

Effectiveness of the mother-friendly hospital initiative on the delivery of maternal and newborn care among the MFHI-centred health facilities.

A cross-sectional study.

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Abstract

Background

Effective maternal and child health practice requires skillfully combining a number of theoretical models and frameworks to support systems addressing the health needs of women, children, and families. The study assessed the effectiveness of the Mother Friendly Hospital Initiative on the delivery of maternal and newborn care among the MFHI-centred health facilities.

Methodology

This was an exploratory, descriptive, cross-sectional study that adapted both quantitative and qualitative methods of data collection. The study population included all mothers of reproductive age (15-45years) who are receiving maternal and newborn care services.

Results

There were slightly more female participants (85.7%) than males (14.3%). Most of the respondents (88.6%) agreed that mothers in labour were provided with the highest level of privacy. Under BEMOC, uterotonics (94.28%) and parenteral antibiotics (91.43%) were the most administered emergencies. All (100%) in Buikwe hospitals are satisfied with their work mainly because of the good pay and good working environment. Maternal satisfaction was highest for quality of nursing care received in MFHI hospitals (mean: 4.72 ± 0.55 , median: 5[IQR: 5-5]) and lowest in the non-MFHI hospitals (mean: 3.85 ± 0.74 , median: 4[IQR: 3-4]). Antenatal care (ANC) utilisation by women across all hospitals was relatively high, between 70% and 88%. A statistically significant relationship was found between the type of hospital and ANC use ($\chi^2 = 12.320$, $df=1$, $p<.001$). Generally, the proportion of women attending ANC in the MFHI hospitals is lower than that in non-MFHI hospitals.

Conclusion

This program was a good innovation towards improvement of maternal and child health and has shown indicators of reducing maternal mortality by ensuring hospitable care for all mothers to seek care.

Recommendations

MFHI should further develop strategies to strengthen health workers' skills in handling mothers as one way to enforce increased access and utilisation of maternal health services.

Keywords: Effectiveness, Mother Friendly Hospital Initiative, Delivery, Maternal and newborn care, MFHI-centred health facilities.

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Background

Effective maternal and child health (MCH) practice requires skillfully combining several theoretical models and frameworks to support systems addressing the health needs of women, children, and families (Fraser, 2013). Ongoing quality improvement of a program ensures its ongoing feasibility, efficiency, engagement, cultural relevance, and effectiveness (Austo et al., 2009). It is important to note that a woman's description and perception of non-dignified care may be highly context-specific.

Niles Newton studied the effect of the environment on the process of labour and birth in laboratory mice (Lothian, 2004). When the mice were disturbed, especially by a lack of privacy, catecholamine surges shut down early labour (Lothian, 2004). Later in labour, hormone release was inhibited, and the fetal-ejection reflex did not occur (Lothian, 2004).

Health workers are likely to have more positive attitudes toward their work and to perform better when they receive the support and resources they need to provide essential

services, and when their work is valued by the community (WHO Geneva, 1993, 1995). The study assessed the effectiveness of the Mother Friendly Hospital Initiative on the delivery of maternal and newborn care among the MFHI-centred health facilities.

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Research design

This was an exploratory, descriptive, cross-sectional study that will adapt both quantitative and qualitative methods of data collection.

Cross-sectional survey:

To determine the pattern of change in relation to time, a cross-sectional design will be used. Cross-sectional studies are useful to collect extensive information from an adequate number of respondents with case study analysis in a given period of time.

Quantitative and Qualitative:

The study used both qualitative and quantitative approaches to collect data. Qualitative research generally sought to gain information on the relationships between personal and social meanings; individual and cultural practices, and the material environment or context.

Target population

The study was performed in Greater Mukono and Greater Wakiso Districts. The target population for this exploratory

study included Ugandan public and private hospitals, mothers receiving care in these hospitals, the newborn children, and the health workers attending to the mothers during labour and the immediate postpartum period.

Study population

The study population included all mothers of reproductive age (15-45years) who are receiving maternal and newborn care services.

Study Unit

The study unit was a health worker and a mother in the Ugandan public and private hospitals.

Sample size determination

The study sample was determined by Yamane's formula for sample size determination. Yamane (1967:886) provides a simplified formula to calculate sample sizes.

The formula states:

$$n = \frac{N}{1 + N(e)^2}$$

Where: n- sample size

N- Population size=70

e- Margin of error (level of precision, α) = 0.05

Sample size of the health workers in the maternity department

$$n = 70 / (1 + (70 * 0.0025))$$

$$n = 60$$

Table 1: The sample size distribution of the health workers is shown below:

Hospital	Doctors	Sisters	Midwives	Nurses	Gynecologist	Total
Buikwe	2	10	5	2	1	20
Kawolo	2	10	5	2	1	20
Kisubi	2	2	3	2	1	10
Entebbe	2	2	3	2	1	10
Total	8	24	16	8	4	60

Sampling techniques

Simple random sampling and purposive sampling were used to select the sample of mothers for interviews and questionnaires, too. This involved the use of a lottery system whereby the names or the codes of the respondents were written on a piece of paper, and then the lottery was drawn. For other categories of respondents, especially for interviews, purposive sampling was used. This involved stratified sampling for the population and then choosing the group purposely needed. The study believes that this category of respondents had the relevant information, which assisted them in accomplishing the study.

Inclusion criteria

The study included all mothers of reproductive age group in Entebbe Hospital, Kisubi Hospital, as well as Kawolo Hospital and Buikwe Hospital, of the greater Mukono and Masaka Districts.

Exclusion criteria

The study excluded mothers who were not attended to by the health workers at those hospitals at the time the study was carried out.

Data collection methods

Both primary and secondary data were used in the course of conducting this study. The research used the following research instruments: (i) Document reviews, (ii)

Questionnaires, iii) Key Informant Interviews, iv) Exit interviews, v) Focus group discussion, and vi) observations.

Documentation reviews

Relevant records and books that were easily accessible were reviewed about the impression of how the Mother Friendly Hospital Initiative had been operating in the hospitals under study, e.g., finances, memos, minutes of previous years. These gave comprehensive and historical information about the MFHI program.

The review of documents was an unobtrusive method, rich in portraying the values and beliefs of participants in the setting. Minutes of meetings, logs, announcements. Important journals, statutes, Acts, Manuals, Guidelines, as well as minutes.

The purpose of conducting document reviews was to obtain balanced information that would be used during interviews, questionnaires, and focus group discussions.

Questionnaire

Questionnaires typically entailed several open-and closed-ended structured questions that were examined for bias, sequence, clarity, and face validity.

The questionnaire was given to all the specified respondents. The questions were focused on the perceptions of the respondent groups regarding the Mother-Friendly Hospital Initiative. The open-ended questions aimed at opening up more discussions, while the closed questions aimed at collecting particular responses.

Key Informant Interviews

The interviews helped the study to fully understand someone's impressions or experiences, or learn more about their answers to questionnaires, probe, explain, or help clarify questions, increasing the likelihood of useful responses. Key informant interviews were used to collect data on the progress of the MFHI relevant to maternal and newborn health. Information was gathered on experiences and roles of various actors, and the management of the program and practices related to maternal and newborn care and health.

Focus group discussions

This method was used to gather more information about the study. About eight members per group were used in the MFHI hospitals.

The study identified trends in the perceptions and opinions expressed, which were revealed through careful, systematic analysis.

Exit interviews

These were carried out to assess clients' satisfaction with the MFHI because they were simpler than other possible choices (such as household interviews and focus groups), were more practical, were less expensive to carry out, and allowed for the most rapid feedback. In particular, if feedback is provided in a meaningful and timely way, client satisfaction exit interviews can serve not only as a way to monitor certain aspects of quality, but also as a management tool to improve program performance and sustainability. The mothers who were not delivering for the first time were given a questionnaire to further analyse utilisation of maternal health care services.

Observation.

This was done to gather information about how the program was actually operating. The study understood processes, knowledge, views, and operations of the hospitals on the delivery of maternal and newborn care services. The observation methods helped the study to see events as they occurred. Observation visits were carried out at maternity and neonatal wards to identify and assess the available facilities, including supplies, drugs, and equipment used for newborn care and those related to maternal health. A checklist was used.

Data quality control

Validity

Face validity was used as a logical link between the objectives of the study and the questions on the interview schedule, and content validity was used to establish whether the questions on the instrument covered all the issues about the impact of the Mother Friendly Hospital Initiative on the delivery of maternal and newborn care services. The content validity index model below was used in ascertaining the validity of the instruments used.

$$CVI = (n - N/2) / (N/2).$$

Where n = number of respondents indicating essential, N = total number of respondents. The study targeted a content validity index of at least 0.5 as a basis for ironing out the randomness within the factors considered in the instruments.

Respondents	CVI
Health workers	0.62
Mothers on discharge	0.49
Mothers who had given birth in the previous 3years	0.51

Since the content validity index for all the instruments was above or close to 0.5 as shown, the questionnaires turned out to be valid.

Reliability

To establish the reliability of the questionnaires that were used for the research, test/re-test reliability was done to find

out if the characteristics are the same, and a pre-test was also done. Cronbach's alpha was used since it was considered to be a measure of scale reliability. Cronbach's alpha is a measure of internal consistency, that is, how closely related a set of items are as a group. It is considered to be a measure of scale reliability.

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Interpretation of Cronbach's alpha.

Cronbach's alpha Internal consistency

$\alpha \geq 0.9$	Excellent (High-Stakes testing)
$0.7 \leq \alpha < 0.9$	Good (Low-Stakes testing)
$0.6 \leq \alpha < 0.7$	Acceptable
$0.5 \leq \alpha < 0.6$	Poor
$\alpha < 0.5$	Unacceptable

	Cronbach's alpha	Cronbach's alpha based on standardized items	No.of items
Questionnaire for health workers	0.650	0.576	41
Questionnaire for mothers	0.705	0.666	14

Generally, the questionnaires were tested for internal consistency, and they exhibited a Cronbach's alpha which was acceptable for the study.

Data analysis and presentation

In an effort to come up with an inferentially meaningful analysis, interpretation, conclusion, and recommendations, data will be analyzed and presented. In line with this, cross-data validation will be done to establish the relationship between the independent variable, Mother Friendly Hospital Initiative, and the dependent variable, maternal and newborn care services among hospitals in the Greater Mukono and Wakiso Districts.

Quantitative data analysis

The data were edited, coded, and cleaned before analysis was done. Statistical packages like Epi-Data and SPSS were used for data entry and analysis. The data were condensed into frequency counts and tables, and graphs as found appropriate. Cross-tabulated tables and chi-square tables were also used as required.

Qualitative Data Analysis

Content analysis was used to read through raw qualitative data from respondents who participated in the focus group discussions so as to understand the meaning as applicable to the research. Also, qualitative data from the questionnaires and interviews were coded and edited.

Ethical consideration

To carry out data collection at the different health facilities, permission was sought from the medical superintendent of the hospital, who further recommended that the study be carried out in the hospital. To obtain information from the respondents, their consent was sought before the administration of the data collection instruments. For the security of their information and privacy, the respondents were assured of maximum confidentiality.

RESULTS

Response Rate

From the 60 questionnaires administered to the health workers in the maternity department, 35 were collected and found usable for analysis, i.e., 10 from St. Charles Lwanga Buikwe Hospital, 8 from Entebbe Hospital, 9 from Kawolo Hospital, and 8 from Kisubi Hospital. This indicates that the response rate was 58.33%, which was acceptable for this particular study. From a sample of 80 mothers selected for interviews immediately after discharge from the hospitals under study or who had ever delivered from the hospitals where the study was being carried out, 40 were interviewed (17 from Kawolo hospital, 10 from Kisubi hospital, 8 from Buikwe hospital and 5 from Entebbe hospital) which indicated a 50% response rate and given that this was a survey, the response rate is acceptable for the study as most surveys usually exhibit lower response rates. Those who had delivered before were administered a questionnaire.

Socio-demographic composition of survey sample

In this survey, there were slightly more female participants (85.7%) than males (14.3%). The majority of participants were single with no partner or with a regular partner, and a

significant proportion was married. Similarly, most of the respondents (37.2%) were in the age group 33 and above. Nearly all the survey participants had attained formal education, and the majority (85.7%) had gone to tertiary institutions. The majority of the survey participants were midwives (65.7%).

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Table 5: Basic characteristics of the health workers that responded.

Indicator	Frequency (Total= 35)	Percent (%)
Sex		
Female	30	85.7
Male	05	14.3
Age (Groups)		
21-24	11	31.4
25-33	11	31.4
33 & above	13	37.2
Level of Education		
Tertiary	30	85.7
University	5	14.3
Marital Status		
Single	22	62.9
Married	13	37.1
Qualification of respondent		
Doctor	5	14.3
Sister	5	14.3
Midwife	23	65.7
Nurse	2	5.7

QUALITY OF CARE IN THE HOSPITALS Respectful and dignified maternity care

Table 6: Table showing frequencies of respectful and dignified maternity care.

Indicator	Name of hospital	No	Yes	Not sure	Total
		Frequency/ Percent (%)	Frequency/ Percent (%)	Frequency/ Percent (%)	Frequency/ Percent (%)
Highest level of privacy available for mothers in labour					
	Buikwe	0 (0.00%)	10 (28.57%)	0 (0.00%)	10 (28.57%)
	Entebbe	2 (5.71%)	6 (17.14%)	0 (0.00%)	8 (22.86%)
	Kawolo	1 (2.86%)	7 (20.00%)	1 (2.86%)	9(25.71%)
	Kisubi	0 (0.00%)	8 (22.86%)	0 (0.00%)	8(22.86%)
	TOTAL	3 (8.57%)	31 (88.57%)	1 (2.86%)	35 (100.00%)

Most of the respondents (88.6%) agreed that mothers in labour were availed the highest level of privacy compared to the 8.6% who disagreed. Of these, 28.6% of them were from Buikwe Hospital, 22.9% were from Kisubi Hospital, both PNFP hospitals, whereas 20.0% of them were from Kawolo Hospital and 17.1% were from Entebbe Hospital. In the

MFHI hospitals, privacy is ensured by the use of curtains during labour so as to ensure a good labour process without any disruption; curtains separating the delivery beds, and accessibility to the labour wards was limited to staff. In the MFHI hospitals especially, women were offered a smooth

labour, which encouraged these women to give birth again in these hospitals.

EMONC (Basic and comprehensive) offered

Generally, all the hospitals offer both Basic and comprehensive Emergency obstetric care. Comparing the MFHI hospitals and the non- MFHI hospitals, in a period of two months before the study was carried out, it was found

that BEMOC and CEMOC had been offered more in the MFHI hospitals than the non-MFHI hospitals.

It is also observed that under BEMOC, Uterotonic drugs (94.28%) and parenteral antibiotics (91.43%) were the most administered emergencies, followed by newborn resuscitation at 88.57%. Regarding CEMOC, both blood transfusion and surgery had been offered in all health facilities at 94.28% and 94.28%, respectively.

Table 7: Emonc offered at the facilities

BEMOC Offered												
Name of hospital	Parentral antibiotics administered		Uterotonic drugs administered		Parentral anticonvulsant s administered		Manual removal of placenta performed		Assisted vaginal delivery performed		Newborn resuscitation performed	
	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
BUIK WE	0(0.0%)	10(28.57%)	0(0.0%)	10(28.57%)	0(0.00%)	10(28.57%)	1(2.86%)	9(25.71%)	7(20.00%)	3(8.57%)	0(0.00%)	10(28.57%)
KAW OLO	0(0.0%)	9(25.71%)	0(0.0%)	9(25.71%)	0(0.00%)	9(25.71%)	4(11.43%)	5(14.29%)	9(25.71%)	0(0.00%)	0(0.00%)	9(25.71%)
Sub-total in MFHI Hospitals	0(0.0%)	19(54.28%)	0(0.0%)	19(54.28%)	0(0.00%)	19(54.28%)	5(14.29%)	14(40.00%)	16(45.71%)	3(8.57%)	0(0.00%)	19(54.28%)
ENTE BBE	2(5.71%)	6(17.14%)	2(5.71%)	6(17.14%)	4(11.43%)	4(11.43%)	3(8.57%)	55(14.29%)	5(14.29%)	3(8.57%)	1(2.86%)	7(20.00%)
KISU BI	1(2.86%)	7(20.00%)	0(0.00%)	8(22.86%)	1(2.86%)	7(20.00%)	2(5.71%)	6(17.14%)	5(14.29%)	3(8.57%)	3(8.57%)	5(14.29%)
Sub-total for non-MFHI Hospitals	3(8.57%)	13(37.14%)	2(5.71%)	14(40.00%)	5(14.29%)	11(31.43%)	5(14.28%)	11(31.43%)	10(28.57%)	6(17.14%)	4(11.43%)	12(34.29%)
Total in all hospitals: 35 (100.00%)	3(8.57%)	32(91.43%)	2(5.71%)	33(94.28%)	5(14.29%)	30(85.71%)	10(28.57%)	25(71.43%)	26(74.28%)	9(24.71%)	4(11.43%)	31(88.57%)
CEMOC offered												
Name of hospital	Blood transfusion performed		Surgery performed									
	No	Yes	No	Yes								
BUIK WE	0(0.00%)	10(28.57%)	0(0.00%)	10(28.57%)								
KAW OLO	0(0.00%)	9(25.71%)	0(0.00%)	9(25.71%)								

“We don’t usually get visits from the health workers but when I was bleeding one time after giving birth, I called the toll free line and the person who picked the call asked me to visit the hospital so that I would be injected to stop the bleeding which could have led me to die.”

ENTE	1(2.86%)	7(20.00	1(2.86	7(20.00
BBE		%)	%)	%)
KISU	1(2.86%)	7(20.00	1(2.86	7(20.00
BI		%)	%)	%)
Total in all hospitals	2(5.71%)	33(94.28%)	2(5.71%)	33(94.28%)

BIVARIATE ANALYSIS

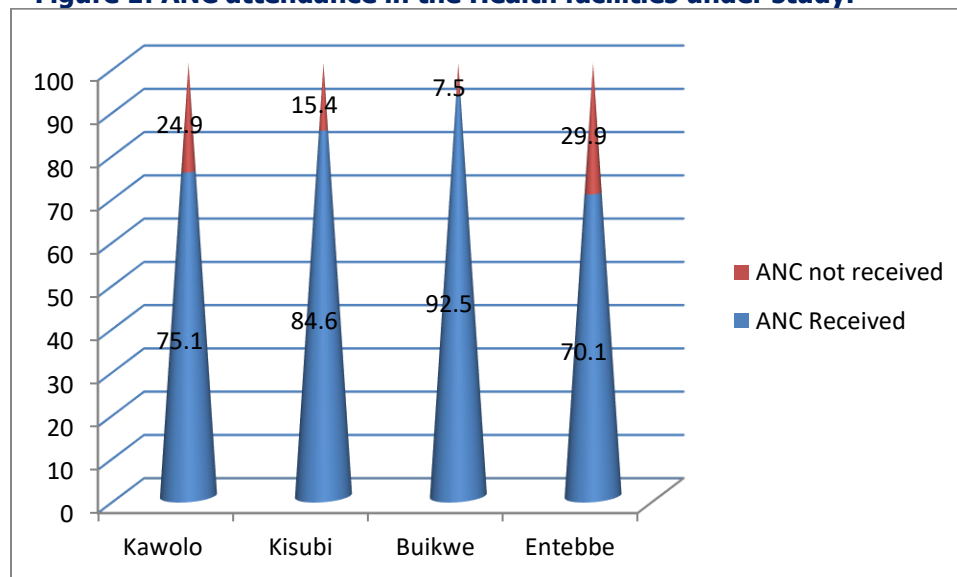
ANC and the sequence of training and promotion of health care.

The sequence of training and promotion of services in the MFHI hospitals has contributed to more women attending ANC, as seen.

75.1% of the mothers at Kawolo hospital had received antenatal care, 84.6% from Kisubi hospital, 92.5% from Buikwe hospital, and 70.1% from Entebbe hospital compared to the 24.9% from Kawolo hospital, 15.4% from

Kisubi hospital, 7.5% from Buikwe hospital, and 29.9% from Entebbe hospital who had not received antenatal care during their pregnancy

Figure 1: ANC attendance in the Health facilities under study.



Statistically significant differences existed in the ANC utilization of all the four health facilities included in this study. However, it can be seen that similarities exist between the PNFP hospitals, i.e Buikwe and Kisubi hospitals.

Nevertheless, significant differences occur in both the Hospitals under study and ANC utilization indices between the MFHI and non-MFHI hospitals. 50% of the women interviewed had received ANC from the MFHI hospitals

compared to 30% in the non-MFHI hospitals. The probability associated with the chi-square statistic of 0.00 was less than 0.05, indicating there's a significant difference in whether or not a mother had attended ANC in an MFHI

hospital or not. Generally, women in the MFHI hospitals are more likely to utilize ANC compared to those in the non-MFHI hospitals.

Table 8: Utilization of ante-natal in the MFHI and non-MFHI hospitals

	Had attended ANC	Had not attended ANC	Total
MFHI hospitals	20 (50.00%)	05 (12.5%)	25 (62.5%)
Non-MFHI hospitals	12 (30.00%)	03 (7.5%)	15 (37.5%)
Total	32(80%)	08(20%)	40 (100%)
<i>Chi-square (X2) value:</i>			0.00000

ANC and frequency of Caesarean Section

The C-Section in the hospitals under the MFHI was improved by the initiative, which helped to increase the number of mothers benefiting from it, thus contributing to overall improvement in maternal and newborn care. It was noted that follow-up for postnatal care is not routinely observed; however, with the help of the toll-free line, the mothers can call the health workers for advice.

A TBA from Buikwe was quoted as saying, "Sometimes I take my children to deliver from the health facilities, not because I don't know how to manage deliveries but because sometimes I lack the necessary equipment and supplies."

TBA from Buikwe District

However, more work needs to be done to improve functioning and delivery of services at both the pre and post-natal stages in the public hospitals to address the weaknesses in health education and clinical practices.

Traditional Birth Attendants (TBAs) still play a crucial role in the delivery of maternal and neonatal health in the areas around Buikwe and Kawolo hospitals, and many of the obstetric emergencies happen as a result of delayed referrals by the TBAs.

It was observed that in the MFHI hospitals, deliveries increased since the program was implemented and maternal deaths gradually decreased every year. Maternal deaths were mainly due to APH/PPH and other complications due to pregnancy. Neonatal deaths were mainly due to asphyxia.

Table 9: showing Deliveries, live births, C-section, maternal and neonatal deaths

Hospital		2009/10	2010/11	2011/12	2012/13	2013/14
Kawolo	Deliveries	2835	3069	3159	3108	3441
	Live births	2608	2897	2770	2967	3609
	C-section	16				777
	Maternal deaths	04	10	05	17	02
	Neo-natal deaths		06	03	44	36
Buikwe hospital	Deliveries	498		889	807	
	Live births					
	C-section	132		187	137	
	Maternal deaths	06		04	02	
	Neo-natal deaths	3		00	00	
Kisubi hospital	Deliveries			1509	1492	1562
	Live births			1492	1478	1538

C-section			
Maternal deaths	07	16	04
Neo-natal deaths	19	09	14

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Effective communication to the community about availability of quality maternal and newborn care

Meeting the issue of accessibility of maternity and newborn care services necessitates effective communication and transportation components. Accessibility is one of the determinants of maternal mortality and morbidity. If a facility is geographically accessible, then these can be reduced. Delay in reaching the health facility when a woman has a pregnancy emergency can be controlled if a hospital is easily accessed.

The geographical accessibility of all the health facilities in the study was good, implying that women with pregnancy complications need to be transported to and treated in a facility providing obstetric care. One indicator used for measuring accessibility of the maternity and newborn care services could be the percentage of complications treated in EOC facilities.

The standard is 100%. Another could be the existence of a transportation system, for example, an ambulance network or a reliable public transportation system. Meeting this criterion implies a strong commitment from the authorities to provide EOC facilities, including communication and transportation components.

Table 10: Effective communication to the community

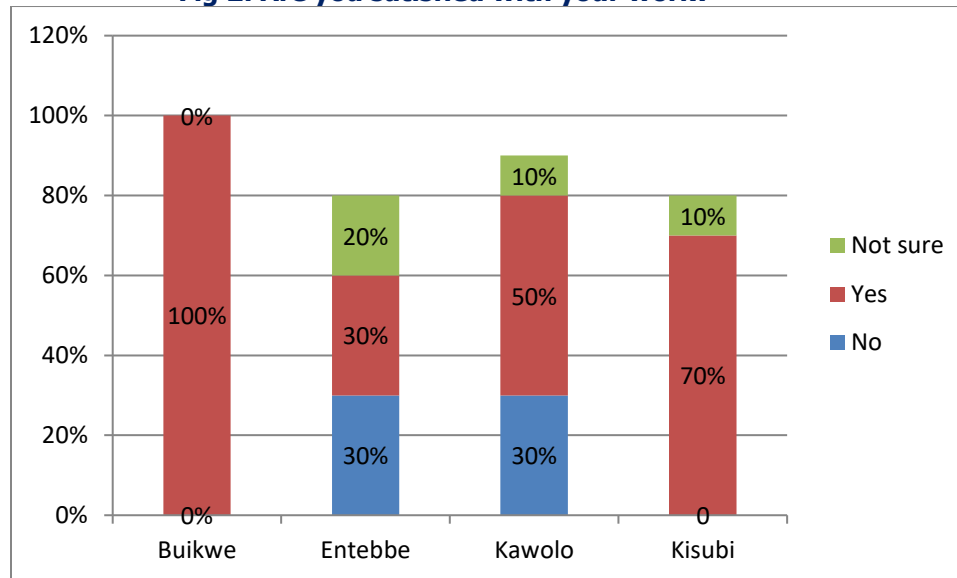
Indicator	Name of hospital	No	Yes	Not sure	Total
		Frequency/ Percent (%)	Frequency/ Percent (%)	Frequency/ Percent (%)	Frequency/ Percent (%)
4.3.3.1 Availability of proper directions to the health unit indicating availability of maternity and newborn care services					
	Buikwe	0(0.00%)	10(28.57%)	0(0.00%)	10(28.57%)
	Entebbe	2(5.71%)	4(11.43%)	2(5.71%)	8(22.86%)
	Kawolo	0(0.00%)	8(22.86%)	1(2.86%)	9(25.71%)
	Kisubi	0(0.00%)	8(22.86%)	0(0.00%)	8(22.86%)
	TOTAL	2(5.71%)	30(85.72%)	3(8.57%)	35(100.00%)
4.3.3.2 Existence of community day for dialogue between the facility and community members					
	Buikwe	1(2.86%)	9(25.71%)	0(0.00%)	10(28.57%)
	Entebbe	2 (5.71%)	2(5.71%)	4(11.43%)	8(22.86%)
	Kawolo	1(2.86%)	7(20.00%)	1(2.86%)	9(25.71%)
	Kisubi	0(0.00%)	7(20.00%)	1(2.86%)	8(22.86%)
	TOTAL	4(11.43%)	25(71.43%)	6(17.14%)	35(100.00%)

Nurtures friendly and well-motivated health care professionals

All (100%) workers in Buikwe hospitals are satisfied with their work mainly because of the good pay and good working environment. 50% of the staff in Kawolo Hospital are dissatisfied with their work since the government delays

payment and their pay is low. The hospital is understaffed, and the doctors are few, so the midwives are usually overworked and get exhausted by the end of the day. There's a similarity between the Public hospitals and the PNFP hospitals when it comes to this area. The health workers in the PNFP hospitals are more satisfied with their work than in the Public hospitals.

Fig 2: Are you satisfied with your work?



Functional referral network inter-hospital/health unit communication

In Buikwe and Kawolo, the MFHI program was able to provide the hospitals with mobile phones that are useful for communication, just in case of critical cases, especially when it comes to the treatment of life-threatening

complications. The percentage was high in the MFHI hospitals and Kisubi Hospital (PNFP) because in the MFHI hospitals, they have phones in every ward with airtime loaded to enable communication within the health unit and the toll-free line for the community to communicate with the health facilities. The MFHI hospitals are then able to communicate with other units in the same catchment areas.

Table 11: Existence of an established functional intercom within the health unit

Indicator	Name of hospital	No	Yes	Not sure	Total
		Frequency/ Percent (%)	Frequency/ Percent (%)	Frequency/ Percent (%)	
<i>Existence of an established functional intercom within the health unit</i>					
	Buikwe	1(2.86%)	9(25.72%)	0(0.00%)	10(28.57%)
	Entebbe	2(5.71%)	3(8.57%)	3(8.57%)	8(22.85%)
	Kawolo	1(2.86%)	7(20.00%)	1(2.86%)	9(25.72%)
	Kisubi	0(0.00%)	7(20.00%)	1(2.86%)	8(22.86%)
	TOTAL	4(11.43%)	26(74.29%)	5(14.29%)	35(100.00%)

Adherence to Baby Friendly Hospital Initiative standards

The Baby Friendly Hospital Initiative (BFHI), also known as Baby Friendly Initiative (BFI), is a worldwide programme of the World Health Organization and UNICEF, launched in 1991 following the adoption of the *Innocenti Declaration* on breastfeeding promotion in 1990.

The standards for the BFHI were available in the hospitals under the MFHI health facilities since they had been introduced there. The standards that were observed

included: (i) Early initiation of breastfeeding and (ii) the time for initiation of breastfeeding.

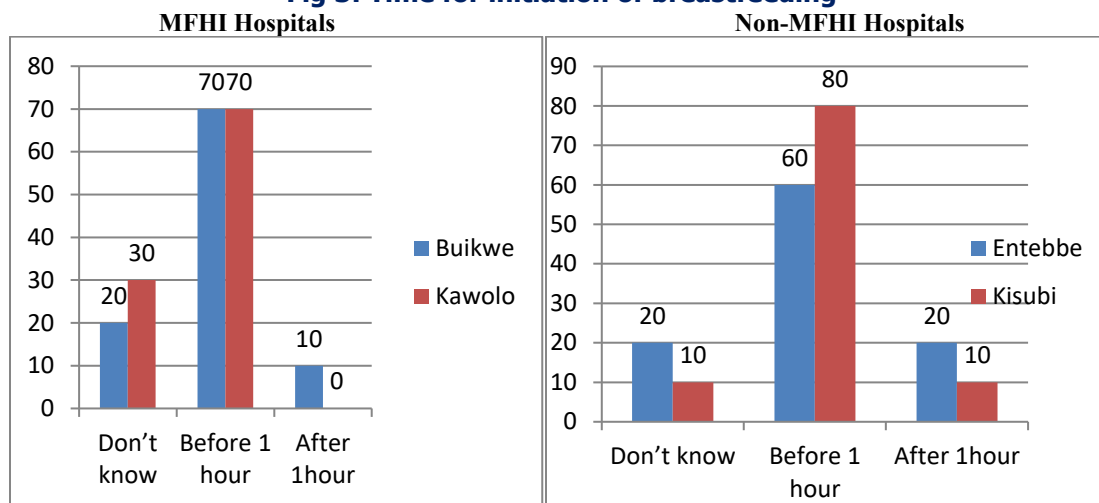
Early initiation of breastfeeding

For proper nutrition of any newborn baby, initiation of breastfeeding within 1 hour of birth is critical, hence contributing to overall reduction of neonatal mortality. It ensures that skin-to-skin contact is made early on, an important factor in preventing hypothermia and establishing the bond between mother and child. Also, if breastfeeding is done initially, the mother's risk of acquiring postpartum

hemorrhage is reduced. Hemorrhage is one of the leading causes of maternal mortality. The study found out that in the MFHI hospitals, breastfeeding was encouraged highly and the standards of the Baby friendly hospital initiative were followed i.e. the breast feeding policy was available, the health care workers are trained in the skills necessary to implement the policy, the pregnant mothers are trained about breastfeeding benefits and management, breast feeding within one hour after birth, among others whereas in the non-MFHI hospitals, the breast feeding policy is not

there though the health workers are informed about breast feeding. Most of the mothers learn about breastfeeding because of experience, and others from those of experience. The study found that a considerable proportion of mothers, 75%, were able to breastfeed their children within an hour of birth. The remaining 25% were unable to have their children breastfed because of various reasons, including not knowing what to do, swollen breasts, and not being given the baby at the right time after delivery, according to the qualitative assessment.

Fig 3: Time for initiation of breastfeeding



Relationship between mother friendliness and utilization of maternal health care services.

Mothers on discharge after delivery and/or those who were attending ANC at the time the study was carried out but had delivered 3 years before the study were interviewed to find out their level of satisfaction with the MFHI facility or non-MFHI facility.

Satisfaction of the mothers with the maternal and newborn care in the facility.

Satisfaction of the mothers in the MFHI hospitals was rated on a five-point Likert scale. A correlation analysis of overall satisfaction of mothers was conducted using descriptive and inferential non-parametric statistics.

Maternal satisfaction was highest for quality of nursing care received in MFHI hospitals (mean: 4.72 ± 0.55 , median: 5[IQR: 5-5]) and lowest in the non-MFHI hospitals (mean: 3.85 ± 0.74 , median: 4[IQR: 3-4]). The overall rating (mean: 4.17 ± 0.58 , median: 4[IQR: 4-5]) and the observed effect of the MFHI on the mothers (mean: 4.34 ± 0.58 , 4[IQR: 4-5]) were quite satisfactory. Almost all mothers (98.4%) indicated willingness to continue visiting the MFHI hospitals in the future or recommend it to others. The other

1.6% of the mothers were from Kawolo hospital and were dissatisfied with the fact that some beds in the general ward did not have curtains for privacy and mosquito nets to protect the babies from malaria infections.

Utilisation of maternal health care during previous pregnancy.

Utilisation of maternal health care is one of the important determinants of maternal mortality and morbidity. Utilisation of these services differs from hospital to hospital. Antenatal care (ANC) utilization by women across all hospitals was relatively high, between 70% and 88%. A statistically significant relationship was found between the type of hospital and ANC use ($\chi^2 = 12.320$, $df=1$, $p<.001$). Generally, the proportion of women attending ANC in the MFHI hospitals is lower than that in non-MFHI hospitals. About 38% of the women in the MFHI facilities had delivered in a health facility in the previous three years, whereas the others had delivered from home or by other institutions, mainly the TBAs, compared to the 57.1% who had delivered from the health facilities in the non-MFHI facilities. A significant relationship was found between the type of hospital and Place of delivery ($\chi^2 = 19.0022$, $df=2$,

$p < .001$), which implied that it really mattered where the mother had delivered from.

A significant relationship was found between the type of hospital and trained assistance during delivery ($\chi^2 = 37.3766$, $df=1$, $p < .001$), so this showed that it mattered if a mother had received trained assistance from an MFHI hospital or not. Most of the mothers in the MFHI facilities had previously been attended to by non-health professionals simply because there are many TBAs in the district, whereas most of the mothers in the non-MFHI hospitals had

previously been attended to by a health professional during birth.

Attendance at postnatal care was low across all the hospitals. Most of the mothers had not received postnatal care. In Buikwe Hospital, the highest percentage had not received postnatal care (75.3%) compared to Kawolo Hospital (69.3%). In Kisubi, 68.1% had not received postnatal care compared to 67.5% in Entebbe Hospital. The chi-square test shows that mothers in the MFHI hospitals are more likely to receive postnatal care than in the non-MFHI hospitals ($\chi^2 = 0.6422$, $df = 1$, $p < .001$).

Table 12: Utilization of maternal health care during previous pregnancy.

	MFHI hospitals		Non-MFHI hospitals	
	Buikwe	Kawolo	Kisubi	Entebbe
<i>Ante natal care</i>				
Received	78.7	70.1	87.9	88.3
Not received	21.3	29.9	12.1	11.7
<i>Place of delivery</i>				
Home	31.2	32.5	30.7	25.0
Health facility	40.8	34.5	69.3	44.9
other	28.0	33.0	0.00	30.1
<i>Assistance during delivery</i>				
Health professional	45.3	47.3	76.1	66.7
Non-health professional	52.2	43.7	20.6	17.6
No assistance	2.5	9	3.3	15.7
<i>Postnatal care</i>				
Received	24.7	30.7	28.7	32.5
Not received	75.3	69.3	68.1	67.5

Key challenges experienced in accessing the mother-friendly hospitals

Pregnant women travel long distances to the nearest MFHI health facilities for both ANC and postnatal care. Delivery at health facilities has been a very big challenge due to the long distances pregnant women are expected to travel. These trips require money for transport, which, due to high poverty levels, becomes very difficult to access. This causes mothers to visit the TBAs and village clinics as they are more accessible.

Inadequate equipment in some health facilities that provide maternity services inhibits proper care of deliveries as well as motivation to seek deliveries at the facilities.

High vacancy rates of medical personnel are affecting the quality of medical care provided to mothers and newborns. It was observed that Kawolo Hospital still faces a huge staff shortage, contributing to delays when seeking treatment and fatigue of clinical staff.

Discussion

From the community perspective, the objectives of the project are extremely important in linking the community and the health facilities to improve maternal, neonatal, and child health. At the district council, the programme was relevant as it has brought a new connection between the community and health facilities, which is an improvement in maternal health.

The Initiative involved quality improvement (Lau in Ammerman, 2010) of maternal health care in hospitals, for example, provision of water in Kawolo Hospital, provision of beds, bedsheets and curtains in both hospitals, renovation of the maternity ward and painting it.

The skills of the health workers were improved through training, and effective communication with the community was improved to bridge the gap between the health workers and the mothers in the community. The programme is in line

with the Maternal and Child Health programmes in the country, and it is consistent with MDGs 3 & 4. An analysis of the macro context also makes the objectives of the project highly relevant.

The study showed a statistically significant relationship between the type of hospital and ANC use ($\chi^2 = 12.320$, $df=1$, $p<.001$). Generally, the proportion of women attending ANC in the MFHI hospitals is lower than that in non-MFHI hospitals. If a hospital is mother-friendly, the mother is encouraged to attend all the services in place; hence, it is easier to identify the complications in time. This is in agreement with (Yuster, 1995)

A significant relationship was found between the type of hospitals and trained assistance during delivery ($\chi^2 = 37.3766$, $df=1$, $p<.001$), so this showed that it mattered if a mother had received trained assistance from an MFHI hospital or not. Most of the mothers in the MFHI facilities had previously been attended to by non-health professionals simply because there are many TBAs in the district, whereas most of the mothers in the non-MFHI hospitals had previously been attended to by a health professional during birth.

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Conclusions

This program was a good innovation towards improvement of maternal and child health; however, the government and other partners should consider joining hands to further improve the performance of the program. In the long run, this program has shown indicators of reducing maternal mortality by ensuring hospitable care for all mothers to seek care.

On sustainability, one of the important initiatives has been the direct involvement of the local district health system by including Kawolo Hospital, a Government hospital, in one of the pilot studies, since government hospitals are usually underfunded.

Recommendations

MFHI should further develop strategies to strengthen health worker skills in handling mothers as one way to enforce increased access and utilisation of maternal health services by mothers during pregnancy, childbirth, and post-delivery. In government hospitals like Entebbe and Kawolo hospitals, "Save the Mothers" should put a hand to lobby the government to improve the delivery of health services for

childbearing women, through, e.g., the provision of more skilled personnel, especially in Kawolo Hospital. The government should continue providing the hospitals with equipment so that even the helping hand (MFHI) just helps to build up from the government. The government should always be encouraged to take a leading role in the development of infrastructure in its hospitals.

MFHI should lobby for the government to construct more health facilities so that the programme can be extended in the district where it is, and further, this would reduce the distance travelled by mothers to reach the nearest health facility/mother-friendly hospital. There will be a need for more resources to be put into health construction through the Parliament, and the Government should continue taking a leading role in infrastructure provision, including those related to infrastructure development.

The MFHI implementers should continue to train more community-based agents and also work towards improvement of maternal and child health facilities and supplies/equipment, as well as continuous training and involvement of Village Health Committees to fill in gaps that are still faced in implementation of the programme.

The males and traditional leaders, and all other leaders at the villages where the programme was implemented, should be involved in sexual and reproductive health to help to tackle some practices that are rooted in unchallenged myths and traditions, and increase support for mothers during pregnancy and also in newborn care.

The government and the directors of hospitals should develop strategies for improving health worker attitudes towards patients, including the strengthening of supervision and motivation of health workers.

In the government hospitals, especially, there's a need to improve delivery rooms so that mothers are motivated to visit the facilities for antenatal, delivery, and postnatal care. Most of them tend to be discouraged by the look of the delivery rooms, which at times end up not visiting the health facilities and go to clinics.

Since there are many village clinics and they are more accessible to mothers, the MFHI should consider involving these clinics as stakeholders in the program so as to enable them to handle emergencies and also be able to refer mothers immediately to the MFHI hospitals.

Save the Mothers should look at expanding the grant size by inviting more partners, other than the government, so as to achieve its goals and make the programme more productive and successful, as it is one of the best innovations to reduce maternal and child mortality.

Save the Mothers should also incorporate ANC and PNC so as to promote maximum utilisation of the health services.

MFHI should continue to work hand in hand with the Ministry of Health and Health Centre I so as to ensure the availability of drugs in Kawolo Hospital.

The MFHI should also consider expanding the program even at the clinic level, as these mainly handle cases from

newborn babies and infants. These clinics have the potential to save the lives of the children; hence, they can be trained to handle emergencies at this level.

The MFHI should work hand in hand with the government through the Ministry of Health so as to provide insecticide-treated mosquito nets for the babies in hospitals, so as to reduce the risk of acquiring malaria, and they should also donate some.

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List of abbreviations

MFHI	Mother Friendly Hospital Initiative
ANC	Antenatal Care
MCH	Maternal and Child Health
MDGs	Millennium Development Goals
UNICEF	United Nations Children's Fund
WHO	World Health Organisation
EMONC	Emergency Obstetric Care
PNFP	Private Not For Profit
PNC	Postnatal care

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Data availability

Data are available upon request

Author contribution

Christine Sanyu Nannyonga collected data and drafted the manuscript of the study.

Harriet Nakanyike Mukoma supervised the study

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REFERENCES

1. Fraser M. R. (2013). Bringing it all together: effective maternal and child health practice as a means to improve public health. *Maternal and Child Health Journal*, 17(5), 767-775. <https://doi.org/10.1007/s10995-012-1064-1>
2. Maricopa 02021. Exploring relationship dynamics. <https://open.maricopa.edu/com110/chapter/4-4-nonverbal-communication-in-context/>
3. Lothian, J. A. (2004). Do not disturb: the importance of privacy in labor. *The Journal of perinatal education*, 13(3), 4-6. <https://doi.org/10.1624/105812404X1707>
4. Ammerman, R.T., Putnam, F.W., Bosse, N.R., Teeters, A.R., Van Ginkel, J.B., 2010: Maternal depression in home visitation: A systematic review. *Aggression and Violent Behavior* 15 (3), pp. 191-200. <https://doi.org/10.1016/j.avb.2009.12.002>
5. Astuto, J., & Allen, L. 2009: Home Visitation and Young Children: An Approach Worth Investing In? In Society for Research in Child Development (Ed.), *Social Policy Report*. <https://doi.org/10.1002/j.2379-3988.2009.tb00061.x>
6. WHO, Geneva. Midwifery Practice, 1993: Measuring, Developing and Mobilizing Quality care. Report of a Collaborative WHO/ICM/UNICEF pre-congress workshop, Vancouver, Canada.
7. WHO, Geneva. "Quality of Care, 1995: Doing Things the Right Way", *Safe Motherhood Newsletter*, No. 17.
8. Yuster, E.A., 1995: Rethinking the role of the risk approach and antenatal care in maternal mortality reduction. *International Journal of Gynecology & Obstetrics* 50 [https://doi.org/10.1016/0020-7292\(95\)02488-X](https://doi.org/10.1016/0020-7292(95)02488-X)

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