An Innovative Intervention to Improve Respectful Maternity Care in Three Districts in Ethiopia

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Research article

Keywords: Disrespect and abuse, Respectful maternity care, Quality improvement, Childbirth, Compassionate respectful care, Patient-centeredness, Experience of care, Ethiopia

Posted Date: December 11th, 2019

DOI: https://doi.org/10.21203/rs.2.18578/v1

Version of Record: A version of this preprint was published at BMC Pregnancy and Childbirth on August 6th, 2021. See the published version at https://doi.org/10.1186/s12884-021-03934-y.

Abstract

Background

Disrespect and abuse (D&A) during childbirth are major violations of human rights and often deter women from accessing skilled delivery in health facilities. In Ethiopia, D&A has been documented to occur in up to 49.4% of mothers delivering in health facilities. This study describes the development, implementation and results of a novel intervention to improve respectful maternity care (RMC) and decrease D&A in three districts in Ethiopia.

Methods

As part of a national initiative to reduce maternal and perinatal mortality in Ethiopia, we developed a novel RMC training module with three core components: testimonial videos, didactic sessions on communication, and onsite coaching. As of February 2017, we implemented the RMC training in three districts within the regions of Oromia; Southern Nations, Nationalities, and People's; and Tigray. Measures of births with privacy and a birth companion from a 27-month data from 17 health centers and three hospitals were analyzed using STATA version 13 for interrupted time series and a regression analysis was conducted to assess the significance of improvement. Facilitated discussions were conducted among health care providers to gauge the effectiveness of the videos. Facility level solutions applied to enhance RMC were documented.

Results

An analysis of the effectiveness of integrating RMC using available programmatic data showed significant improvement following the RMC training, which was sustained beyond the project intervention (regression coefficients ranging from 0.18 to 0.77). Several local solutions were devised and implemented in the health facilities to improve the experience of care for mothers. Facilitated discussions with health care providers participating in the RMC training showed improved understanding of patients' perspectives and the psychosocial needs of their clients.

Conclusion

This study suggests that integrating the RMC training into the district-wide quality improvement (QI) collaborative is effective in improving RMC. Use of testimonial videos are especially helpful as they remind providers of the need to treat mothers with dignity and helps them reflect on potential root causes for this type of treatment and develop effective solutions.

Introduction

Increasing access to skilled care during childbirth is a key strategy for reducing maternal and perinatal mortality and morbidity (1). However, disrespectful and abusive care (D&A) is highly prevalent in health facilities globally (2–7). D&A ranges from subtle negligence and abandonment to overt verbal or physical

abuse. The Bowser and Hill framework is commonly cited to describe aspects of abuse during childbirth (4,6,8–12). These forms of abuse include physical abuse, non-consented care (including denial of birth companionship), non-confidential care, non-dignified care (including verbal abuse), discrimination based on specific attributes, abandonment or denial of care and detention in facilities.

These forms of mistreatment are major violations to human rights and discourage mothers from seeking care in their subsequent deliveries (3,4,8,9,13–18). In addition, D&A has been shown to negatively affect clinical outcomes (2,6,13). Such mistreatment can occur at the level of interaction between a client and a provider or may result from health system failures, including supply constraints or the physical condition of facilities (3,12).

Largely due to a low facility-based delivery rate (26%), about 11,000 maternal deaths happen each year in Ethiopia (21). Systematic analyses of studies on D&A in Ethiopia have shown that among those utilizing facility-based care, almost half (49.4%) are experiencing neglectful or abusive care, with 13.6% reporting physical abuse and 16.4% abandonment (22). Lack of training on interpersonal communication, poor working environments and high workloads are among the drivers of D&A (6,13,23). Such mistreatments tend to be accepted as the 'norm' both by the clients and providers and may not be raised as concerns (4,9,12,24–26).

To address this critical issue, the Federal Ministry of Health of Ethiopia (FMoH) has elevated the compassionate, respectful and caring (CRC) health workforce as one of the four priority agendas of the Health Sector Transformation Plan (27). Although there is increasing documentation of effective intervention of D&A globally (14,28), there are no studies that share effective interventions to reduce D&A in maternity care in Ethiopia.

The Institute for Healthcare Improvement (IHI) in partnership with the FMoH, integrated an approach to institutionalize respectful maternity care (RMC) into a large-scale maternal newborn health (MNH) program. The intervention aimed to empower health care providers (HCPs) through a life testimonial video-based training along with participatory discussion and reflection, a didactic session on communication skills, along with onsite coaching to devise local solutions that can enhance RMC. This study describes its development, implementation and measures its effectiveness.

Methods

Quality Improvement Collaborative Context: IHI has partnered with the FMoH to reduce maternal and neonatal deaths by 30% through a district-wide quality improvement (QI) collaborative, being integrated into the existing health system. This approach brings together facility teams from the district for a 12 to 18-month period. These teams pursue a collective aim of improving MNH by using the Model for Improvement where they test different change ideas using Plan-Do-Study-Act cycles (PDSA) in their local facilities. The collaborative commences with QI training and baseline assessment on key MNH indicators, followed by quarterly learning sessions (LS). Intensive coaching/clinical mentorship happens in between the LSs (action period) (Figure 1). When training gaps were found during the baseline assessment,

providers received basic emergency obstetric and newborn care (BEmONC) training which included RMC orientation.

Three districts in Tigray - Tanqua Abergele (TA), Oromia - Limu Bilbilu/Bekoji (LB) and Southern Nations, Nationalists, and People's (SNNP) - Duguna Fango (DF) were targeted as prototype districts as of October 2016.

RMC Intervention

Design of the RMC videos: We conducted a focus group discussion (FGD) with IHI staff team members who had first-hand experiences as health care workers in rural settings and as coaches, to explore the current state of RMC-related issues in the program-supported districts. These findings were consolidated and key themes were identified. Three patient stories were written to capture these key themes. The testimonial scripts depicted a mother with normal delivery, another one with referral and emergency care and an adolescent pregnant woman who experienced preterm labor (Annex 1: scripts of the testimonials). The scripts were three to four minutes long and translated into Amharic. Student-actresses were then trained to perform the scripts to protect patient confidentiality in creating the video testimonials.

Delivery of the RMC Training Module: The videos were shown to participants during the second LS and facilitated by IHI Senior Project Officers (SPOs). Participants of this LS in the three districts are depicted in Table 1.

The three videos were followed by participatory reflection and discussion. Participants were asked to reflect on the videos using the following questions.

1) How did this woman's story make you feel?

2) What were the key learning points for you as an HCP:

1. What went well for this woman?
2. What were some of the problems this woman encountered?
3. What could be done differently?

3) Is this relevant for your facility and for you personally?

After the discussion, there was a short presentation on the prevalence of D&A in Ethiopia and skills to improve empathic communication and relationships with patients (Annex 2: Power Point slides used in the discussion). Following the LS, teams returned to their QI projects to develop change ideas or local solutions to enhance RMC in their facility. Skills were reinforced by facility coaches between LSs. A minimum of three coaching visits happened between two LSs per facility.

Data Collection: Monthly programmatic data indicating the percentage of sampled deliveries with privacy maintained and with birth companion offered were collected from November 2016 until January 2019 for

a total of 27 months. These programmatic data were collected in all the three districts (17 health centers and three primary hospitals) from 30 maternal medical records on the safe child birth checklist (29) who gave birth in the previous month, using a systematic random sampling technique for facilities that have higher number of deliveries. For facilities with lower birth rates (30 or less), all the safe childbirth checklists filled-in during the past month were reviewed. Data were collected by IHI SPOs and entered into the program database as part of their routine work. Even though the RMC training addressed all the seven categories of D&A, the programmatic database measured only the sampled births with privacy and those with birth companion. Hence, in this study we used the two categories to assess the results of the training module.

Change ideas tested at facilities were extracted from routine QI coach programmatic documentation and evaluated based on quantitative criteria for "success" based on run chart rules (30). Those with higher degrees of success were then reviewed and those with an RMC focus were extracted for this analysis.

To assess providers' feedback on the testimonial videos, we conducted a moderated discussion using a semi-structured interview guide among 44 health workers (six from Kersa hospital, 26 from the health centers and 12 from the health posts) in one sample district of Munessa, Oromia in June 2018. This was conducted after the QI collaborative effort in the three districts for which the results of the RMC training are discussed. As the settings and the health system are similar throughout the targeted regions, the discussion reflects HCPs views, including those included in this study.

Data Analysis: We conducted an interrupted time series and regression analysis using STATA version 13 to analyze the effectiveness of the intervention. In the regression analysis, we analyzed the short-term effect of the intervention which measures the first 10 to 11 months following the training (February/March to December 2017 during which direct project support was going on), while the long-term effect measures the impact of the intervention after the direct support ended. We used the Bowser and Hill D&A categories to label a 'change idea' as having a component that aims to enhance RMC. We presented sample change ideas implemented in the targeted facilities to enhance RMC by the HCPs organized along the continuum of care. Additionally, we analyzed the qualitative feedback of the HCPs on the videos using thematic categories.

Results

Quantitative results on privacy and birth companion: The targeted outcomes reported are privacy maintained and birth companion offered during labor and delivery (L&D). A total of 23,129 births took place during the 27 months of data collection (November 2016 to January 2019) in the 20 health facilities. On average, each of the targeted health centers attended 34 deliveries (LB 28, TA 26 and DF 48) and the primary hospitals attended on average 96 deliveries per month (LB 127, TA 72 and DF 89).

Figure 2 shows an interrupted time series for the percentage of sampled deliveries with birth companion by district. The timing for the second LS in LB, Oromia when RMC was introduced is labeled with a

vertical line (February 2017) while in TA, Tigray and DF, SNNP, it was conducted in the following month (March 2017). Direct project support ended in December 2017 (LS4), while data collection continued.

To ensure the privacy of mothers during delivery, health facilities developed change ideas such as using screens, including those that are made from locally available materials. Figure 3 shows an interrupted time series analysis for the sampled percentage of deliveries where privacy was maintained by district.

As shown in Table 2, a regression analysis in Tigray showed significant short and long-term effects following the intervention in terms of supporting birth companion participation and in maintaining privacy during birth. In SNNP, there was a significant short-term effect while in Oromia there was a significant long-term effect following the intervention.

Interventions deployed to enhance RMC: In addition to the outcome data, we assessed the change ideas tested in the facilities as part of improving the quality of care. Out of a total of 73 change ideas tested by the QI teams in these health facilities, 27 were related to RMC and among these, 23 met the criteria for inclusion in the change package. In all the three districts, the pregnant women conference— where pregnant mothers come together monthly for a group counselling—was modified to include discussions on availability of laboratory investigation at no costs. The conference was also used as an opportunity to discuss new efforts to maintain women's privacy during L&D and of bringing a birth companion. A tour of the L&D ward was incorporated into the session and a coffee ceremony was added. As part of the QI, engagement of leaders was important as most of the change ideas require the leaders' approval and resource allocation. An illustrative sample of successfully tested change ideas is shown in Table 3.

Qualitative feedback: To assess HCP feedback on the videos, we facilitated discussions with LS participants in the district of Munessa which highlighted the effectiveness of using testimonial videos as a teaching tool. They affirmed that testimonials appealed to their feelings. They also affirmed that the videos presented the reality of maternal care at their facilities. The HCPs explained how the videos helped them understand that mothers closely examine and judge the health facility and the services offered. One of the discussants commented, "We used to think that our supervisors were in the Ministry of Health, but little did we know that they were our patients." The HCPs reported that the videos helped them realize why mothers may decide not to return to the health facility. They described how the content of the videos helped them to move beyond theory and discussions to actual changes in practice.

Discussion

Our results found that an RMC-focused intervention involving self-reflection which was embedded into a district-wide QI approach led to significant improvement in the two measures of RMC. These changes were sustained for 13 months after the conclusion of the collaborative support in December 2017. Qualitative feedback from participants indicated appropriateness of the approach, as it helped HCPs evaluate their care provision critically from their clients' perspective. The QI initiative helped providers address some of the system related issues that contributed to D&A.

This study adds to the limited existing literature on successful strategies to improve RMC in Sub-Saharan Africa. As the intervention districts were distributed over the three agrarian regions of Ethiopia, the findings may be generalizable to other agrarian contexts.

Health care providers indicated that the testimonial videos were emotionally compelling and enabled them to understand the impact of substandard RMC practices. This finding is consistent with other studies that showed change in attitudes are best learned when applied to scenarios that replicate real life (31).

Birth companions provide emotional, psychological and social support. Recent studies have shown that the presence of a birth companion is associated with improved outcome both for the mother and the baby, including increased spontaneous vaginal delivery, shortened labor time and higher Apgar scores (19). The failure to allow a family companion during institutional childbirth is one of the deterrents to utilization of maternity care services in Ethiopia and other low- and middle-income countries (4). Despite previous concerns about hygiene, providers who had received the RMC training specifically recognized the importance of encouraging family support and companionship.

Lower results were seen in both privacy and birth companion data in Oromia from October to December 2017. This may have been due to civil unrest that took place during this time, which affected the short-term effect in the regression analysis. In SNNP, long-term effect may have been affected by the lack of the safe childbirth checklist. In cases in which the data is not recorded, it is assumed that services are not offered.

Previous studies that have evaluated RMC-related interventions have shown the importance of a multifaceted approach, including training on RMC and addressing barriers of RMC (14,28,32). Studies conducted in neighboring countries such as Tanzania and Kenya, using a pre and post comparative evaluation study, showed reduction in D&A ranging from 7 to 66% (14,32). Because we used available programmatic data, we were not able to show a specific reduction in D&A. However, our analysis shows significant improvement in births with privacy and companion following the RMC training.

Our study has some important limitations. As our analysis is based on available programmatic data, the study was not able to evaluate the status of RMC using all the seven Bowser and Hill's categories of D&A, which may require interviewing clients and observing their interactions with providers. However, the RMC training module addressed all the seven D&A categories. In this study, we focused on two of the categories: ensuring privacy (non-confidential care) and allowing family companionship (non-consented care). These were shown to be the main grievances by mothers in Ethiopian settings (13,24,33–35).

We may have also underestimated the impact of the training, as there were many change ideas tested to improve the general experience of care along the MNH spectrum as described in Table 5. In addition, as data were collected from the medical record safe childbirth checklist, its unavailability in some of the health facilities led to lower coverage even when services are offered, again contributing to underestimation of the impact. Finally, without a comparison district, it is possible that the results were

related to other factors, including the national initiative on CRC. Attributing results to just the RMC approach is difficult as integration within the QI initiative likely had a synergistic effect.

In conclusion, this study suggests that integrating RMC training into a QI collaborative is effective in improving RMC. Use of testimonial videos are especially helpful as they appeal to the heart and remind HCPs of their moral obligation to treat mothers with dignity. Embedding this intervention within an ongoing QI effort enabled HCPs to look deeper into the care process and to reform it in ways that are genuinely family and women-centered. In relation to this, engagement of the facilities' and districts' health leaders was crucial in allocating resources to enhance RMC. These interventions could be replicated in similar settings to ensure mothers get the respectful care they deserve.

Abbreviations

ANC: Antenatal Care; BEmONC: Basic Emergency Obstetric and Newborn Care; CRC: Compassionate Respectful Care; D&A: Disrespectful and Abusive care; DF: Duguna Fango; FMOH: Federal Ministry of Health; HCP: Healthcare Providers; IHI: Institute for Healthcare Improvement; LB: Limu Bilbilu; LS: Learning Session; MNH: Maternal Newborn Health; PWC: Pregnant Women's conference; QI: Quality Improvement; RMC: Respectful Maternity Care; TA: Tanqua Abergele

Declarations

Ethics approval and consent to participate

This research is part of a broader evaluation study that was reviewed and approved by the Ethiopian Public Health Association Scientific and Ethical Review Committee. The programmatic data confidentiality is maintained, as there are no identifiers of the clients nor on the providers. Verbally informed consent was obtained from the Munessa Learning session participants prior to their participation in the moderated discussion. As our study was a minimally invasive one, the Ethiopian Public Health Association Scientific and Ethical Review Committee has approved that a verbal consent was sufficient.

Consent for publication

N/A

Availability of data and materials

The dataset is readily available upon request with permission of IHI.

Competing interest:

The authors declare that they have no competing interests.

Funding

The project is funded by the Bill and Melinda Gates Foundation and Margaret A. Cargill Philanthropies. However, the authors are fully responsible in the implementation, data collection, analysis and the write-up of this report.

Author's contribution

BMJ and HA led the analysis and report write-up of this study. HA, BB and MA are IHI's SPOs who facilitated the RMC session and collected programmatic data in the three districts. KN led the change package compilation. HM and NSP critically reviewed the manuscript for intellectual content. All authors have read and approved the final paper.

Acknowledgement

We would like to extend our appreciation to the participants of this study from the three collaboratives and Munessa district. The QI program is funded by the Bill and Melinda Gates foundation and Margaret A. Cargill Philanthropies. We thank our colleagues from Addis Continental Institute of Public Health who provided insight and expertise that greatly assisted with the analysis and write-up of this research. We are especially indebted to Prof. Alemayehu Worku and Mr. Fitsum Tsegaye for their tireless support in the analysis of the data. We are also grateful to Jane Roessner for her valuable comments on an earlier version of the manuscript and Naomi Fedna for proofreading the final version to fit journal requirement. Last but not least, we are grateful to the three actresses who participated in the testimonial videos.

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Tables

Table 1: Learning session two timing by region and participants

Region	Date	Participants by health facility			
		Hospital	Health center	Health posts	Total
Tigray	Mar 2017	11	23	37	71
SNNP	Mar 2017	7	27	35	69
Oromia	Feb 2017	10	29	20	59
Total		28	79	92	**199**

Table 2: Percentage of births with companion and privacy regression analysis, by region

Tigray births with companion and privacy	Coef.	Std. Err.	T	P>t	[95% Conf. Interval]	
Time	-0.27	0.06	-4.8	0	-0.38	-0.15
Short term intervention effect	0.18	0.05	4.06	0.001	0.09	0.28
Long term intervention effect	0.27	0.06	4.8	0	0.15	0.38
Constant	1.85	0.22	8.39	0	1.39	2.31
SNNP births with companion and privacy	Coef.	Std. Err.	T	P>t	[95% Conf. Interval]	
Time	0.01	0.07	0.18	0.86	-0.13	0.16
Short term intervention effect	0.26	0.11	2.46	0.02	0.04	0.48
Long term intervention effect	-0.01	0.07	-0.08	0.94	-0.15	0.14
Constant	0.48	0.22	2.22	0.04	0.03	0.94
Oromia births with companion and privacy	Coef.	Std. Err.	T	P>t	[95% Conf. Interval]	
Time	-0.78	0.23	-3.39	0.003	-1.25	-0.30
Short term intervention effect	-0.46	0.18	-2.55	0.019	-0.83	-0.09
Long term intervention effect	0.77	0.22	3.48	0.002	0.31	1.24
Constant	3.8	0.93	4.08	0.001	1.87	5.75

Table 3: Sample RMC related change ideas tested in the facilities

Target indicator	Change idea (What?)	Change Idea (How?)	Addressed category of D&A	Tested sites
ANC	Modifying and refining pregnant women conference (PWC)	The content of messages during PWC was modified by adding live testimonies on good and bad outcomes by recently delivered mothers and their families including maternal and newborn near misses and deaths by those who accessed health care late or those who delivered at home. **Coffee ceremonies** were added in some of the PWC. Mothers are informed of the following: -That they can give birth in **preferred birthing position**, as most women do not like the lithotomy position -The availability of the lab investigations free of charge -**Family member of choice is now allowed during L&D.** -**Woman's privacy** is maintained which they observe during a tour to the delivery unit	Non-consented care, Non-confidential care, Non-dignified care	All
	Efficient workflow to reduce waiting time	-**Triage station setup** with two nurses to take vital signs, history and anthropometric measurements using an obstetric wheel -Dedicating **separate rooms** for ANC, family planning and post-natal care which used to be provided in one room. -**30-minute ANC counselling** in accordance to the FANC guideline.	Non-consented care, Non-confidential care, Non-dignified care	Tigray
SBA	Home-like environment in maternity waiting home where mothers who live in distant villages stay within the health facility	-Health centers provide **coffee, flour and utensils for coffee ceremony and porridge so that mothers feel at home** **-Prayers and cultural celebrations are allowed** -During their stay, **they are looked after daily.** Vital signs assessed, and provision of structured health education, including family planning of choice to be provided in the immediate post-partum	Non-dignified care, Non-consented care	Tigray
	Transporting delivered mothers and newborns back home by ambulance	Mothers are **transported back** to their homes by ambulances so that they are encouraged to give birth at health facility	Non-dignified care	Tigray
	Allowing family birth companion during labor	While pregnant woman is in prenatal stage (4th ANC visits or PWC), **birth companion** is identified and counselled	Non-consented care	All

	and delivery (L&D)	on the expectations and responsibilities to support the mother during L&D. **Tour of the L&D ward** is organized to help mothers become familiar with the setting		

Table 4: Thematic categories of healthcare providers' feedback on the testimonial videos

Thematic categories	Comments
Manifestations of disrespect and abuse	• Careless health workers • Lack of birth companion • HCPs do not introduce themselves • Lack of privacy • Abandonment of care
Depicts reality	• The problems raised in the testimonial videos are truly reflective of the problems that mothers face in our health facilities • The videos are a good reflection of our behavior and actions
New understandings	• Patients closely examine and judge the health facility and the services offered • Clear indication of why mothers do not come back
Testimonial videos as a teaching tool	• Testimonials appeal to our feelings • Allowed us to put ourselves in their shoes

Figures

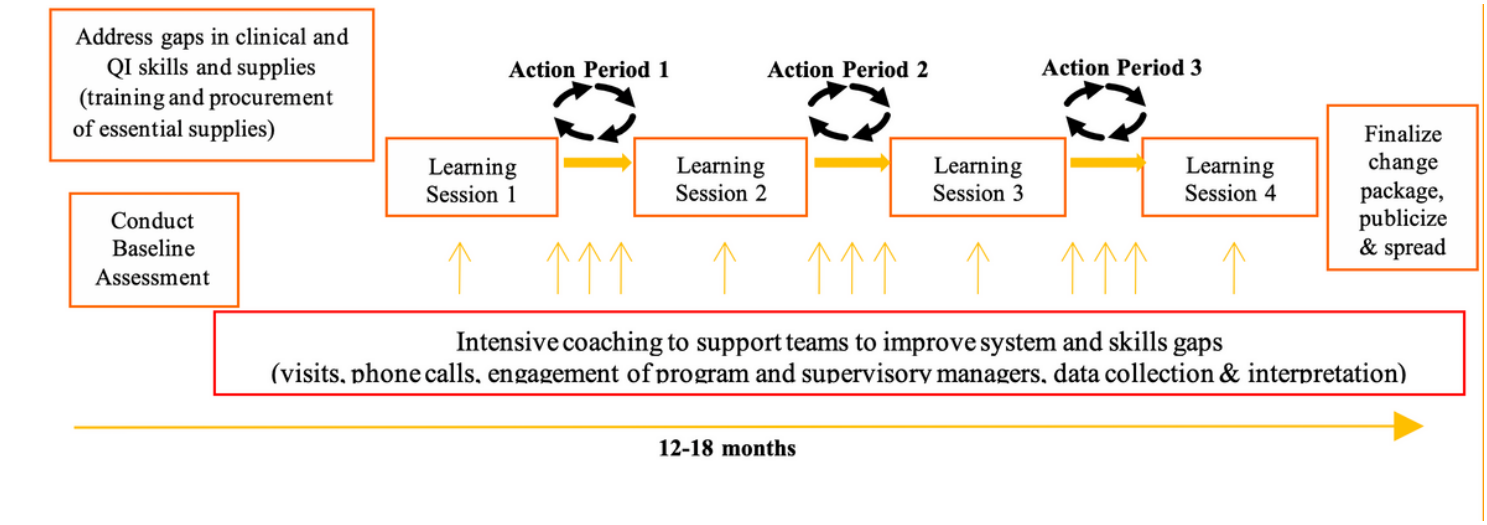

Figure 1

District-wide quality improvement approach of IHI

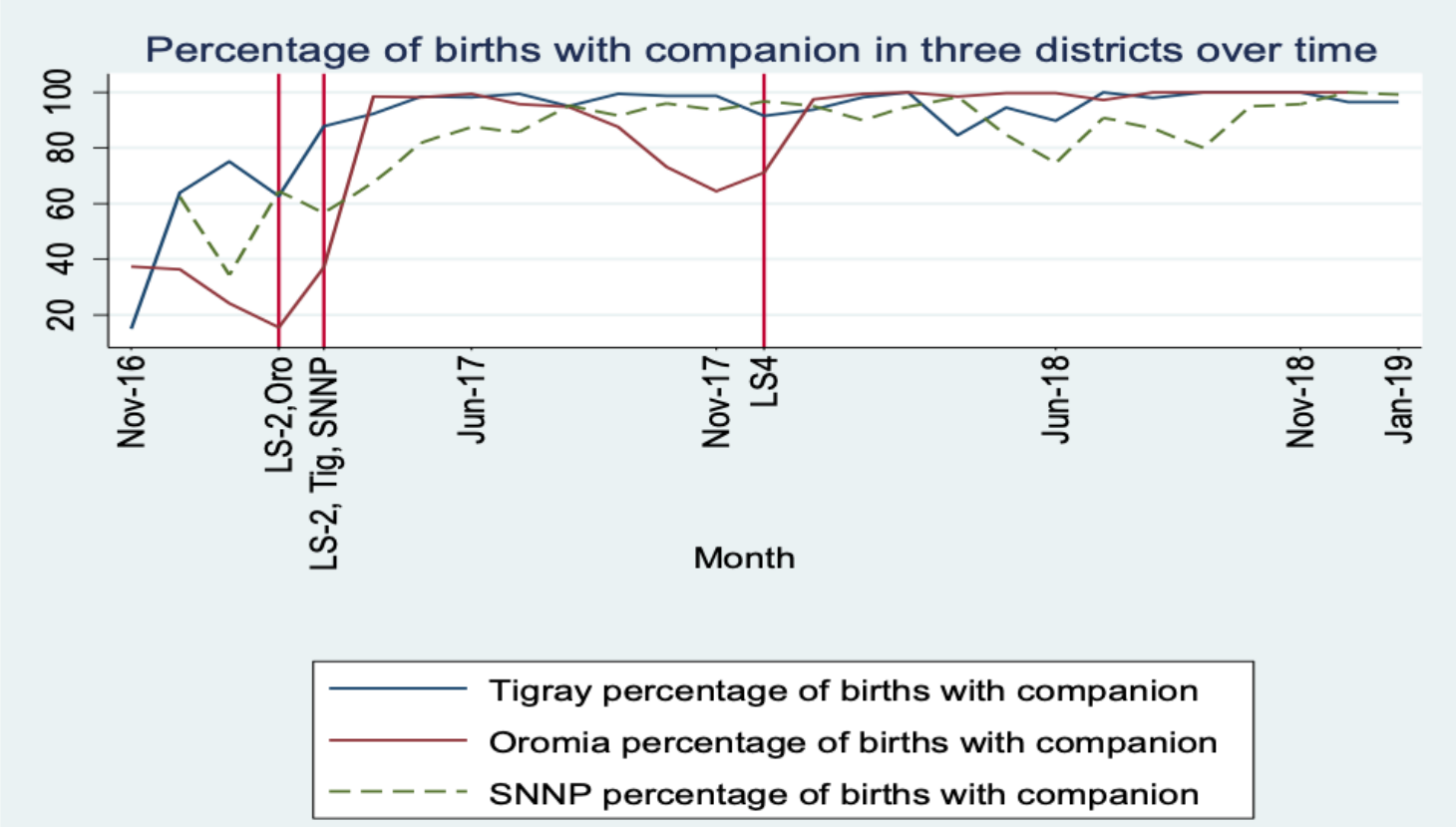

Figure 2

Percentage of births with companion allowed in three regions in Ethiopia

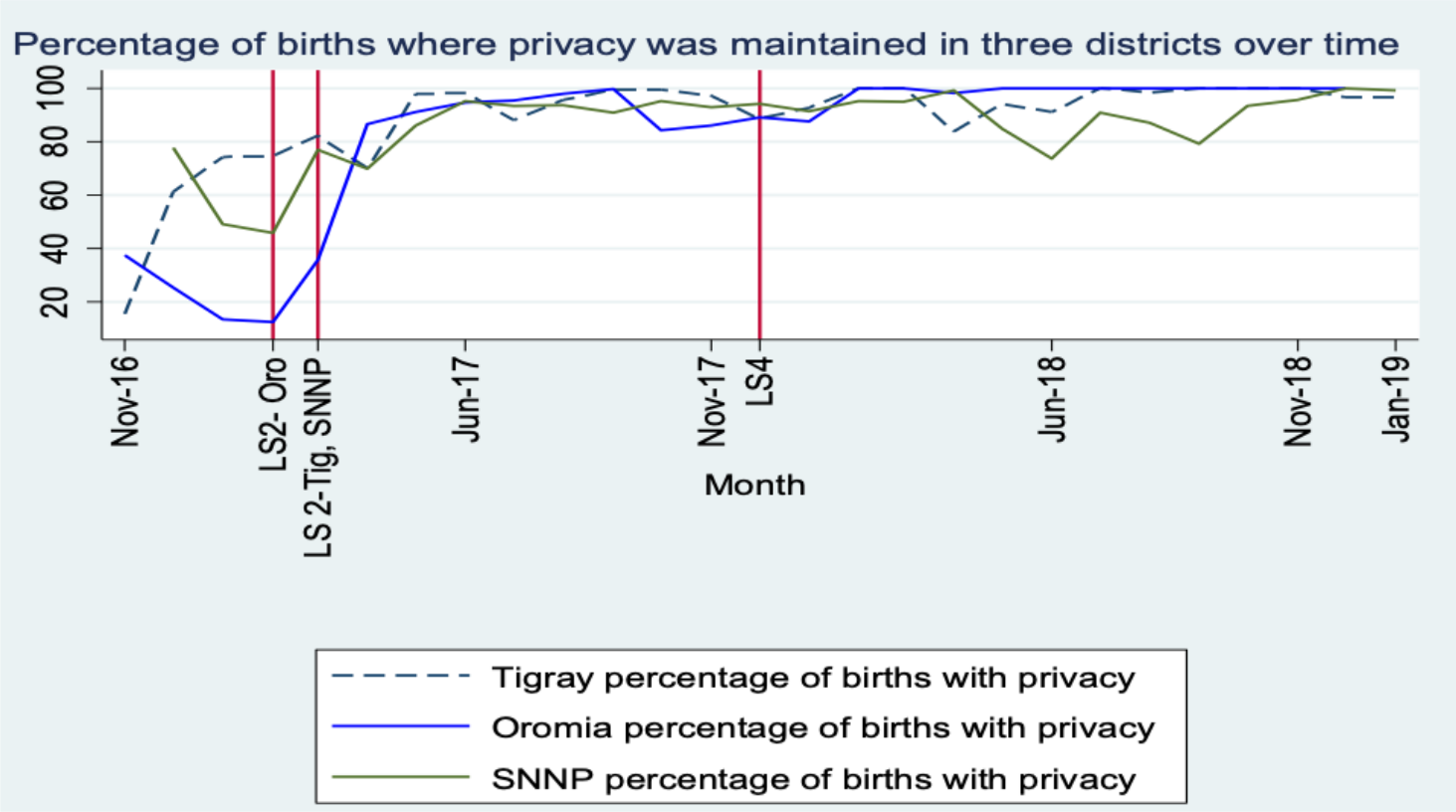

Figure 3

Percentage of births with privacy maintained in three regions in Ethiopia

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- Annex1ScriptsoftheTestimonies.docx
- Annex2slidesonRMC.pptx