

## Educators' perceptions of the early impact of COVID-19 on midwifery training in Kenya: a cross-sectional survey

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**Background:** This paper presents a descriptive analysis of the perceptions of Kenyan midwifery educators regarding the early impact of coronavirus disease 2019 (COVID-19) on the continuity of midwifery education.

**Methods:** A cross-sectional online survey was conducted among 51 midwifery/clinical medicine educators from 35 diploma training colleges from all eight regions of Kenya. Educators' concerns and satisfaction regarding the delivery of training during the early phases of the pandemic were expressed as proportions on a three-point Likert scale.

**Results:** Of the educators, 76% were extremely concerned about face-to-face teaching during the pandemic; 96% of educators had started delivering virtual teaching (VT), with only 41% being extremely confident in facilitating VT; and 97% were unsatisfied with the measures in place in their institutions to continue face-to-face teaching.

**Conclusion:** To minimise the impact of COVID-19 on midwifery education in Kenya, capacity building for VT and mitigation measures for safe in-person training are urgently needed.

**Keywords:** COVID-19, Kenya, midwifery, preservice training, virtual teaching.

### Introduction

Kenya reported its first coronavirus disease 2019 (COVID-19) case on 13 March 2020. The COVID-19 pandemic has disrupted and posed challenges to the health education sector.<sup>1,2</sup> Key COVID-19 pandemic-containment measures have necessitated the closure of all learning institutions on account of physical/social distancing for students, including the education and training of the medical health profession. To overcome this crisis, medical training schools have shifted from the face-to-face to the online/virtual context for educators and students/trainees; with regard to the admission of new students, the teaching of students and graduation, using different technologies has helped to maximise

students' learning experiences and minimise the interruption to their training.<sup>3</sup> This rapid shift to virtual training could be challenging in the way that educators teach and students learn.<sup>4</sup> Despite the shift, midwifery educators are expected to deliver effective teaching to achieve the expected competencies for skilled health personnel graduates. Little is documented on the educators' perceptions of the effects of COVID-19-containment measures on the continuity of midwifery training in Kenya. This paper presents a descriptive analysis of the perceptions of midwifery/clinical medicine educators regarding the early impact of the COVID-19 pandemic on midwifery training, and informs the strategies that are essential to promote continuity in midwifery training during the pandemic in Kenya.

## Materials and Methods

This was a cross-sectional anonymous online survey administered to 51 (19 males, 32 females) midwifery and clinical medicine (reproductive health) educators in November 2020, who had registered to participate in two-part capacity building workshops delivered by the Liverpool School of Tropical Medicine (LSTM) to national, preservice trainers of trainers, to improve their capacity to implement the updated curricula and cascade it to colleagues nationwide. This training was a follow-up to a review of the basic diploma training syllabus offered by 84 training schools of the total 121 midwifery training institutions nationally. Because this was training for national trainers of trainees, lecturers from all eight regions (formerly provinces) who were trained on the basic 5-day emergency obstetrics and newborn care (EmONC) and the EmONC master trainer courses were selected. Each college had at least one midwifery/clinical medicine lecturer randomly selected to represent it. The selected educators were from the 35 eligible government/public and private medical training colleges offering diploma midwifery and clinical medicine training, and they were proportionately drawn from all eight regions of Kenya. Eligibility to participate included previous training on basic and master trainer training on emergency obstetrics care for educators, and at least three midwifery lecturers in the college. The frequencies/proportions of three-point Likert scales rating educators' concerns regarding the effect of the pandemic on preservice training (not concerned, somewhat concerned or extremely concerned), satisfaction with the COVID-19-containment measures in place to continue face-to-face teaching safely (extremely unsatisfied, somewhat satisfied or extremely satisfied) and confidence concerning various online teaching applications (not confident, somewhat confident or extremely confident), are reported.

## Results

### Midwifery and reproductive health master trainer educators

A total of 46 educators (17 males and 29 females), representing a 92% response rate—consisting of 28 (61%) midwives, 15 (33%) clinical officers (reproductive health) and 3 (6%) doctors—completed the survey. Over half ( $n = 25$ , 54%) of the educators had a management role in their institutions as a college administrator, principal or head of department. A majority ( $n = 36$ , 78%) of the educators had attended learning- and teaching-specific/continuous professional development training in the last 12 mo.

### Perception of the impact of COVID-19 on the training of midwives and reproductive health specialists in Kenya

Almost all ( $n = 44$ , 96%) of the educators reported that the COVID-19 pandemic had affected the training of midwives/reproductive health officers in the country. In addition, 85% of the educators were extremely concerned about the effect of the pandemic on midwifery/reproductive health training in the country. Educators were extremely concerned about the safety of and disruption to face-to-face teaching (76%), the delay

in final qualifying examinations and graduation for final-year students (74%), as well as the admission of both new and continuing students (61% for each). The key modifications to facilitate safe teaching in institutions since the COVID-19 outbreak, as reported by the trainers of trainers, were: virtual teaching sessions (100%), use of personal protective equipment during all teaching sessions (39%), fewer students in class during face-to-face teaching (33%), fewer students in class during skills teaching (33%), with handwashing and/or use of hand sanitisers during sessions. Almost all (96%) educators had started offering virtual teaching in their institutions, with 41% being extremely confident, 57% somewhat confident and only 2% not confident at all to facilitate virtual teaching. On whether educators were satisfied with the measures in place to continue face-to-face teaching safely, only 3% were extremely satisfied, 80% were somewhat satisfied and 17% were extremely unsatisfied. On whether educators had received any training to implement modifications to learning and teaching in their institutions since the COVID-19 outbreak, only 74% had been given an opportunity for specific training.

Our findings are similar to other countries where there has been a major shift from traditional face-to-face to virtual teaching to counter the effects of the COVID-19 pandemic and its containment measures on the education sector. A blended approach involving both face-to-face approaches for clinical skills, cognitive and communication skills, and virtual teaching for theoretical content, will be crucial in future curricula for ensuring that practical education for midwifery and reproductive health training is achieved for competent skilled health personnel graduates, providing satisfaction in the training received as well as avoiding any interruptions.<sup>5-7</sup> Our findings also demonstrate that due to COVID-19, a new normal with threats to the continuity of midwifery training has been created, and innovative approaches to promote preservice training are critical. To adapt, training schools should be prepared to integrate e-learning platforms and other innovative virtual learning solutions for training skilled health personnel, to maximise the benefits of the new digital learning approaches while COVID-19 public health and social containment measures are in place.<sup>8</sup> Technical and infrastructural resources are essential for successful implementation, and the technological, financial, institutional, educator and student barriers that could present major challenges to implementing virtual learning in midwifery/medical education in the COVID-19 context need to be understood and planned for.<sup>7-9</sup> The current study made the assumption that learning was taking place in all of the colleges, despite their various differences in infrastructure. Also, because of the small sample size of the participating educators, our findings should be interpreted in context.

## Conclusion

To mitigate the perceived impact of COVID-19 on midwifery education, capacity building to provide blended education in a COVID-19-secure learning environment is urgently needed.

**Authors' contributions:** DNS and CA conceived the idea and designed the online survey and interpreted the data; DNS performed data curation, data analysis and drafted the manuscript; ET, IW, AM, LW, LN and

IB reviewed the draft manuscript and approved the final version of the manuscript. All the authors read and approved the final version of the manuscript.

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**Competing interests:** None declared.

**Ethical approval:** The training and study were approved by the Ministry of Health's Department of Family Health and the Pre-service Taskforce. Permission to publish was granted by the Chair of the Pre-service Taskforce. The participants in this anonymised survey were preservice midwifery educators who were selected by the Kenya Medical Training College as trainers of trainers; they were registered by the LSTM for the two-part workshop—part 1 was a 3-d virtual workshop for the theoretical component and part 2 was a 2-d face-to-face workshop for the skills-based component—teaching delivery of the updated midwifery/clinical medicine curricula integrated with emergency obstetrics and newborn care. All data were anonymous. This was part of the monitoring of implementation of the preservice training and all participants provided informed consent.

**Data availability:** Data is available from the corresponding author on reasonable request.

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## References

- 1 Upoalkpajor J-LN, Upoalkpajor CB. The impact of COVID-19 on education in Ghana. *AJESS*. 2020;9(1):23–33.
- 2 Watson C, Chima C, Murray B, et al. COVID-19: Changing experiences of teaching and learning in postgraduate nursing education. *AISHE-J*. 2020;12(3):1–9.
- 3 Kenya Medical Training College. KMTc kicks off training for over 9000 new students. Available at: <https://kmtc.ac.ke/site/5376> [accessed 19 April 2021].
- 4 Pregowska A, Masztalerz K, Garlińska M, et al. A worldwide journey through distance education—from the post office to virtual, augmented and mixed realities, and education during the COVID-19 pandemic. *Educ Sci*. 2021;11(3):118.
- 5 Schlenz MA, Schmidt A, Wöstmann B, et al. Students' and lecturers' perspective on the implementation of online learning in dental education due to SARS-CoV-2 (COVID-19): a cross-sectional study. *BMC Med Educ*. 2020;20(1):1–7.
- 6 Shehata MH, Abouzeid E, Wasfy NF, et al. Medical education adaptations post COVID-19: an Egyptian reflection. *J Med Educ Curr Dev*. 2020;7:2382120520951819.
- 7 Ahmed SA, Hegazy NN, Malak HWA, et al. Model for utilizing distance learning post COVID-19 using (PACT)<sup>TM</sup> a cross sectional qualitative study. *BMC Med Educ*. 2020;20(1):1–13.
- 8 Alhassan RK. Assessing the preparedness and feasibility of an e-learning pilot project for university level health trainees in Ghana: a cross-sectional descriptive survey. *BMC Med Educ*. 2020;20(1):1–10.
- 9 Al-Balas M, Al-Balas HI, Jaber HM, et al. Distance learning in clinical medical education amid COVID-19 pandemic in Jordan: current situation, challenges, and perspectives. *BMC Med Educ*. 2020;20(1):1–7.