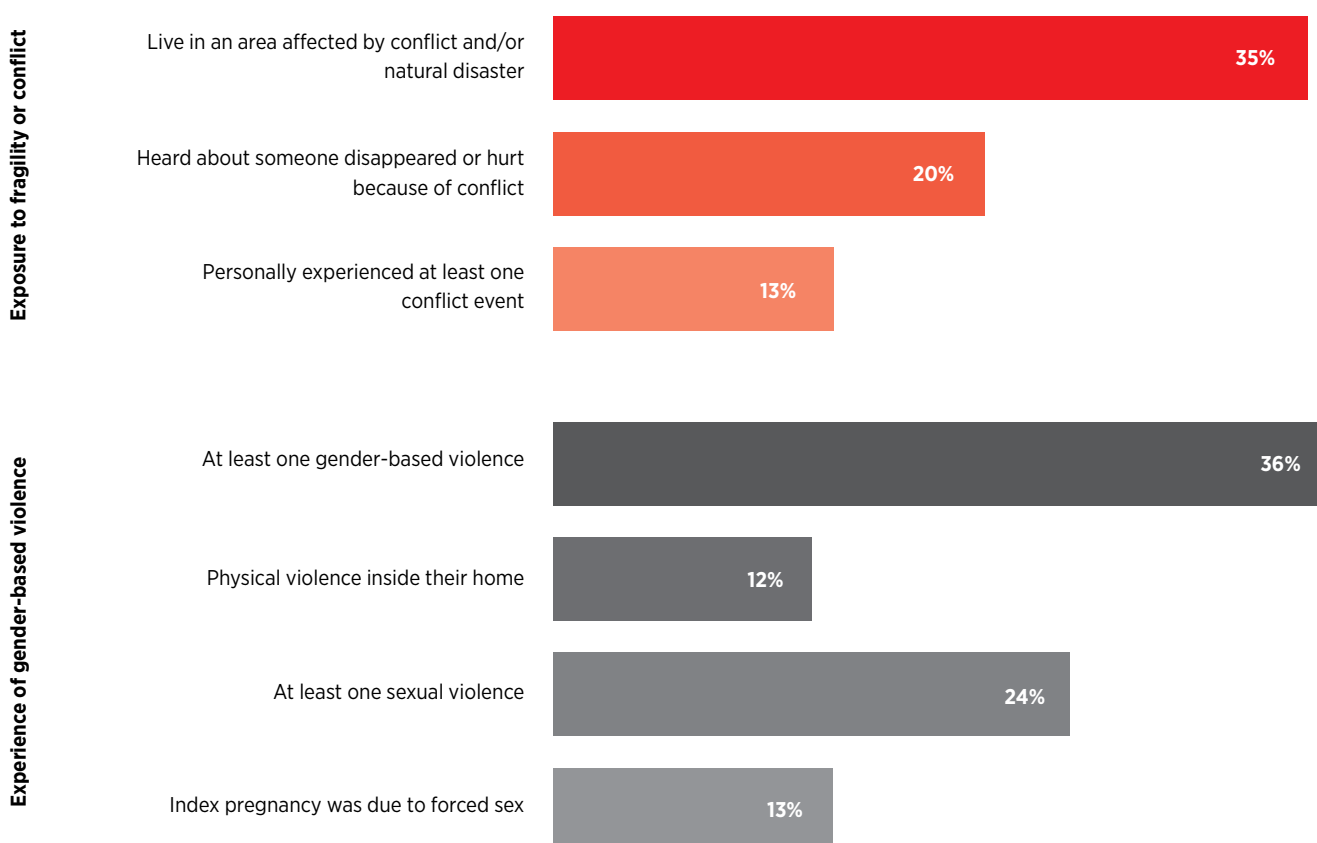


When we arrived [at a lower level health facility], I had a contraction in my lower abdomen that I had to bend down for a while and they [the healthcare providers] shouted from afar, "Is it delivery?" and I said "No, it is miscarriage." They asked, "How old is it?" I replied, "6 months." And they said "You people should go to [the hospital]. You are staining the whole place with your blood. You can go now." We came out of their office, they were supposed to give us a car that would convey us here but when we came here, it was difficult for them to attend to us because we did not come with a paper from the other hospital [referring to the referral form].

- Age 24, 2nd pregnancy, 19 weeks gestation, potentially life-threatening complication.

- Women in the quantitative survey reported high levels of exposure to fragility and conflict events as well as personal experience of gender-based violence. Within the last 12 months, amongst the women who answered the corresponding questions,
 - » 35% (125/354) said they were living in an area exposed to natural disaster, conflict, or both. 20% (71/352) had heard about someone who had disappeared or was hurt; and almost 13% (45/348) reported having personally experienced at least one conflict-related event¹.
 - » More than 36% (125/345) reported having experienced at least one type of gender-based violence². 12% (43/350) said they experienced physical violence inside their home; almost a quarter (24%; 85/355) said they had experienced at least 1 incident of sexual violence³; and for more than 12% (42/331), the pregnancy in the study was due to forced sex.

Women had high exposure to fragility & conflict as well as gender-based violence in the year prior to the study.



- Contraceptive prevalence was low: 97% (n=350) of the 360 hospitalized women who were interviewed were not using contraception when they became pregnant; almost 50% (n=166) reported wanting to get pregnant at that point in time.
- For women who didn't use contraception and did not want a child (n=184), the major barriers given for not using contraception were:
 1. their husband objected to them using contraception: 21% (n=39)
 2. it was against their religious beliefs: 20% (n=36)
 3. they didn't think they could get pregnant: 19% (n=34)
 4. they were afraid of side effects: 18% (n=33)
 - Only 7 women (4%) identified costs as a major barrier.

¹ In the past 12 months, the woman experienced at least one of these events: 1) witnessed someone disappeared, intimidated, arrested, kidnapped, hurt, or killed; 2) separated from a member of her family because of war or conflict; 3) personally exposed to armed combat in her current neighbourhood.

² In the past 12 months, the woman experienced at least one of these types of gender-based violence: 1) have been hit, punched, kicked, slapped, choked, hurt with a weapon, beaten, tortured or otherwise physically hurt by someone inside or outside her house (physical violence), 2) sex against her will inside or outside her house (forced sex), 3) forced to have sex be able to eat, have shelter, access to essential services or because she or someone from her family would be in physical danger if she refused (sexual exploitation), 4) index pregnancy due to forced sex, 5) forced to become pregnant, 6) forced to lose this pregnancy.

³ In the past 12 months, the woman experienced at least one of these 3 types of sexual violence: 1) forced sex 2) sexual exploitation 3) index pregnancy due to forced sex.

CONCLUSIONS

Along with the other AMoCo study sites, this is one of the first studies conducted using WHO-MCS-A methodology in fragile/conflict-affected settings. Our data showed greater severity of abortion-related complications in this facility compared to African hospitals from more stable settings studied by WHO (15). **The high severity of morbidity found in this study suggests a high incidence of unsafe induced abortion and abortion complications in Jigawa state. This may also occur in other fragile or crisis-affected populations and reinforces the need to recognise abortion as a serious health issue in these contexts.**

Increasing the availability of post-abortion care services as well as improving transportation options and referral mechanisms could help decrease delays in accessing appropriate care and reduce morbidity. In addition, building sexual and reproductive health literacy in the community, including among decision-makers, could enable people to recognise and seek quality care sooner when abortion complications occur. Women in our study with the most severe complications described multiple attempts to be treated with both traditional medicine and at lower-level health care facilities, incurring significant cost, before they received adequate treatment at the referral hospital. Implementing post-abortion care services within all levels of the health care system would likely reduce delays to care.

Health literacy and interventions should also focus on improving the underlying health of women of child-bearing age. We saw high levels of anaemia and severe anaemia present, even in women without severe bleeding complications. **Preventing and managing underlying chronic health conditions like malnutrition and chronic anaemia may prevent aggravation of abortion complications in these fragile contexts.**

Given that almost 1 in 4 women in the quantitative survey had experienced sexual violence in the past 12 months, there is a role for

community interventions in prevention of sexual violence and raising awareness of treatment for victim-survivors of sexual violence. Health facilities should review and improve pathways to care for victim-survivors.

In our study, women who did not want to be pregnant were more likely to suffer from a severe complication compared to those that wanted to be pregnant, and most women, including those that did not want to get pregnant, were not using a modern method of contraception.

Access to free contraceptive services, offering a broad range of methods, allowing for a free and informed method choice, as well as investment in increasing community knowledge of contraceptive methods, including addressing specific barriers such as concern about side effects and gatekeepers to acceptance with active male involvement in health education and promotion activities, could help to reduce unwanted pregnancy and resultant unsafe abortion.

Complications from unsafe abortion must be recognised as serious health issues and addressed openly to improve awareness among communities of the dangers of unsafe abortion. This new evidence showing that these abortion complications represent a significant public health issue and the challenges accessing safe abortion care should inform a broader public health and policy discussion about abortion law reform and implementation. This study showed that, despite the stigma, a significant number of women reported having induced their own abortion, and very few used a safe method. Abortion complications consume a significant proportion of human and financial resources for the health system. Implementation of the Maputo Protocol, which provides for sexual and reproductive health rights, and which Nigeria has ratified, could reduce severe abortion complications by reducing unsafe abortion.

The high severity of abortion-related complications is a heavy burden in this maternity ward. Greater access to quality contraceptive services, safe abortion care and post-abortion care, and efforts to make them truly accessible, are urgently needed in Jigawa state.

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