



TAMANI

Tabora Maternal Newborn Health Initiative

Endline Report:

An interim analysis of baseline and endline
data for key indicators

April 2021

Produced By:

Ilona Vincent

Arijit Nandi, PhD

Sam Harper, PhD

Holly Nazar

Institute for Health and Social Policy
McGill University

TABLE OF CONTENTS

<u>1</u>	<u>OVERVIEW</u>	<u>1</u>
1.1	INTRODUCTION	1
1.2	HOUSEHOLD SURVEY	1
1.3	ANALYSIS	2
<u>2</u>	<u>SOCIO-DEMOGRAPHIC CHARACTERISTICS</u>	<u>4</u>
<u>3</u>	<u>KEY INDICATORS</u>	<u>5</u>
3.1	WOMEN ATTENDING ANTENATAL CARE FOUR OR MORE TIMES	5
3.2	DELIVERIES ASSISTED BY SKILLED BIRTH ATTENDANT	6
3.3	CONTRACEPTIVE PREVALENCE RATE	7
3.4	UNMET NEEDS FOR FAMILY PLANNING	8
3.5	WOMEN'S AUTONOMY IN HEALTHCARE DECISION-MAKING	9
3.6	ADOLESCENT PREGNANCY	10
3.7	SYNTHESIS OF PRIMARY OUTCOME INDICATORS ACROSS DISTRICTS	11
3.8	RESPECTFUL MATERNAL CARE	13
3.9	MEN'S SUPPORT FOR WOMEN'S REPRODUCTIVE AND HEALTH RIGHTS	14
<u>4</u>	<u>DISCUSSION</u>	<u>16</u>
<u>5</u>	<u>CONCLUSION AND NEXT STEPS</u>	<u>17</u>
<u>6</u>	<u>REFERENCES</u>	<u>18</u>
<u>7</u>	<u>APPENDIX A: LIST OF INTERVENTIONS</u>	<u>19</u>

1 OVERVIEW

1.1 INTRODUCTION

TAMANI is a complex intervention for improving maternal and newborn health in Tabora, Tanzania (see **Figure 1**). The overarching objective of this intervention is to address the challenges linked to (1) the decision to seek care, (2) the barriers to accessing care, and (3) the provision of the highest possible quality of care, collectively known as the “three delays”. Addressing these delays requires a complex set of changes in behaviors, attitudes, access to and use of resources, skills, and knowledge of clients and service providers. The intervention targeted the supply side through improving the quality of care at health facilities, and the demand side through programs to increase utilization of care through community engagement and addressing gender barriers to accessing care by women and their families. These interventions are summarized in **Appendix A**.

Figure 1. Map of Tabora, Tanzania



1.2 HOUSEHOLD SURVEY

Data presented here is collected from the household survey administered at baseline and at the end of the intervention rollout. The household survey is adapted from the Demographic and Health Surveys as well as supplementary CARE, White Ribbon Alliance, and Johns Hopkins RADAR resources.

The target population for the household survey comprises the direct beneficiaries of the interventions, including adolescent and adult women of reproductive age (15 to 49 years), as well as men of the same age groups living in the same household. A series of repeated cross-sectional surveys were carried out, with samples drawn using a cluster sampling procedure that gives each household in the population an equal chance of being included in the sample.¹ The household survey has followed a two-stage, self-weighting sampling design.¹² The listing of villages within each district was obtained from the Tabora district authorities, and within each sampled village we obtained a household listing. Households within each village were assigned a unique random number generated via computer. We sorted households based on the random number and sampled households until a sufficient number were interviewed. At baseline 1,497 women were interviewed and at endline 1,492. All eligible respondents were selected for interviews in each household.

The household questionnaire was translated from English to Swahili and administered in Swahili. Responses were electronically recorded using handheld devices with skip and quality check functions to minimize errors. Electronic data were securely backed up daily, and hard copies of the project documents are kept in a secure location. All electronic databases are anonymized.

The survey consists of the following sections and modules: (1) Household Questionnaire with an information panel, household members panel, and household assets module; (2) Men's Questionnaire with an information panel and men's information module; and (3) Women's Questionnaire including an information panel and modules on demographic information, fertility, most recent birth, antenatal care, respectful maternal care, postnatal care, family planning, and women's empowerment.

This report compares baseline data collected in November 2017 to the end of project data collected in February 2021 after implementation of the intervention. As a result, at the time of analysis, all eight districts had received program interventions, which were phased in across districts over the course of the project, including emergency obstetric and newborn care (EmONC) training for health workers, training and deployment of community health workers (CHWs), community dialogues and health infrastructure upgrades. The results presented here summarize the household survey data collected at the beginning and at the end of the intervention, but do not evaluate the impact of the TAMANI project on the outcomes of interest.

1.3 ANALYSIS

In this report we provide summary statistics focusing on the socio-demographic characteristics of respondents and primary study outcomes. The ultimate outcomes of interest for the TAMANI project are the maternal mortality rate and the neonatal mortality rate. However, because these outcomes are difficult to measure in the Tabora region, the primary outcomes have been directly measured via household survey. Specific primary outcomes (**Table 1**) are: (1) percentage of births attended by skilled health personnel (doctors, nurses or midwives); (2) percent of women ages 15 to 49 with a live birth within the past five years who reported four or more antenatal care (ANC) visits during their most recent pregnancy; (3) percentage of women of reproductive age who are using (or whose partner is using) a contraceptive method at a given point in time; (4) percentage of women who feel confident to go to a health facility even if their partner objects (autonomy in healthcare decision making); and (5) percentage of childbearing adolescents (women ages 15-19) who are pregnant or already mothers.

Women's experiences during their last birth in a health facility will be assessed as part of the Respectful Maternity Care (RMC) module, which included questions on whether women were allowed to move around during labour, choose their birthing position and their birthing partner, were treated with respect and listened to. Secondary outcomes will also be assessed among men, specifically: perceptions of women's health and reproductive rights, including whether a woman is justified in refusing to have sex with her husband or partner in various situations (e.g., if she knows he has sex with other women, if she is tired or not in the mood); whether a woman has the right to go to the health facility without her husband's permission; and whether a woman can use family planning without her husband's permission.

The distributions of variables were presented as frequencies with percentages. The definition of our primary outcomes followed the methodology adapted from the 2015-16 Tanzania Demographic and Health Survey.³ Analyses were conducted using Stata SE 15.

Table 1. Primary and secondary study outcomes from Household Survey

Measure	Indicator
Primary outcomes	
Availability of maternal and newborn health services	% of women with unmet needs for family planning
Increased utilization of maternal and newborn health services	% of women 15 - 49 with a live birth attending ANC 4 or more times
	Contraceptive Prevalence Rate (% of women currently using, or whose sexual partner is currently using, at least one method of contraception, regardless of the method used).
	Unmet need for family planning (% of women who had a mistimed pregnancy, or need for family planning that were not using a method of contraception)
	Autonomy in making healthcare decisions (% of women perceived as confident to go to a health facility even if their partner objects).
Adolescent birth rate	% of childbearing adolescents (women ages 15-19) pregnant or already mothers
Secondary outcomes	
Respectful Maternity Care	Whether women's beliefs, independence, emotions, dignity, privacy and preferences were respected during their most recent childbirth in a health facility, such as: <ul style="list-style-type: none"> • Option to choose preferred birthing position • Allowed to move around while in labour • Told everything about the care being received • Given time to ask questions and voice opinions • Confidence in health facility and HCWs keeping information private • Not treated with respect/insulted/physically hurt or coerced into something didn't want to do • Allowed to have a birth companion • Allowed to choose who the birth companion is
Perceptions of women's health and reproductive rights	Whether a woman is justified in refusing to have sex with her husband or partner in various situations
	Whether a woman has the right to go to the health facility

without her husband's permission

Whether a woman can use family planning without her husband's permission

2 SOCIO-DEMOGRAPHIC CHARACTERISTICS

Socio-demographic characteristics are shown in **Table 2**. A similar number of women were interviewed at baseline and endline (1,497 vs 1,492), although slightly fewer adolescent women (15-19 years) were interviewed at endline (19.9% at baseline vs 16.4% at endline). In addition, the endline sample included a lower proportion of adolescent girls who were married or living with a man as if married. Almost 39% of baseline adolescent girls were married compared to 32.7% of those interviewed at endline.

A slightly higher percentage of women reported having already given birth at the endline vs baseline survey (82.9% vs 86.1%), with the average number of children per woman similar between the two waves (3.8 at baseline vs 3.7 at endline).

Levels of educational attainment and literacy were similarly distributed among women at baseline and endline.

Among the 782 and 715 male respondents to the household survey at baseline and endline, respectively, the percentages of married adults were similar. However, the percentage of male adolescents who reported being married varied substantially between the two waves (21.7% at baseline vs 4.8% at the final wave). This might reflect the small sample sizes since 19.4% of interviewed males were adolescents at baseline compared to 17.6% at endline.

Heads of households reported similar distribution of characteristics (religion, ethnicity) and household assets (land and livestock ownership) across both survey waves.

Table 2. Socio-demographic characteristics

	Baseline	Endline
<i>Women Respondents</i>		
Total women respondents (n)	1497	1492
Adolescents, % (n)	19.9% (298/1497)	16.4% (245/1492)
Married women, % (n)	74.7% (1118/1497)	73.5% (1097/1492)
Adolescents, % (n)	38.9% (116/298)	32.7% (80/245)
Any schooling, % (n)	80.4% (1203/1497)	82% (1224/1492)
Highest level completed		
Less than Primary School	18.6% (224)	15.4% (188)
Primary School	63.5% (764)	63.6% (779)
Some Secondary School	7.4% (89)	8.9% (109)
Secondary School 1st cycle	8.1% (97)	11% (135)
More than Secondary 1st cycle	2.4% (29)	1.1% (13)

Literacy, % (n)		
Cannot read	23% (345)	18.6% (277)
Not well	10.4% (156)	9.6% (143)
Well	51.1% (765)	52.2% (779)
Very well	15.4% (230)	19.6% (293)
Blind/Impaired	0.1% (1)	0% (0)
Ever given birth	82.9% (1241/1497)	86.1% (1285/1492)
Households		
Religion of head of household, % (n)		
Christianity	52.4% (785)	48.0% (716)
Islam	34.7% (519)	37.9% (566)
Other	0.5% (8)	0.2% (3)
No religion	12.4% (185)	13.9% (207)
Ethnic group of head of household, % (n)		
Nyamwezi	30.1% (450)	31.5% (470)
Sukuma	36.1% (540)	34.9% (521)
Waha	0% (0)	10.8% (161)
Other	33.9% (507)	22.8% (340)
Households owning livestock, % (n)	64.7% (969/1497)	61.7% (921/1492)
Households owning agricultural land, % (n)	69.9% (1046/1497)	71.3% (1064/1492)
Men Respondents		
Total men respondents (n)	782	715
Adolescents, % (n)	19.4% (152/782)	17.6% (126/715)
Married men, % (n)	76.1% (595/782)	73.6% (526/715)
Adolescents, % (n)	21.7% (33/152)	4.8% (6/126)

3 KEY INDICATORS

3.1 WOMEN ATTENDING ANTENATAL CARE FOUR OR MORE TIMES

This indicator refers to women ages 15-49 who attended antenatal care services at a health facility four or more times during their most recent live birth in the last five years. Between the two survey waves the percentage of women reporting receiving these services increased from 55.8% to 68.4% (**Table 3**). Increases have been noted across all districts with one of the lowest reporting districts at baseline (Nzega DC), making some of the largest gains (45.6 at baseline vs 64.8% at endline). At both survey waves 98% of the respondents reported seeing a health professional at least once for antenatal care. However, a considerably higher proportion of women from the endline survey indicated going for their first antenatal visit in their first trimester of pregnancy (32.5%) compared to their counterparts from the baseline survey (21.8%).

Figure 3. Percent of women with live births receiving 4 or more ANC visits, by district

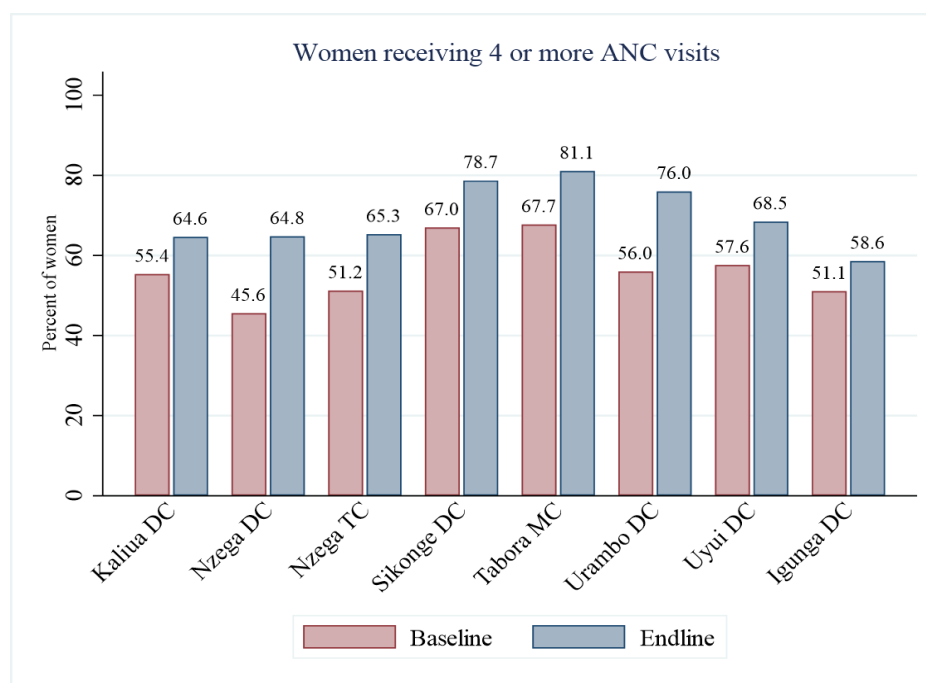


Table 3. Percent of women with live births receiving 4 or more ANC visits, by district

	TOTAL	Kaliua DC	Nzega DC	Nzega TC	Sikonge DC	Tabora MC	Urambo DC	Uyui DC	Igunga DC
Baseline	55.8% (535/958)	55.4% (98/177)	45.6% (72/158)	51.2% (21/41)	67% (65/97)	67.7% (84/124)	56% (28/50)	57.6% (72/125)	51.1% (95/186)
Endline	68.4% (756/1106)	64.6% (126/195)	64.8% (114/176)	65.3% (32/49)	78.7% (85/108)	81.1% (133/164)	76% (38/50)	68.5% (102/149)	58.6% (126/215)

3.2 DELIVERIES ASSISTED BY SKILLED BIRTH ATTENDANT

The percentage of deliveries assisted by a skilled birth attendant among women who have given birth in the last five years is presented in **Figure 4**. Skilled birth attendants (SBAs) include doctors, nurses, assistant nurses, clinical officers, assistant clinical officers, midwives, and maternal and child health aides. At baseline, 69.5% of women reported giving birth with a skilled birth attendant present. This proportion increased to 81.9% in the endline survey (**Table 4**). Women from all districts reported deliveries with an SBA present at higher or similar rates on the 2021 survey vs baseline survey with the exception of Urambo. However, given the small sample of interviewed women from Urambo (50) one should be careful to draw strong conclusions about the difference in percent of deliveries with an SBA present between the two surveys in that district.

At endline, when asked about their postnatal checks after delivery, 91.3% of 623 women who gave birth in a health facility reported having someone check on their health before leaving the facility. This represents an important increase when compared to the baseline survey, in which 54.4% of women reported having postnatal health checks.

Figure 4. Percent of deliveries assisted by a skilled birth attendant, by district

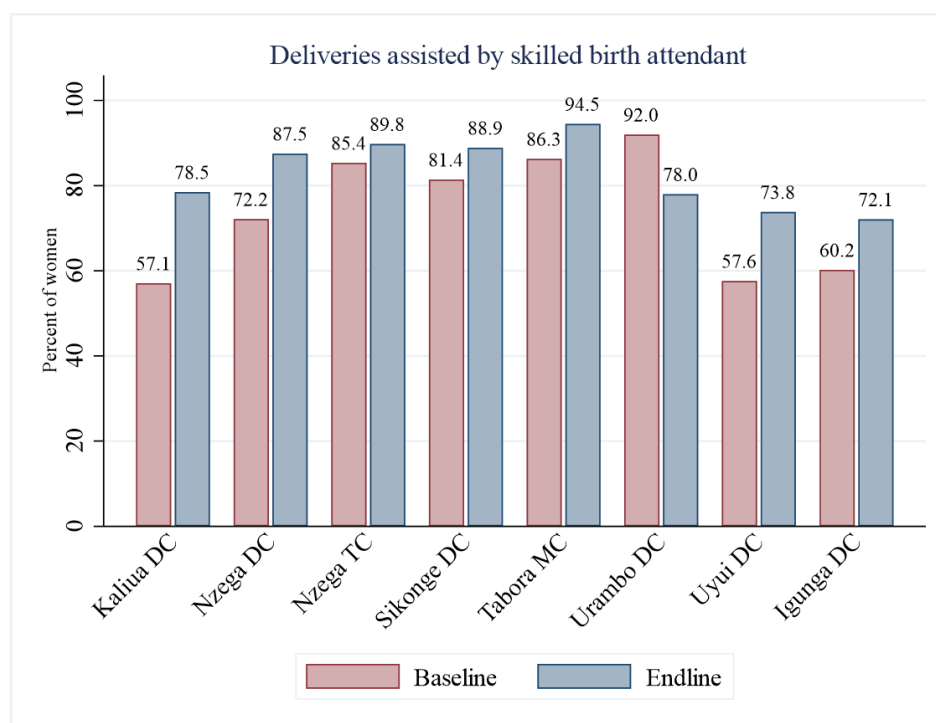


Table 4. Percent of deliveries assisted by a skilled birth attendant, by district

	TOTAL	Kaliua DC	Nzega DC	Nzega TC	Sikonge DC	Tabora MC	Urambo DC	Uyui DC	Igunga DC
Baseline	69.5% (666/958)	57.1% (101/177)	72.2% (114/158)	85.4% (35/41)	81.4% (79/97)	86.3% (107/124)	92% (46/50)	57.6% (72/125)	60.2% (112/186)
Endline	81.9% (906/1106)	78.5% (153/195)	87.5% (154/176)	89.8% (44/49)	88.9% (96/108)	94.5% (155/164)	78% (39/50)	73.8% (110/149)	72.1% (155/215)

3.3 CONTRACEPTIVE PREVALENCE RATE

The percentage of married women using any method of contraception or family planning between the two surveys remained unchanged, with 32.8% of married women surveyed at baseline and 32.2% at endline reporting using contraception. The only substantial changes were observed in Nzega DC, where contraceptive prevalence amongst married women fell from 41.0% to 25.4%, and in Igunga DC where it increased from 19.8% to 29.5%.

Modern contraceptive use including female or male sterilization, intrauterine device, injectables, implants, contraceptive pills, male or female condoms, diaphragms, foam/jelly, or lactational amenorrhea method remain the main form of family planning for women at both baseline and endline. Out of married women currently using any form of contraception, 92.1% at baseline and 93.5% at endline indicated using at least one method of modern contraception.

Figure 5. Contraceptive prevalence rate, by district

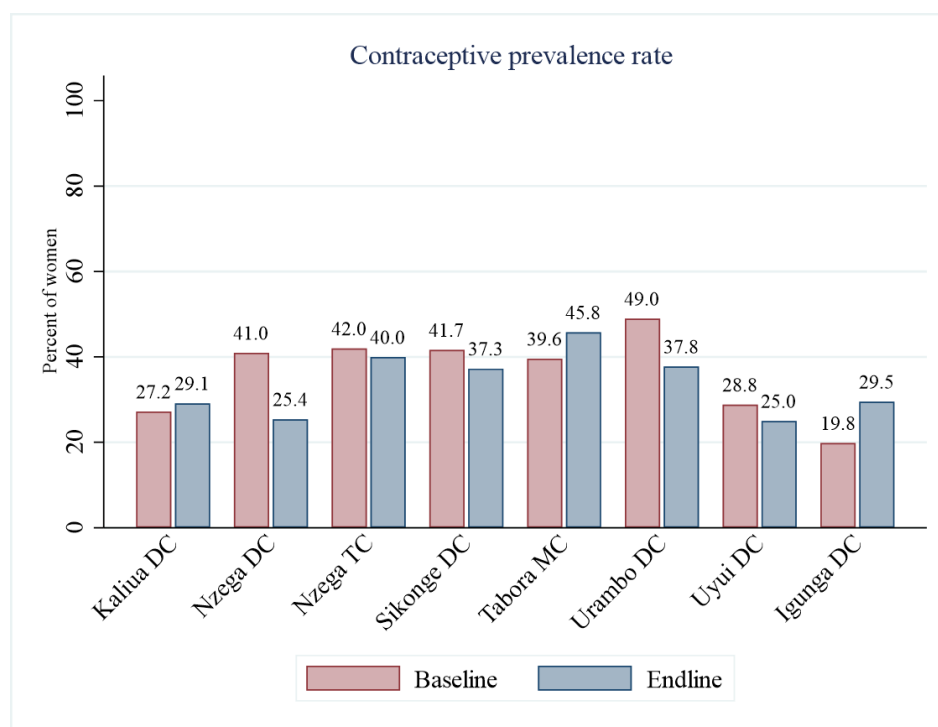


Table 5. Contraceptive prevalence rate, by district

	TOTAL	Kaliua DC	Nzega DC	Nzega TC	Sikonge DC	Tabora MC	Urambo DC	Uyui DC	Igunga DC
Baseline	32.8% (367/1118)	27.2% (52/191)	41% (77/188)	42% (21/50)	41.7% (45/108)	39.6% (57/144)	49% (24/49)	28.8% (45/156)	19.8% (46/232)
Endline	32.2% (353/1097)	29.1% (58/199)	25.4% (46/181)	40% (20/50)	37.3% (38/102)	45.8% (76/166)	37.8% (17/45)	25% (36/144)	29.5% (62/210)

3.4 UNMET NEEDS FOR FAMILY PLANNING

The unmet needs for family planning indicator includes married women who:

- (1) were not pregnant and not postpartum amenorrhoeic and wanted to postpone their next birth for 2 or more years or stop childbearing altogether, but were not using a contraceptive method, or
- (2) had a mistimed or unwanted current pregnancy, or
- (3) were postpartum amenorrhoeic and their last birth in the last 2 years was mistimed or unwanted.

The percentage of women who are not using contraception and have unmet needs for family planning methods increased from 30.3% at baseline to 38.7% at the end of the project. In almost every district more women reported having unmet needs for contraception and family planning at

the endline than at the baseline survey. Kaliua and Tabora MC are the only two districts where the percentage of women with unmet needs remained unchanged between the two surveys.

The increased percentage of women with unmet needs combined with the unchanged percentage of women using contraception could suggest barriers to contraception access or lack of education on family planning is a continuing challenge in the Tabora region.

Figure 6. Women with unmet needs for family planning, by district



Table 6. Women with unmet needs for family planning, by district

	TOTAL	Kaliua DC	Nzega DC	Nzega TC	Sikonge DC	Tabora MC	Urambo DC	Uyui DC	Igunga DC
Baseline	30.3% (339/1118)	42.4% (81/191)	24.5% (46/188)	22% (11/50)	26.9% (29/108)	26.4% (38/144)	16.3% (8/49)	30.8% (48/156)	33.6% (78/232)
Endline	38.7% (425/1097)	40.7% (81/199)	38.1% (69/181)	36% (18/50)	36.3% (37/102)	26.5% (44/166)	31.1% (14/45)	47.2% (68/144)	44.8% (94/210)

3.5 WOMEN'S AUTONOMY IN HEALTHCARE DECISION-MAKING

Autonomy in making healthcare decisions refers to a woman's perceived level of confidence to go to a health facility even if their partner objects. According to the baseline survey, among women who in the last 12 months had visited a health facility for care for themselves and/or their children, only 35.3% felt completely confident in their ability to do so regardless of their partner's support or objections. Large increases in reported autonomy were observed in all districts when the endline survey results were analyzed. The districts with some of the lowest reported healthcare decision-

making autonomy at the beginning of the project, Kaliua DC and Uyui DC, experienced the biggest increases of 32 and 31 percentage-points, respectively, by the end of the project. Overall, 57.9% of women surveyed at endline felt completely confident in their ability to make healthcare decisions.

Figure 7. Women’s autonomy in healthcare decision-making, by district

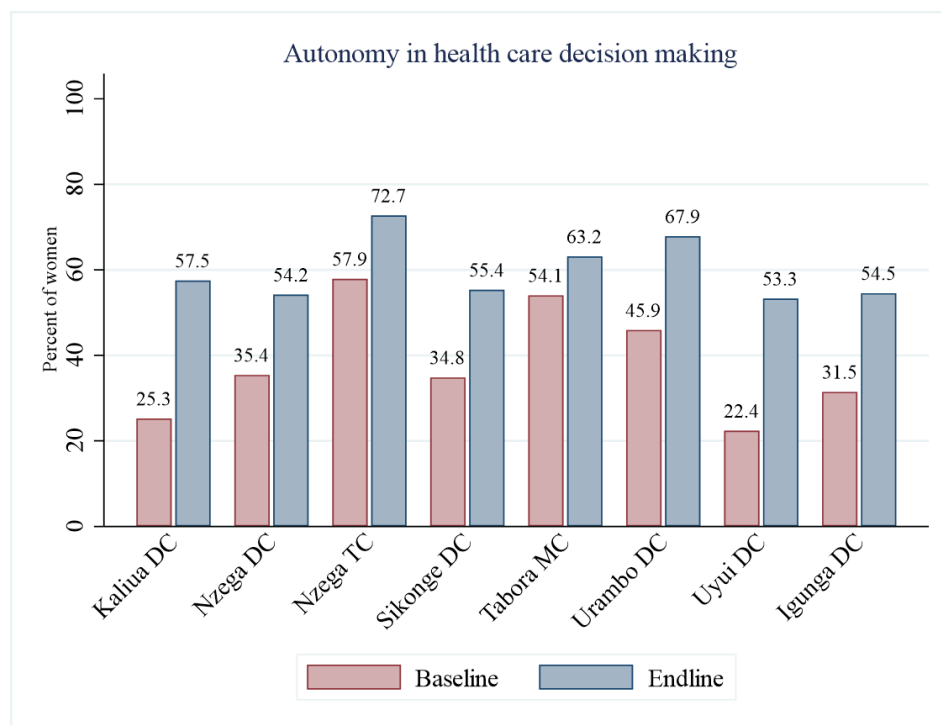


Table 7. Women’s autonomy in healthcare decision-making, by district

	TOTAL	Kaliua DC	Nzega DC	Nzega TC	Sikonge DC	Tabora MC	Urambo DC	Uyui DC	Igunga DC
Baseline	35.3% (187/530)	25.3% (25/99)	35.4% (28/79)	57.9% (11/19)	34.8% (23/66)	54.1% (40/74)	45.9% (17/37)	22.4% (15/67)	31.5% (28/89)
Endline	57.9% (640/1106)	57.5% (115/200)	54.2% (96/177)	72.7% (40/55)	55.4% (62/112)	63.2% (108/171)	67.9% (38/56)	53.3% (73/137)	54.5% (108/198)

3.6 ADOLESCENT PREGNANCY

The prevalence of adolescents who were pregnant or have given birth was unchanged between the two survey waves. Among the 298 adolescents interviewed for the baseline and 245 interviewed for the endline survey, 43.3% and 42.0% respectively were considered childbearing (either pregnant for the first time or already mothers). Among all adolescent respondents, 7.7% were pregnant for the first time at the beginning of the project and 6.1% at the end of it.

Any district-level changes presented in **Table 8** should be viewed with caution as the small sample sizes prevent us from drawing meaningful conclusions.

Table 8. Adolescent first-time pregnancy and current mothers, district

	TOTAL	Kaliua DC	Nzega DC	Nzega TC	Sikonge DC	Tabora MC	Urambo DC	Uyui DC	Igunga DC
Baseline	43.3% (129/298)	44.6% (29/65)	44% (22/50)	25% (4/16)	53.8% (7/13)	22.9% (8/35)	66.7% (8/12)	46.7% (21/45)	48.4% (30/62)
Endline	42.0% (103/245)	47.8% (22/46)	55.6% (20/36)	25% (2/8)	38.1% (8/21)	36.4% (12/33)	7.1% (1/14)	61.8% (21/34)	32.1% (17/53)

3.7 SYNTHESIS OF PRIMARY OUTCOME INDICATORS ACROSS DISTRICTS

When key indicators are compared across time and districts (**Figures 8 and 9**) one can conclude not only that gains have been made for three out of five outcomes (ANC visits, birth with an SBA present and autonomy in healthcare decision making) but also that there is a clear narrowing of disparities between districts, particularly for the two latter indicators.

The difference in percent of deliveries with an SBA present between the lowest and the highest performing district shrank by 12.5 percentage points over time. At baseline, Kaliua DC had the lowest proportion of births with an SBA present out of all districts at 57.1%, and Urambo DC had the highest proportion at 92.0%. This represented a disparity of 34.9 percentage points. By the end of the project this disparity declined to 22.4 percentage points, with the lowest and the highest proportions of births with an SBA present being 72.1% in Igunga DC and 94.5% in Tabora MC.

Even more substantial gains were made by the autonomy in healthcare decision making indicator, where the disparity between the lowest and highest performing districts decreased by 16.1 percentage points from 35.5 to 19.4. At baseline, 22.4% of women in Uyui DC reported having confidence in going to a health facility without their partner's permission compared to 57.9% in Nzega TC, a 35.5 percentage point difference. By the end of the project Uyui DC and Nzega TC still remain the lowest and the highest performing districts respectively for this specific indicator, however larger gains were made in Uyui DC which allowed it to start catching up to the other districts, and shrank the disparity to 19.4 percentage points.

Figure 8. Prevalence of key indicators by districts, **baseline**

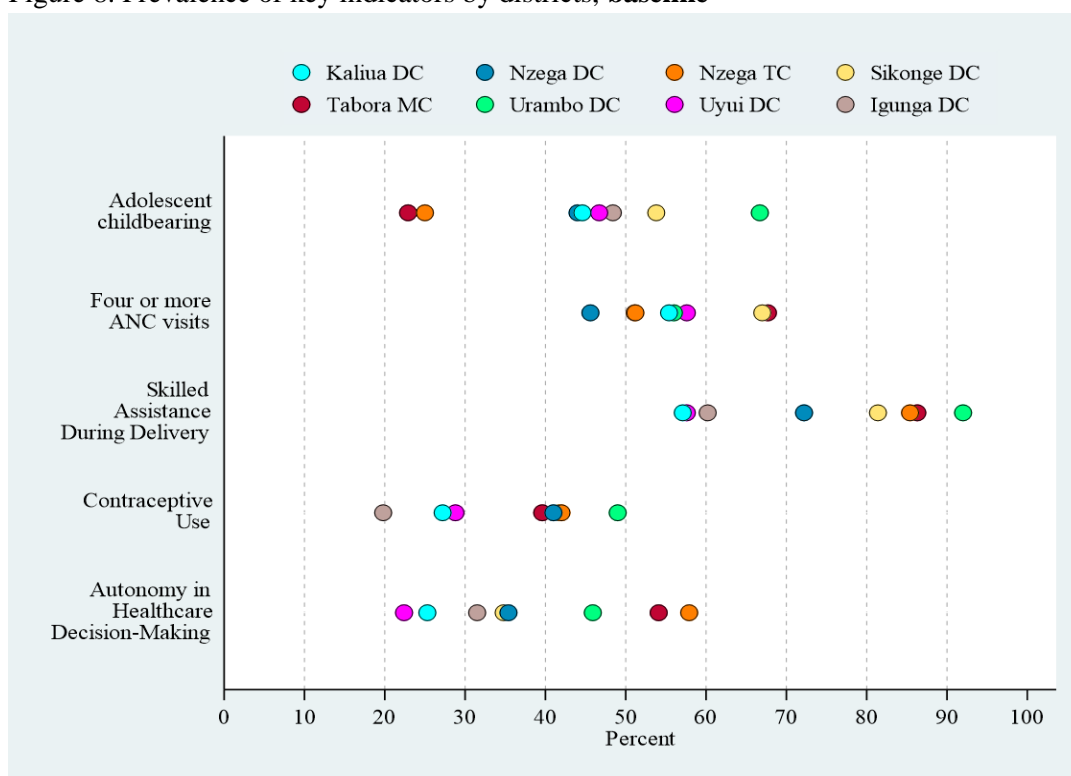
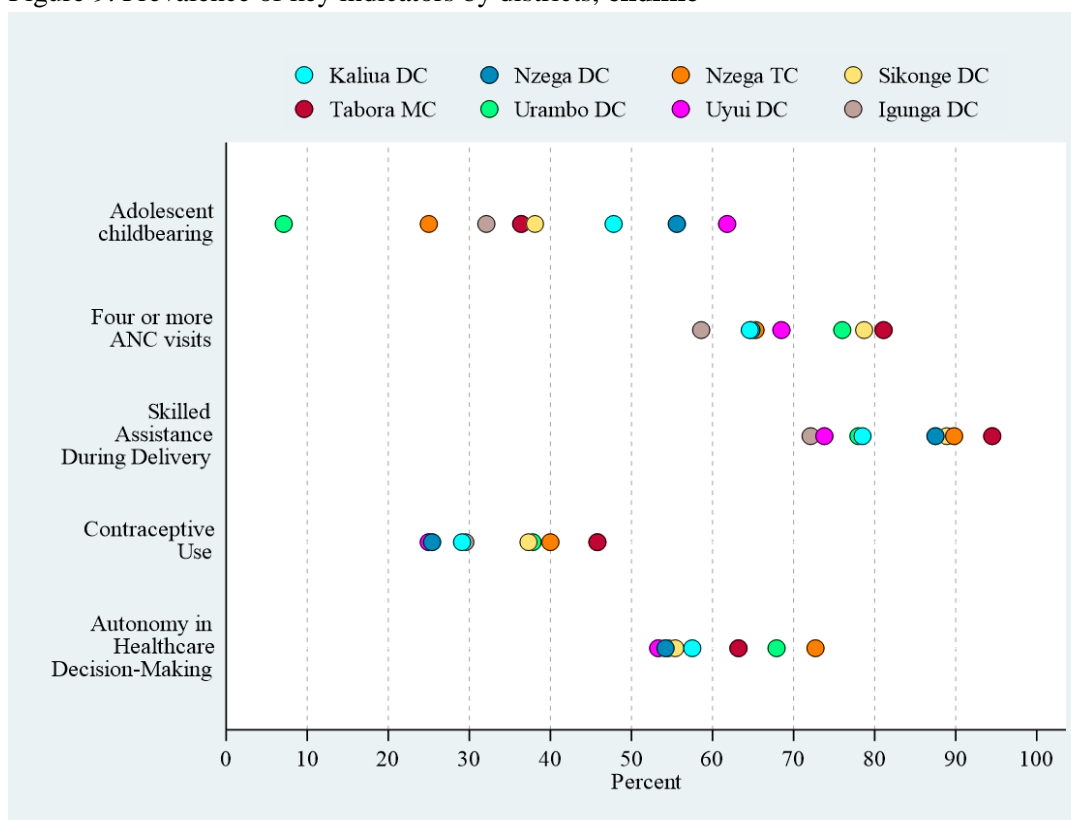


Figure 9. Prevalence of key indicators by districts, **endline**



3.8 RESPECTFUL MATERNAL CARE

The results for women interviewed about their experiences delivering their most recent child in health facilities are presented in **Table 8**. Although the percentage of women allowed to choose their preferred birthing position increased from 4.0% to 9.0% between surveys, the proportion of women allowed to move around while in labour dropped considerably from 56.7% to 46.5%. Other RMC indicators also showed mixed results. For example, while women's confidence in their information being kept confidential by the staff of the facility increased between the surveys (from 57.5% to 80.4%), the level and quality of communication between patients and staff remains concerningly low and unchanged: less than 5% of women reported being given time to ask questions and voice their opinions during labor, and only about 21% of women felt that they were told everything about the care they were receiving and why.

While the proportion of women allowed to have a birthing companion during their labour did not change substantially between the surveys, a higher proportion of women who could have one were given a choice of their birthing companion. At baseline 43.2% of respondents were allowed to choose who to accompany them during labour vs 62.2% at the endline survey.

Finally, the percentage of women who reported not being treated with respect, insulted, physically hurt, or coerced into something they did not want to do during labour decreased by almost 50% between the beginning and the end of the project (13.4% vs 7.4%).

Table 9. Respectful Maternal Care

	Baseline	Endline
Option to choose preferred birthing position	4.0% (26/658)	9.0% (81/896)
Allowed to move around while in labour	56.7% (373/658)	46.5% (417/897)
Told everything about the care being received	21.6% (143/663)	20.8% (187/897)
Given time to ask questions and voice opinions	5.9% (39/661)	4.5% (40/897)
Confidence in health facility and HCWs keeping information private	57.5% (383/666)	80.4% (721/897)
Not treated with respect/insulted/physically hurt or coerced into something didn't want to do	13.4% (89/665)	7.4% (66/896)
Allowed to have a birth companion	22.3% (148/665)	25.1% (225/896)
Allowed to choose who the birth companion is	43.2% (64/148)	62.2% (140/225)

3.9 MEN’S SUPPORT FOR WOMEN’S REPRODUCTIVE AND HEALTH RIGHTS

Men’s support for women’s reproductive and health rights is measured using their responses to the following statements:

1. A woman can go to a health facility without her husband’s permission (**Figure 10, Table 9.**)
2. A woman can use family planning without her husband’s permission (**Table 10.**)

The indicators are defined as the sum of the respondents who “agree” or “strongly agree” with the above statements.

Across all districts, men’s support for the rights of women to seek health care increased between the two surveys, except in Sikonge DC where the proportion remained unchanged and the lowest across Tabora region. Overall, support increased from 33.6% at baseline to 45.9% at endline.

Figure 10. Men’s support for a woman’s right to go to a health facility without her husband’s permission

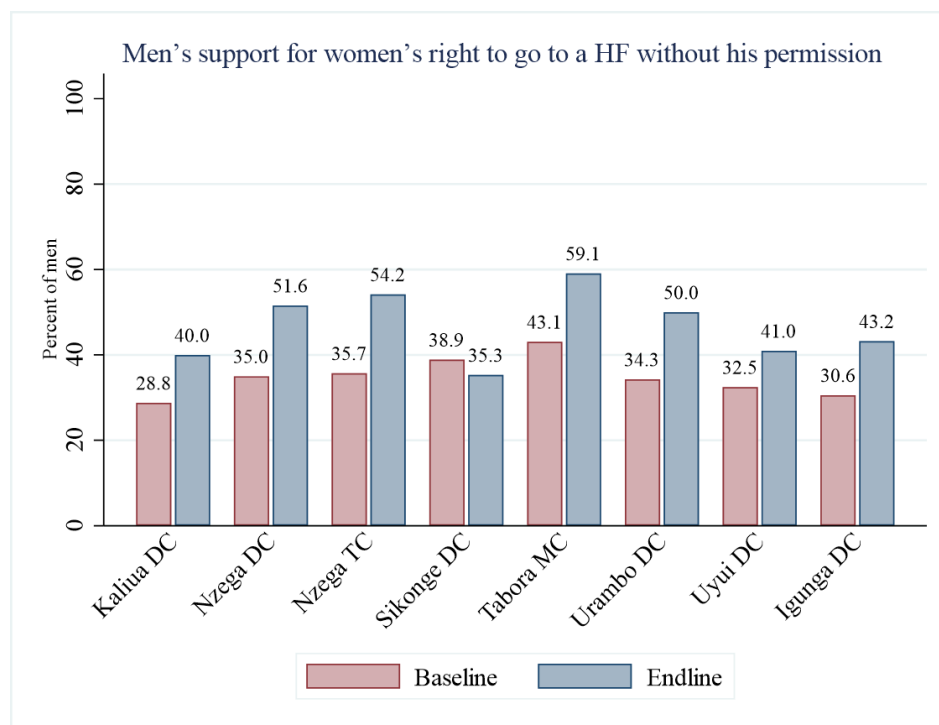


Table 10. Men’s support for a woman’s right to go to a health facility without her husband’s permission

	TOTAL	Kaliua DC	Nzega DC	Nzega TC	Sikonge DC	Tabora MC	Urambo DC	Uyui DC	Igunga DC
Baseline	33.6% (263/782)	28.8% (36/125)	35% (49/140)	35.7% (10/28)	38.9% (28/72)	43.1% (31/72)	34.3% (12/35)	32.5% (38/117)	30.6% (59/193)
Endline	45.9% (328/715)	40% (50/125)	51.6% (66/128)	54.2% (13/24)	35.3% (24/68)	59.1% (52/88)	50% (22/44)	41% (34/83)	43.2% (67/155)

Interviewed men, however, showed much less support when it comes to their partners' right to use family planning without their consent. Measured at the endline, only 14.3% of men agreed with the statement that a woman can use family planning methods without her husband's permission, which was similar to the 11.4% of men at baseline (Table 10).

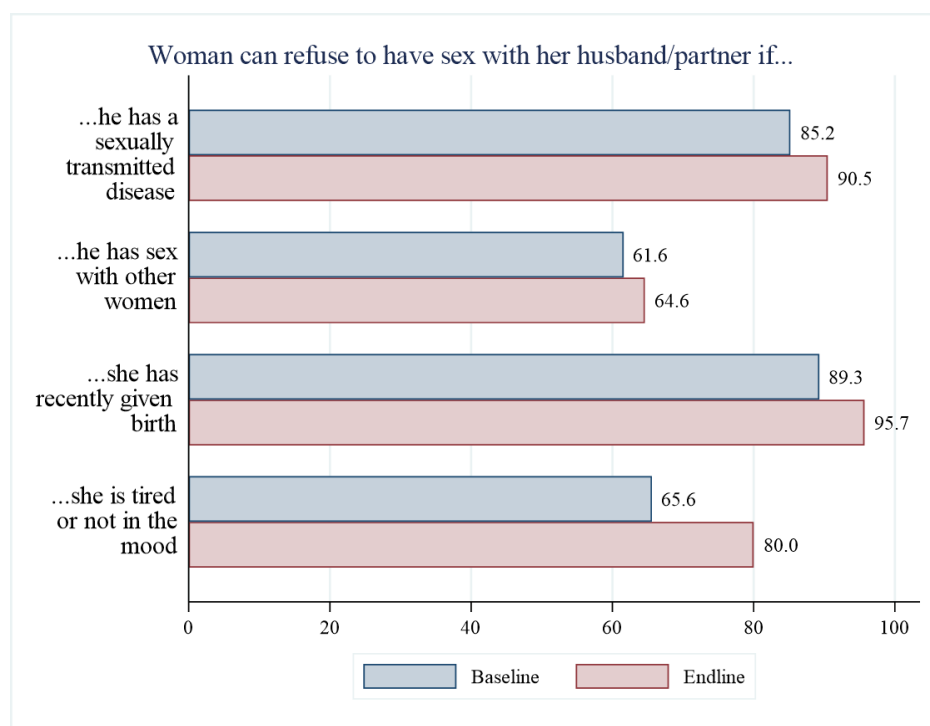
Table 11. Men's support for a woman's right to use family planning without her husband's permission

	TOTAL	Kaliua DC	Nzega DC	Nzega TC	Sikonge DC	Tabora MC	Urambo DC	Uyui DC	Igunga DC
Baseline	11.4% (89/782)	7.2% (9/125)	15% (21/140)	7.1% (2/28)	12.5% (9/72)	11.1% (8/72)	0% (0/35)	17.1% (20/117)	10.4% (20/193)
Endline	14.3% (102/715)	16.8% (21/125)	14.1% (18/128)	16.7% (4/24)	7.4% (5/68)	21.6% (19/88)	13.6% (6/44)	12% (10/83)	12.3% (19/155)

Men's attitude towards women's refusal of sex has changed between the baseline and endline surveys. An index was constructed using the responses to four questions about situations in which a woman can refuse sex with her husband. A value of 4 was assigned to a respondent who agreed with all 4 statements whereas a value of 0 was assigned if he did not agree with any of them. Measured at baseline, the index of men's attitudes had a value of 3 implying that on average men agreed with at least 3 of the 4 statements presented in **Figure 11**. The value of the index increased to 3.3 when measured at endline.

Although men's overall attitude towards women's refusal of sex improved across time, there is one aspect where support is continuously lacking. Just over 60% of men in both surveys agree that their partner has a right to refuse sex if he has sex with other women.

Figure 11. Men's attitude towards women's refusal of sex



4 DISCUSSION

The distributions of key demographic characteristics are fairly well balanced between baseline and endline surveys, reflecting the random sampling done at the start of the project.

Adolescent girls comprised approximately 20% of the baseline survey respondents, and 16% of endline respondents. Across both surveys roughly 75% of women respondents were married.

Regardless of the wave of survey, over 80% of all interviewed women indicated having already given birth.

Approximately 63% of women self-reported primary education as their highest completed education level and around 70% reported being able to read well or very well in both baseline and endline surveys.

Among the men responding, 76.1% reported being married at baseline, and similarly 73.6% reported being married at the final wave. The two samples are less balanced in the proportion of married adolescent boys, with 21.7% of them reported married at the baseline and only 4.8% at the endline, although this might reflect random error related to small sample sizes.

Of the five key indicators presented, we observed increases for three of the indicators when compared between baseline and endline. For the antenatal care indicator, the proportion of women with 4 or more visits increased by 12.5 percentage points (CI: 8.3, 16.7); deliveries attended by skilled birth attendants increased by 12.4 percentage points (CI: 8.7, 16.1); and proportion of women reporting confidence about making their healthcare decisions increased by 22.6 percentage points (CI: 17.6, 27.6).

For these three indicators, increases have been noted across all districts with some of the lowest reporting districts at baseline making some of the largest gains at the end of the project. For example, in Nzega DC, 45.6% of women reported receiving four ANC visits at baseline vs 64.8% in the endline survey. Similarly, districts like Kaliua DC and Uyui DC witnessed increases of over 30 percentage points in the proportion of women reporting high confidence in healthcare decision making.

However, contraceptive prevalence as well as the adolescent childbearing indicator remained notably unchanged for the Tabora region, with just a few districts showing decreases or increases. In Nzega DC contraceptive prevalence amongst married women fell by 15.5 percentage points from 41.0% to 25.4% (CI: 6.0, 25.1) while in Igunga DC it increased by 9.7 percentage points from 19.8% to 29.5% (CI: 1.6, 17.8).

The concerning lack of observable changes in the contraceptive prevalence indicator despite family planning being one of the objectives of the intervention could potentially be explained by the former Tanzanian President's strong anti-contraception stance which might have affected the public perception of contraception.^{4; 5; 6}

The adolescent childbearing rate for the Tabora region remains at around 43% with none of the districts reporting noticeable changes. This could, however, be a result of the very small sample of

adolescents in some of the districts, which prevents us from drawing strong conclusions about potentially meaningful changes.

Overall results for the respectful maternal care module are quite mixed. Although some of the sub-indicators, such as confidence in HCWs keeping information private or freedom to choose a birthing companion, have increased in proportion across the two analyzed surveys, others have declined or remained low and unchanged. A concerning low number of women reported the ability to choose a birthing position (4.0% to 9.0%, respectively, at the baseline and endline surveys) or ask questions and voice opinions during labour (less than 5% according to the endline survey).

The decrease in the percentage of women who reported not being treated with respect, including being insulted, physically hurt, or coerced into something they did not want to do during labour, is encouraging. The prevalence of this sub-indicator decreased by almost 50% between the beginning and the end of the project (13.4% vs 7.4%).

The lack of a general increasing or decreasing pattern across the sub-indicators could indicate that respectful maternal care may not have been experienced or implemented in a uniform and consistent manner.

Men's support for RMNH and women's health rights as measured at baseline vs endline showed mixed results. While overall as well as district-level support for the rights of women to seek health care increased between the two analyzed surveys (from 33.6% to 45.9%), support for women's right to use family planning remains low and unchanged at around 14%.

Finally, an index of men's overall attitude towards women's refusal of sex for specific reasons improved slightly across surveys. The value of the index increased from 3 to 3.3 on the scale of 4. Support, however, is continuously lacking for a woman's right to refuse sex if her partner has sex with other women. This could potentially be a reflection of cultural values and practices in Tanzania, specifically a practice of polygyny. Polygyny is most prevalent in the Western part of Tanzania, with approximately one-third of marriages polygynous.³

5 CONCLUSION AND NEXT STEPS

Overall, while this descriptive analysis reveals some promising changes for certain key indicators, to determine the actual impact of the interventions in each of the districts, a difference-in-differences analysis that leverages the phased-in implementation of interventions across districts will need to be carefully carried out.

6 REFERENCES

- 1 Roy TK, Acharya R. Statistical Survey Design and Evaluating Impact. Cambridge University Press, 2016.
- 2 Groves RM, Jr FJF, Couper MP, Lepkowski JM, Singer E, Tourangeau R. Survey Methodology. John Wiley & Sons, 2011.
- 3 Ministry of Health, Gender, Elderly and Children M, National Bureau of Statistics (NBS), Office of the Chief Government Statistician (OCGS), ICF. Tanzania Demographic and Health Survey and Malaria Indicator Survey (TDHS-MIS) 2015-16. Dar es Salaam, Tanzania and Rockville, Maryland, USA, 2016.
- 4 Tanzania's President Magufuli calls for end to birth control. BBC News. 2018; published online Sept 10. <https://www.bbc.com/news/world-africa-45474408> (accessed May 10, 2021).
- 5 Bukola A, Odutayo D. Amnesty International condemns Tanzania's 'attack' on family planning. CNN. 2018; published online Sept 25. <https://www.cnn.com/2018/09/25/africa/tanzania-suspends-family-planning-advert-intl/index.html> (accessed May 10, 2021).
- 6 Ng'wanakilala F. President urges Tanzania's women to 'set ovaries free', have more babies to boost economy. Reuters. 2019; published online July 16. <https://www.reuters.com/article/us-tanzania-politics-idUSKCN1U51AZ> (accessed May 10, 2021).

7 APPENDIX A: LIST OF INTERVENTIONS

1. Supportive supervision system for improved Maternal Neonatal and Child Health (MNCH) implemented	2. R/CHMTs trained and mentored on planning, budgeting and monitoring of MNCH plans	3. Emergency transportation system developed	4. Health facilities equipped and rehabilitated
Conduct needs assessment of health facilities	Review the Comprehensive Council and Health Management Plan (CCHMP) guidelines and training materials	Assessment of current emergency transportation system	Health facilities equipped to meet Comprehensive Emergency Obstetric and Newborn Care (C/EmONC) standards
Develop training materials job aids	Train R/CHMT on CCHMPs and Financial Management	Purchase Suzuki ambulances	Health facilities rehabilitated
Train <u>Regional and Council Health Management Teams</u> (R/CHMT) on leadership and management	Conduct quarterly CHMT Meetings and joint work planning	Conduct quarterly monitoring for emergency transportation	
Train R/CHMTs on supportive supervision	Develop training materials for Health Management Information Systems		
Train R/CHMTs on mentorship	Train R/CHMTs on Health Management Information Systems		
Conduct supportive supervision	Train R/CHMTs on data utilization		
Conduct needs assessment of health facilities	Conduct quarterly data quality assessment meetings		
5. Gov't of Tanzania maternal and newborn care clinical practice guidelines adapted and implemented	6. <u>Health care workers</u> (HCWs) trained on Emergency Obstetric and Newborn Care and family planning	7. Health care workers mentored on BEmONC, CEmONC and family planning	8. Maternal death audit system developed

Desk Review of CEmONC standards	Training HCWs on Basic Emergency Obstetric and Newborn Care	Develop <u>Objective Structured Clinical Examination</u> (OSCE)	Conduct maternal death review assessment
Develop Job Aids	Training HCWs on Comprehensive Emergency Obstetric and Newborn Care	Coaching and Mentoring Using OSCE	Conduct quarterly maternal death review meetings
Purchase ALARM International Program kits for training in Basic Emergency Obstetric and Newborn Care	Train HCWs on <u>Sexual and Reproductive Health and Rights</u> (SRHR) including long-acting family planning		
9. <u>Community Health Worker</u> (CHW) program implemented	10. Youth friendly Sexual and Reproductive Health and Rights developed and integrated into care	11. Gender-sensitive Maternal and Neonatal Health community scorecards conducted	12. Communities sensitized on gender-sensitive Maternal and Neonatal Health
Map CHWs	Identify youth champions/peer educators	Training of trainers on Community Score Card	Develop Social and Behaviour Change Communication materials
Train CHWs and Supervisors	Develop adolescent girl and youth Sexual and Reproductive Health and Rights messages	Conduct community meetings	Training of trainers and Social Analysis and Action Sexual and Reproductive Health and Rights dialogues
Procure supplies for CHWs and supervisors	Train youth champions	Conduct interface meetings	Conduct community dialogues with community groups
Provide stipends for CHWs	Train health care workers on youth friendly services		Conduct community awareness for Sexual and Reproductive Health and Rights
	Mentor health care workers on youth friendly services		
	Conduct community youth sexual education meetings		