



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.



The impact of covid-19 on midwives' practice in Kenya, Uganda and Tanzania: A reflective account



Eunice Pallangyo^a, Mary Grace Nakate^b, Rose Maina^c, Valerie Fleming^{d,*}

^a Aga Khan University School of Nursing and Midwifery, 344 Urambo Street, PO Box 38129, Dar es Salaam, Tanzania

^b Aga Khan University School of Nursing and Midwifery, Col. Maummar Gaddafi Road, P.O. Box 8842, Kampala, Uganda

^c School of Nursing and Midwifery, Aga Khan University, Nairobi, Box 39340 - 00623, Parklands, Nairobi, Kenya

^d Faculty of Health, Liverpool John Moores University, 15-21 Webster St., Liverpool, L3 2ET, United Kingdom

The COVID-19 pandemic has been named as such because the infection is affecting every part of the globe (World Health Organization, 2010). Yet taking account of the daily statistics coordinated by Johns Hopkins University, there have been very few cases reported from East Africa with death rates also relatively low compared with the number of reported cases (Johns Hopkins University, 2020). However, the actions taken by three countries, Kenya, Tanzania and Uganda in response to the pandemic have varied greatly although all have led to maternity service provision being adapted to the individual circumstances of the country concerned. This article provides a brief overview of how the pandemic has affected midwifery practice in each of these three countries, all of which already experience high neonatal and maternal mortality rates (Hug et al., 2019).

Government measures

All three countries have imposed restrictions on the free movement of residents which has resulted in many people struggling to make a living (Yusuf, 2020). Uganda has imposed the most strict lockdown, while Tanzanian restrictions have been less severe than the other two countries. In Uganda, lockdown entailed closing the normal conducting of business, severely restricting lifestyle of people; leaving only essential aspects of the community functioning (Mbabazi et al., 2020). Public transport was suspended, motor cyclists were prohibited from carrying passengers and only allowed to carry small items including delivering food to individual households. Similarly, private cars required permission from the Ministry of Workers and Resident District Commissioner to travel. Individuals working in critical areas like the health sector, banks, financial institutions, food markets, and security organisations have been allowed to operate but restricted public transport systems has created further difficulties. Kenya's lockdown was less severe, but included self-isolation measures and barring of air, rail and road travel outside the immediate area (VOA news, 2020). As in other countries, the Tanzanian government has been striving to limit the wide spread of infection through the closure of all schools and universities, new regulations and self-isolation with some organisations imposing working

from home directives. All three countries have closed their borders but policing the length of them is impossible.

Midwives' ability to carry out their work

In all three countries, midwives play a major role in primary health care delivery, specifically in regions where other healthcare workers are scarce (Bakibinga et al., 2012).

Midwives in Tanzania have important dual roles to ensure safe childbirth and that quality care is delivered to women, girls and families. In normal times, this is often not achieved because of acute shortages of health professionals, limited resources and overloaded health facilities (Pallangyo et al., 2017). With the COVID-19 pandemic, the situation is being compounded by, for example, unintended pregnancies resulting from reduced attendance for contraception due to fear of exposure to COVID-19 at health facilities. Midwives also play a key role in contraception counselling and addressing the socio-cultural myths related to extremely low use of family planning in Tanzania (Tanzania Government Statistician, 2020). They are also champions of women's and girls' rights addressing the existing and critical inequalities in society. These efforts are necessary as midwives' key contribution to safe childbirth and quality midwifery care. With fear of COVID-19, it is evident that these efforts are affected tremendously. The inadequate availability of personal protective equipment (PPE) has increased fear amongst midwives in all three countries (WHO, 2020) (World Health Organization, 2020). This is detrimental to midwives' efforts in contributing to the achievement of the sustainable development goals. Midwives are continuing to care for women and putting themselves and their own families at the greatest risk. Cases of infection have been reported amongst midwives and other healthcare personnel.

COVID-19 has spread rapidly in Kenya and has not spared pregnant women, with midwives facing a similar challenge to that of Tanzania i.e. being unsure of what to do in the already strained infrastructure and resources. Midwives have reported that eight pregnant women have been diagnosed with COVID-19 in the last few weeks in Kenya, which will

* Corresponding author.

E-mail addresses: eunice.siaity@aku.edu (E. Pallangyo), grace.nakate@aku.edu (M.G. Nakate), maina.rose@aku.edu (R. Maina), v.fleming@ljmu.ac.uk (V. Fleming).

continue to rise as the number of cases countrywide increase). With support from the Ministry of Health strategies aimed at ensuring that strict measures are adhered to protect midwives, women and neonates have been put in place. Midwives are now using universal infection control measures and have embraced the use of personal protective equipment at all times to reduce the risk of contamination and transmission.

The Ugandan government has urged healthcare workers including midwives to continue working despite of the lockdown because women have continued to seek antenatal and intrapartum services in health facilities. Health authorities have provided education on maternal and new-born healthcare and COVID-19, to midwives in various health facilities (Uganda MoH, 2020). Much of the emphasis is specifically aimed at prevention of COVID-19 transmission.

In Kenya the government has organised training through online platforms and the distribution of protocols to healthcare facilities to give the relevant updates from the WHO, CDC and the local guidelines. Midwives, however, state that the issue of practical training on the response to COVID-19 is still lacking (Semaan et al., 2020). Therefore, midwives are now requesting the government to give them specialised training in the management of COVID-19 through updated guidelines and protocols in the care of maternal and new-born conditions.

Impact on women and families

The knock on effects of the lockdown may mean that some pregnant women or new mothers may not be able to afford to pay for health care, while others may be fearful of seeking it due to the disease. The impact of COVID-19 in rural areas is worrisome as women struggle to access health care (Rodriguez, 2020). Midwives have reported low numbers attending maternal health clinics and women are afraid to visit the hospitals for fear of contracting coronavirus. The women also fear being tested for COVID-19 as a positive result means being sent to mandatory quarantine away from their families. This has led to women coming into hospitals too late, sometimes ending with undesirable outcomes e.g. stillbirths, neonatal and maternal death (Amoth, 2020).

Telehealth and phone triage for antenatal clinics using the available resources have been elusive in rural areas. Women suffering from medical conditions or those with poor obstetric histories together with those in emergency situations are advised to come to hospital. Adverse infant outcomes (e.g., preterm birth) have been reported amongst some pregnant women who tested positive for COVID-19 (Chen et al., 2020).

In Kenya the Ministry of Health rolled out Wheels for Life in collaboration with other service providers including AMREF Health Africa, and online taxi operator Bolt. This has helped women who need hospitalisation during the pandemic and according to some reports in the local media has saved many lives (The Standard, 2020)

Lack of antenatal care has reportedly led to poor maternal and neonatal outcomes such as ruptured uterus or stillbirth. Similarly women with comorbidities for example HIV or Hepatitis are also at increased risk of severe morbidity or mortality if they were to develop COVID-19 as they do not have access to antenatal HIV testing.

In Uganda where travel by private car is banned, labouring women are encouraged to contact their local community leaders for ambulances to take them to a health care facility. This presented a challenge as ambulances have not been readily available meaning that more women than previously have been giving birth without access to skilled professionals. In the community health setting, a midwife who runs a not for profit Non-Governmental Organisation, where she counsels local youth in issues related to reproductive health, has stayed in touch with the young women she normally counsels, all of whom are staying home. She sends text messages or telephones to keep them informed and safe but is particularly concerned for those in this vulnerable group whom she cannot reach (Ndedi, 2020).

Increasing domestic violence and a higher number of pregnancies in Tanzania have also been reported by the media following the lockdown

and closure of schools, resulting in already scarce resources having to be distributed more thinly.

Community health-based midwifery could be an option but remains an underdeveloped area of practice, as the use of triage methods to minimise face to face contacts with women in East Africa may be inadequate. Women are thus required to visit a health facility in person at each key point while maintaining social distancing and only having minimal time with the midwife or doctor during the visits. Hospitals, however, have been mandated to identify women infected with, or suspected to have COVID-19 and have also established isolation rooms to prevent the spread of COVID-19 amongst women and new-borns. In these areas health professionals use personal protective equipment while providing care. Those women exposed to COVID-19 have priority in terms of diagnosis and counselling. Midwives are offering women-centred care, with management on a case by case basis, and birth options reflecting the gestational age at which they present as well as overall maternal and foetal health. Restrictions in the labour rooms to minimise visitors are in place, meaning that women need more psychological support as they go through their 'journey' with no relatives, and without emotional and non-verbal cues, other than eye contact with their midwives who try to provide empathetic care.

Women diagnosed with COVID-19 who have an obstetric emergency will be able to have a caesarean section if needed, although vaginal delivery is preferred (Favre et al., 2020). Thereafter their babies are isolated for 14 days and breast milk is expressed and provided for the infant or breastfeeding following the WHO guidelines. Again this has been on an ad hoc basis as it is sometimes encouraged and in others through droplet infection not recommended because of an as yet unconfirmed potential for transmission of the virus (Karimi-Zarchi et al., 2020).

In the longer term Semaan et al. (2020) indicate that midwives are worried about the lack of knowledge on the effects of COVID-19 during pregnancy and the possibility of in-utero and breast milk transmission, yet they are supposed to clarify these issues to women who may request clarity. No advice has been provided to midwives in any of the three countries in this regard in the management briefings as the science remains unclear.

Conclusion

In Kenya, Tanzania and Uganda, maternal and neonatal mortality rates are already consistently high, but the COVID-19 pandemic has exacerbated this. Alongside the response needed to deal with COVID-19, other national issues such as plagues of locusts and flooding are also causing significant problems. It is likely that in the near future that despite the best efforts of midwives and other health professionals that an upward surge in the numbers of COVID-19 related deaths in women of reproductive age, including pregnant and postnatal women, will take place. It is essential, however, to continue every effort as a vital contribution to safe childbirth and high quality midwifery care, and to continue to work towards the achievement of sustainable development goals.

References

- Amoth (2020) We reported 3 cases of pregnant women with #COVID19 but no fatalities. #AskTheDG @DrPatrickAmoth tweeted 11:31 AM on Wed, May 20. <https://twitter.com/DrPatrickAmoth/status/1263024589229219840?s=03>
- Bakibinga, P., Forbech Vinje, H., Mittelmarm, M., 2012. Factors contributing to job engagement in Ugandan nurses and midwives. *Int. Sch. Res. Notices*. <https://doi.org/10.5402/2012/372573>
- Chen, H., Guo, J., Wang, C., Luo, F., Yu, X., Zhang, W., Gong, Q., 2020. Clinical characteristics and intrauterine vertical transmission potential of COVID-19 infection in nine pregnant women: a retrospective review of medical records. *Lancet North Am. Ed.* 395 (10226), 809–815.
- Favre, G., Pomar, L., Qi, X., Nielsen-Saines, K., Musso, D., Baud, D., 2020. Guidelines for pregnant women with suspected SARS-CoV-2 infection. *Lancet Infect. Dis.* doi:10.1016/S1473-3099(20)30157-2.
- Hug, L., Alexander, M., You, D., Alkema, L., 2019. National, regional, and global levels and trends in neonatal mortality between 1990 and 2017, with scenario-based projections to 2030: a systematic analysis. *Lancet Global Health* 2019 7, e710–e720.
- Johns Hopkins University (2020). *Corona virus resource center* <https://coronavirus.jhu.edu> Accessed 25 May 2020.

- Karimi-Zarchi, M., Neamatzadeh, H., Dastgheib, S.A., Abbasi, H., Mirjalili, S.R., Behforouz, A., ..., Bahrami, R., 2020. Vertical transmission of coronavirus Disease 19 (COVID-19) from infected pregnant mothers to neonates: a review. *Fetal Pediatr. Pathol.* 1–5.
- Ndedi, A. (2020). Framework in ending violence against women and girls with the advent of the COVID 19 from an African perspective. <http://dx.doi.org/10.2139/ssrn.3575288>, Accessed 25 May 2020.
- Mbabazi, F.K., Yahaya, G., Awichi, R., Olupot, P.O., Rwahwire, S., Biira, S., & Luboobi, L.S. (2020). A mathematical model approach for prevention and intervention measures of the COVID-19 pandemic in Uganda. doi:<https://doi.org/10.1101/2020.05.08.20095067> Preprint <https://www.medrxiv.org/content/10.1101/2020.05.08.20095067v1> Accessed 25 May 2020.
- Pallangyo, E., Mbekenga, C., Källestål, C., Rubertsson, C., Olsson, P., 2017. “If really we are committed things can change, starting from us”: healthcare providers’ perceptions of postpartum care and its potential for improvement in low-income suburbs in Dar es Salaam, Tanzania. *Sexual Reproduct. Healthcare* 11, 7–12.
- Rodriguez, L. (2020). *Pregnant Women in Rural Kenya Are Struggling to Access Health Care Amid COVID-19* <https://www.globalcitizen.org/en/content/covid-19-coronavirus-kenya-maternal-health/> Accessed 22 May 2020.
- Semaan, A.T., Audet, C., Huysmans, E., Afolabi, B.B., Assarag, B., Banke-Thomas, A., ..., Chavane, L., 2020. Voices from the frontline: findings from a thematic analysis of a rapid online global survey of maternal and newborn health professionals facing the COVID-19 pandemic. *MedRxiv*. <https://doi.org/10.1101/2020.05.08.20093393> Preprint <https://www.medrxiv.org/content/10.1101/2020.05.08.20093393v1.full.pdf> .
- Tanzania Government Statistician (OCGS) (2020). ICF. *Tanzania demographic and health survey and malaria indicator (TDHS-MIS)* 2015–16. Ministry of Health, Community Development, Gender, Elderly and Children (MoHCDGEC) (Tanzania Mainland), Ministry of Health (MoH) (Zanzibar), National Bureau of Statistics (NBS), Office of Chief Government Statistician (OCGS), ICF. Tanzania demographic and health survey and malaria indicator survey. Dar es Salaam: moHCDGEC, MoH, NBS, OCGS, ICF; 2016.
- The Standard (2020). *Wheels For Life Now Offers Free Transportation For Pregnant Women in Cases of Emergency During Curfew Hours*. <https://www.standardmedia.co.ke/evewoman/article/2001369581/free-emergency-transport-for-expectant-women-during-curfew-hours> Accessed 22 May 2020.
- MoH, Uganda, 2020. Ministry of Health. Republic of Uganda <https://www.health.go.ug> .
- VOA News (2020). Kenya begins 21-day partial lockdown amid rise in Coronavirus infections <https://www.voanews.com/covid-19-pandemic/kenya-begins-21-day-partial-lockdown-amid-rise-coronavirus-infections> Accessed 22 May 2020
- World Health Organization (2010). *Definition of a Pandemic*. https://www.who.int/csr/disease/swineflu/frequently_asked_questions/pandemic/en/ Accessed 22 May 2020.
- World Health Organization. (2020). *Shortage of Personal Protective Equipment Endangering Health Workers Worldwide*. Retrieved from <https://www.who.int/news-room/detail/03-03-2020-shortage-of-personal-protective-equipment-endangering-health-workers-worldwide>
- Yusuf, M. (2020). *Nairobi Neighborhood’s Residents Struggle to Make Living During Covid Lockdown* <https://www.voanews.com/covid-19-pandemic/nairobi-neighborhoods-residents-struggle-make-living-during-covid-lockdown> Accessed 22 May 2020.