

THE MAGNITUDE AND SEVERITY OF ABORTION-RELATED COMPLICATIONS

Castors Maternity in Bangui, Central African Republic,
a conflict-affected urban setting – Results of the AMoCo study



©MSF – Olivia Watson



Ipas

epicentre
ÉPIDÉMIOLOGIE • EPIDEMIOLOGY



**MEDECINS
SANS FRONTIERES**

INTRODUCTION

Abortion complications remain a major cause of maternal mortality worldwide 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) which can be largely prevented by providing comprehensive abortion care, including post-abortion care, contraceptive services, and safe abortion care.

At 829 deaths for every 100,000 live births, the Central African Republic (CAR) has one of the world's highest maternal mortality ratios (3). Abortion-related complications are a major contributor to maternal mortality,



Abortion-related complications are a major contributor to maternal mortality, estimated at almost one in four (24%) of the maternal deaths in one study led by the Central African Ministry of Health and UNFPA

estimated at almost one in four (24%) of the maternal deaths in one study led by the Central African Ministry of Health and UNFPA (4). Further, CAR is one of the most fragile countries in the world, rating 174th out of the 178 countries in the Fund for Peace Fragility Index (5) with different parts of the country regularly affected by decades-long armed conflict.

A lack of evidence on abortion complications in fragile settings limits the understanding of women's needs in access to comprehensive abortion care in this context. This study

describes the burden of abortion-related complications and their contributing factors in the maternity of Castors in Bangui, CAR. This evidence brief presents selected results of two 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, and 2) A quantitative survey with a sub-group of these women who were hospitalized.

METHODS

This study took place in the Maternity of Castors, in the country's capital, Bangui. The 66-bed facility is one of the capital's best-known maternities. In 2019, the facility recorded over 10,000 deliveries and assisted more than 2,600 women seeking post-abortion care (PAC). Between 2014 and 2017, abortion-related complications caused over 33% of maternal deaths in the facility (MSF monitoring system).

Using a similar methodology as the World Health Organization (WHO) multi-country study on abortion (WHO-MCS-A) that is based on the WHO near-miss approach (6–8), we conducted a prospective medical record review of 548 women presenting with abortion-related complications between November 2019 and January 2020. A subset of 362 women (66%) hospitalized with abortion-related complications were

interviewed to provide a detailed history of their current condition, their pathways to care and experiences related to decision-making, care-seeking, and treatment while hospitalized. We used descriptive analysis methods to examine the clinical characteristics and care of these women. We categorized the severity of their complications into four categories according to the WHO-MCS-A classification (7): 1) mild, 2) moderate, 3) potentially life-threatening, 4) life-threatening (near-miss) and deaths (cf. definitions Figure 2). Potentially life-threatening, life-threatening (near-miss) complications and deaths constitute severe complications.



This study took place in the Maternity of Castors, in the country's capital, Bangui. The 66-bed facility is one of the capital's best-known maternities. In 2019, the facility recorded over 10,000 deliveries and assisted more than 2,600 women seeking post-abortion care (PAC).

KEY FINDINGS

- Admissions for abortion complications accounted for 20% of all pregnancy-related admissions during the study period. (Figure 1)

One in five pregnancy-related admissions was for abortion-related complications

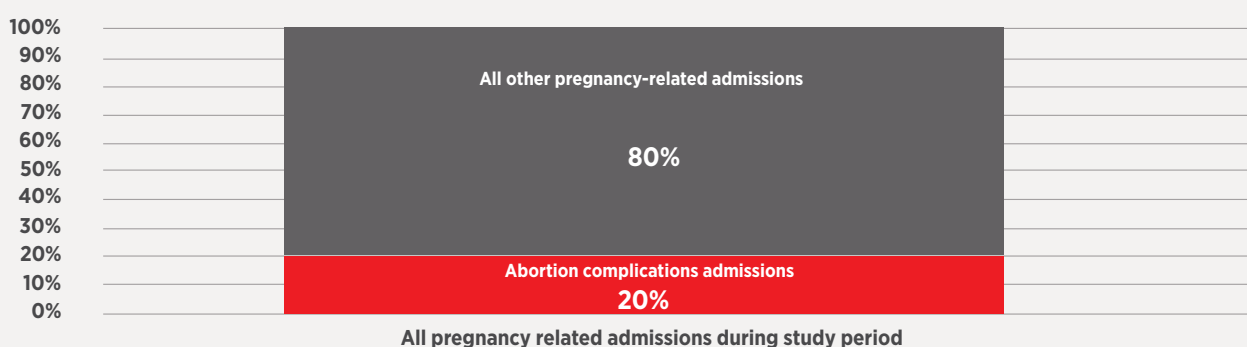
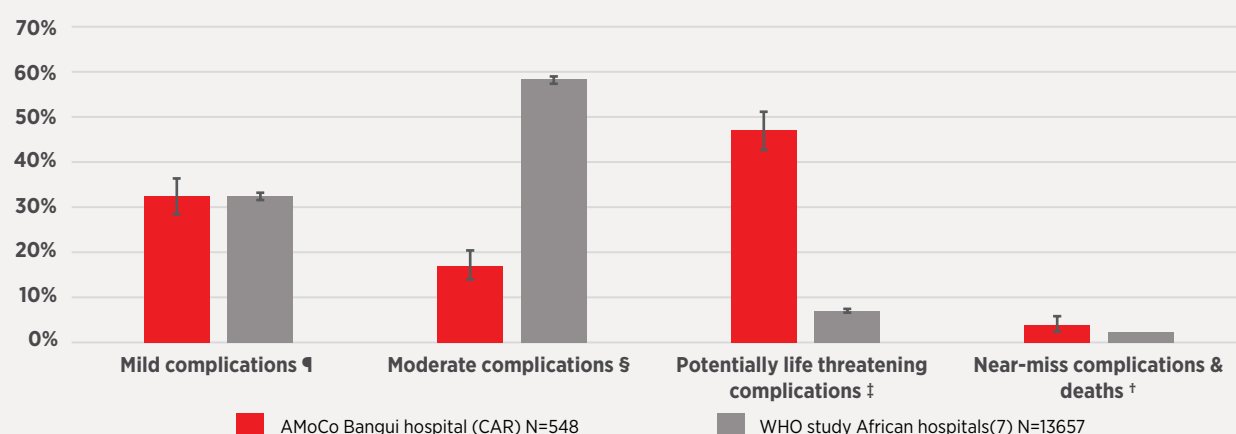


Figure 1: proportion of abortion admissions among all pregnancy related admissions (N=2750)

- Over one quarter (26%) of all women presenting with abortion complications (N=548) were adolescents 18 or younger.
- Among all women included in the study (N=548), **over 50% had a severe abortion complication**, either potentially life-threatening (47%; n=257) or life-threatening, called near-miss, (3.5%; n=19) or death (0.3%; n=2). The remaining women had either moderate (17%; n=93) or mild abortion complications (32%; n=177). (Figure 2)
- This is the first study conducted using the WHO-MCS-A methodology in a conflict-affected setting. The data from this study indicate much higher frequencies of severe complications in this maternity compared to other hospitals in stable settings: near-miss events were 1.6 times more frequent and potentially life-threatening complications were almost seven times more frequent in this maternity compared to the African hospitals of stable settings studied by WHO (7). (Figure 2)

Women in this hospital suffered from more severe abortion complications than those treated in hospitals in stable settings across Africa (7)



¶ **Mild complications** based on abnormal physical examination findings on initial assessment (vital signs, appearance, mental status, abdominal examination, gynaecological examination). (7)

§ **Moderate complications** (heavy bleeding, suspected intra- abdominal injury or infection). (7)

‡ **WHO potentially life- threatening complications** (severe haemorrhage, severe systemic infection or suspected uterine perforation) (7)

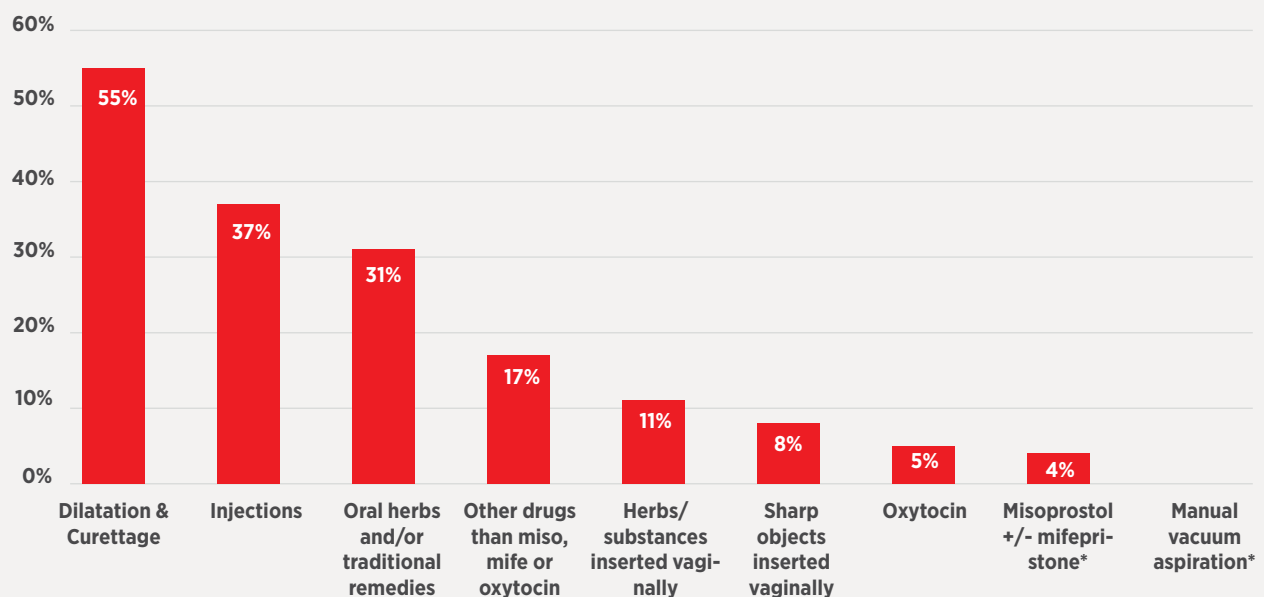
† **WHO maternal near- miss criteria** (organ dysfunction of either one or more of the following: cardiovascular, respiratory, renal, coagulation, hepatic, neurological or uterine dysfunction). (7)

Figure 2: proportion of women in each severity category – AMoCo Bangui hospital (CAR) and WHO study African hospitals (7)

THE RISK OF VERY SEVERE COMPLICATIONS WAS MORE THAN THREE TIMES HIGHER AMONG WOMEN WHO REPORTED UNSAFELY INDUCED ABORTION

- More than 45% of women who participated to the quantitative survey (N=362) reported having done something to try to end their pregnancies, many resulting in very severe or life-threatening complications.
- More than two-thirds of women who reported induced abortion (N=156), used some of the “least safe” methods to do so before seeking post-abortion care (n=106); over 11% reported using methods that were “less safe” (n=18) and over 20% reported using a method that was “safe” (n=32) according to WHO classification (9).
- The percentage of women reporting having done something to induce their abortions with an unsafe method (least or less safe) increased as the severity of their complications increased.
- Among the women included in the quantitative survey without missing data (N=354), the risk of very severe complications (i.e. near-miss events and deaths) was more than three times higher among women who reported unsafely induced abortion compared to others.
- Among the women who participated in the quantitative survey (N=362), fewer than half (40%; n=146) believed that they could find a way to have an induced abortion in their community. Among them (N=146), when asked what methods they thought could be used to have an induced abortion in their community, only six (4%) mentioned mifepristone and/or misoprostol, the only medications recommended by WHO. Larger numbers of women mentioned less safe methods such as dilatation and curettage (55%), injections (37%), herbs and traditional remedies taken orally (31%), drugs other than misoprostol, mifepristone or oxytocin (17%), herbs/ substances inserted vaginally (11%), sharp objects inserted vaginally (8%), or the prescription of the drug oxytocin, commonly used to cause uterine contractions (5%). (Figure 3)

Knowledge about safe abortion methods was low



*WHO-recommended methods considered safe
MISO: Misoprostol, MIFE: Mifepristone

Figure 3 : what methods could be used to have an abortion in the community? (N=146 - multiple answers possible)

- Among all women included in the study without missing data (N=514), most (67%) presented with abortion complications from pregnancies in the first trimester (less than 13 weeks gestation), while one-third (33%) presented in the second trimester of pregnancy.
- Almost 50% of women who participated to the quantitative survey without missing data (N=349) took 2 days or more to reach care after the onset of their complication. The overall delays from the onset of symptoms to arrival at the facility was significantly longer in women with severe complications compared to the others. Overall, women had a significantly longer first delay from symptom onset to the decision to seek care than second delay from decision to seek care to arrival at the facility (10).
- Among women who reported that they took “too long” to make the decision to seek care (N=112) (first delay), the main reported reasons were 1) the condition was not perceived as serious (58%); 2) they did not have enough money (31%); and 3) family constraints (28%). Among women who reported that they took too long to arrive at the health facility (N=100) (second delay), cited reasons were: 1) they went to other health facilities before arriving at the study hospital (58%); 2) the health facility was too far (25%); 3) they did not have people to accompany them (13%); 4) they did not have enough money (13%); and 5) there was a lack of transportation available (11%).
- Many women, 37% of the quantitative survey (N=362), reported that they were using contraception at the start of their pregnancy. Among those that were not using contraception (N=227), they gave several reasons for their choices, mainly, wanting to have a child at the time (31%); fear of side effects (30%); objections from their husband, partner, or other family member (13%); or not knowing enough about contraception (11%).
- Almost 63% of all women with abortion complications who were medically discharged (N=506) left the facility with a modern contraceptive method: mainly oral contraceptives, injectables or implants. Just over 1% of women received condoms, and none received an intra-uterine device.



©MSF

CONCLUSIONS

The higher severity of morbidity found in this study suggests a high incidence of unsafe induced abortion and abortion complications in Bangui, CAR. It may also occur among other fragile or crisis-affected populations and reinforces the need to recognize abortion as a serious health issue. This is the first study to use the WHO Near Miss Abortion-related morbidity approach in a hospital setting serving people significantly affected by conflict and resulting displacement. In comparison, our data shows greater severity of abortion-related complications in this facility compared to African hospitals from stable settings.

Stakeholders in fragile or conflict-affected settings should consider implementing community-based approaches to improve recognition of signs and symptoms of abortion complications in the community.

Women had on average a longer first delay (from symptom onset to their decisions to seek care) than second delay (from decision to seek care to reach the adequate health facility). Most women who waited longer to decide to seek care, reported that they did not perceive their conditions to be severe.

Increasing the availability of post-abortion care services as well as improving transportation options and referral mechanisms could help decrease delays in care-seeking and further reduce morbidity. In addition, building accountability and sexual and reproductive health literacy in the community could enable people to advocate for their own health care needs, and ultimately increase demands for improved quality of post-



This study shows that women who used unsafe methods to induce abortion had three times higher risk of life-threatening complications or deaths and that few women were aware of current safe methods to induce abortion.

abortion care. If more services providing comprehensive post-abortion care were available in Bangui and if women were more confident in how and where to seek that care, even for sensitive or stigmatized health issues like post-abortion care (PAC), delays in seeking PAC would likely be reduced as well as the severity of complications. Women who took longer to reach the adequate health facility, reported that they first went to other facilities or that the health facility providing the adequate PAC services was too far away.

This study reveals barriers in accessing information and services for contraceptive care in this community, together with a limited range of available methods. **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, can help to reduce unwanted pregnancy.

Complications from unsafe abortion must be recognized as serious health issues and addressed openly to improve awareness among citizens of the dangers of unsafe abortions and the availability of safer abortion methods. This new evidence showing that these abortion complications represent an important public health

issue informs a broader public health and policy rationale to orient and support abortion law reform and implementation.

This study shows that women who used unsafe methods to induce abortion had three times higher risk of life-threatening complications or deaths and that few women were aware of current safe methods to induce abortion. Currently in CAR, access to a safe induced abortion is limited and legal only up to eight weeks of gestation if the woman's health is in danger, in cases of foetal impairment, in cases of incest or rape, or for minors in a "serious state of distress", when provided by a physician. Abortion complications consume a significant proportion of human and financial resources for the health system for complications that are preventable. At this time, the Government of CAR has signed the Maputo Protocol and started the process of ratification, which is not yet finalized. The implementation of this protocol could strengthen the "reproductive rights of women by authorizing safe induced (medical) abortion in cases of sexual assault, rape, incest, and where the continued pregnancy endangers the mental and physical health of the mother or the life of the mother or the foetus."

The severity and quantity of abortion-related complications are a heavy burden in this maternity. Greater access to quality contraceptive services, safe abortion care and post-abortion care, and efforts to make them truly accessible, are urgently needed in this conflict-affected city.

REFERENCES:

1. Roth GA, Abate D, Abate KH, Abay SM, Abbafati C, Abbasi N, et al. Global, regional, and national age-sex-specific mortality for 282 causes of death in 195 countries and territories, 1980–2017: a systematic analysis for the Global Burden of Disease Study 2017. *Lancet* [Internet]. 2018 Nov 10 [cited 2020 Sep 23];392(10159):1736–88. Available from: <https://vizhub.health>
2. Grimes DA, Benson J, Singh S, Romero M, Ganatra B, Okonofua FE, et al. Unsafe abortion: the preventable pandemic. *Lancet* [Internet]. 2006 Nov 25 [cited 2020 Jul 13];368(October):1908–19. Available from: <https://pubmed.ncbi.nlm.nih.gov/17126724/>
3. WHO, UNICEF, UNFPA, World Bank, UNDP. Trends in maternal mortality 2000 to 2017. [Internet]. Geneva: World Health Organisation; 2019. Available from: <https://www.who.int/reproductivehealth/publications/maternal-mortality-2000-2017/en/>
4. Ministère de la sante, UNFPA. Evaluation de la disponibilité, de l'utilisation et de la qualité des soins obstétricaux d'urgence dans la zone d'intervention de l'UNFPA en République Centrafricaine. Bangui; 2010.
5. Fund For Peace. FRAGILE STATES INDEX ANNUAL REPORT 2020. Geneva: Fund for Peace; 2020.
6. World Health Organization. The WHO near-miss approach for maternal health [Internet]. WHO. Geneva; 2011. Available from: [www.who.int/reproductivehealth%0Ahttp://apps.who.int/iris/bitstream/10665/44692/1/9789241502221_eng.pdf](http://apps.who.int/iris/bitstream/10665/44692/1/9789241502221_eng.pdf)
7. Qureshi Z, Mehrtash H, Kouanda S, Griffin S, Filippi V, Govule P, et al. Understanding abortion-related complications in health facilities: results from WHO multicountry survey on abortion (MCS-A) across 11 sub-Saharan African countries. *BMJ Glob Heal* [Internet]. 2021 Jan 29 [cited 2021 Feb 1];6(1):e003702. Available from: <https://gh.bmj.com/lookup/doi/10.1136/bmjgh-2020-003702>
8. Kim CR, Tunçalp Ö, Ganatra B, Gülmezoglu AM. WHO Multi-Country Survey on Abortion-related Morbidity and Mortality in Health Facilities: study protocol. *BMJ Glob Heal* [Internet]. 2016;1(3):e000113. Available from: <http://gh.bmj.com/lookup/doi/10.1136/bmjgh-2016-000113>
9. Ganatra B, Gerdts C, Rossier C, Johnson BR, Tunçalp Ö, Assifi A, et al. Global, regional, and subregional classification of abortions by safety, 2010–14: estimates from a Bayesian hierarchical model. *Lancet*. 2017;390(10110):2372–81.
10. Thaddeus S, Maine D. Too far to walk: Maternal mortality in context. 1994 Apr 1 [cited 2018 Jun 26];38(8):1091–110. Available from: <https://pubmed.ncbi.nlm.nih.gov/8042057/>





The AMoCo research project was funded by Médecins Sans Frontières and Elrha's Research for Health in Humanitarian Crises (R2HC) Programme, which aims to improve health outcomes by strengthening the evidence base for public health interventions in humanitarian crises. R2HC is funded by the Foreign, Commonwealth & Development Office of the United Kingdom, Wellcome, and the UK National Institute for Health Research.

Suggested citation: **“The magnitude and severity of abortion-related complications in the Castors Maternity in Bangui, Central African Republic – Evidence brief. March 2022.** E. Pasquier, O. Owolabi, T. Feters, H. Chen, T. Williams, D. Lagrou, C. Schulte-Hillen, C. Fotheringham, B. Powell, L. Nguengo, A. Dodane, M. Adame Gbanzi, E. Baudin, A. Moore, R. Ngbale - The AMoCo Study group for the Central African Republic.

Contact: estelle.pasquier@epicentre.msf.org