APPENDIX 10

Determining Sustainability of a community midwifery model in Siaya county, Kenya

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Abstract

Introduction: Reducing maternal mortality requires coordinated, long-term efforts. Sustainable Development Goal 3 (SDG3) states that *"by 2030, reduce the global maternal mortality ratio (MMR) to less than 70 per 100,000 live births*". One of the key indicators for monitoring the progress towards meeting the MMR target is the proportion of births attended by skilled birth attendants. One strategy to achieve this was the implementation of community midwifery. This study aimed at finding out whether the community midwifery practiced in Siaya County was sustainable.

Methods: A cross-sectional study that used both quantitative and qualitative data in four sub-counties of Siaya County. The study involved facilities as well as sampled mothers who had given birth within the previous year and who were served by the four sampled health facilities. It also involved skilled birth attendants working at the health care facilities of the primary levels of the health care system as well as the community Health Visitors (CHVs) attached to the selected health care facilities.

Findings: Current practice that involved the community participation improved the skilled attendance. This would ensure sustainability due to model's affordability and acceptance by the community members as evidenced by their acceptability and satisfaction with the midwives' services.

Conclusion: The CHVs may be relied upon to promote skilled birth attendance at the primary level of the health system as well as refer the women to the health facilities for childbirth, thus reducing the burden of employing more expensive and trained personnel in the community, thereby making community midwifery services cheaper for the County health system and community to afford.

Recommendations: Community midwifery model, as practiced in Siaya County should be stepped up with the support of the County Department of Health.

Keywords: Community midwifery, Sustainability, Skilled birth attendance,

Introduction

Sustainability is defined as the durability and permanence of a programme or project results at the end of the project and the expiration of the technical cooperation with a donor or sponsor (Mugenda & Mugenda, 2012).One of the objectives of the United Nations Millennium Development Goals (MDGs) was to reduce MMR by an average of 5.5% every year over the period 1990–2015. As a result, the first international meeting focusing on scaling up of the midwifery workforce at community level, drafted a Call to Action for all countries with high Maternal Mortality Rate to embark on intensified action to scale up

midwifery care at the community level (MOH 2005). In Kenya, Community Midwifery Model of care was implemented in 2006 with the aim of using out of work community midwives to conduct deliveries in the women's homes. Reducing maternal mortality requires coordinated, long-term efforts. Actions are needed within families and communities, in society as a whole, in health systems, and at the level of national legislation and policy(Costello, Osrin et al. 2004).The concept of sustainability in public funded health care services embraces questions of what is socially and ethically acceptable, or how societies decide what they can afford.

One key to a sustainable health care system is healthier population (Open Sustainability, 2013) .While sustainability is about the future of our society, it is also about the success of a community program to endure. Sustainability indicates that the system or service can be maintained at a steady state without exhausting the resources available to support it (Mugenda & Mugenda, 2012).

The three key attributes of sustainability are the benefits that are produced over time for individuals and populations, the contingencies which cause the benefits, and the costs of the program resources that are required to achieve them (Kornelsen 2007; S 2007). For a health care delivery system to be sustainable it would need to be accessible to all, financially viable and delivered with little impact to the environment (Open Sustainability, 2012). It would be critical to recruit and retain high quality health personnel with efforts made to recruit individuals locally and provision made for extensive and on-going training for capacity building (Jorgensen et al 2010).

The community midwifery model was introduced in Kenya and was expected to address the gap by ensuring that skilled care was available during pregnancy, labour and child birth and follow-up of both mother and baby during post-natal period in the community(MOH 2012).The model discussed in the guidelines focused on linking retired or out of work nurse/midwives to health facilities and the community in order to work as a team in improving the quality of Maternal and Neonatal Health in the community. However, these community midwives were usually private practitioners who would expect to be paid in the midst of the poverty stricken rural communities thus making it not affordable especially for the community. Provision of quality maternal and newborn care requires locally accessible and affordable 24 hour provision of highly skilled staff able to make rapid life-saving decisions with access to proper facilities, supplies, and support personnel (Swerissen 2007).

Programmes are sustainable when physical and social contingencies can be arranged to achieve better health outcomes which maintain over time at an acceptable level of disruption to established benefits. Programmes are also sustainable when the costs of reallocating resources are justified by the health benefits that are achieved (Kornelson 2009).

Sustaining level-one services in Kenya greatly depends on the degree of community ownership, participation and involvement, supported by political will in resource allocation for action by the state. The Government through MOH is therefore, required to mobilize additional resources from external partners and allocate resources from the government budget for the sustainability of the community midwifery model(MOH, 2006).

The Ministry of Health's interest in sustaining the community midwifery model was to ensure that the programme activities and the proposed ones together with the benefits they produced were continued long after the initial funding would have stopped especially from development partners (MOH, 2012). The objective of this study done in Siaya in 2014 was therefore, to determine the sustainability of the community midwifery model of care implemented.

Methods

The study was carried out in Siaya County of Western Kenya in 2014. It concentrated on four conveniently selected sub-counties namely Ugenya, Ugunja, Gem and Siaya, because of their proximity to each other. This was a cross-sectional study that used a three prong approach that used questionnaires for quantitative data, complemented by key informant interviews and focus group discussions for qualitative data.

The sample size was 374 women who had given birth within the year of study, and all midwives who worked in the sampled facilities (n=48). Four focus group discussions were also held with the community health volunteers. A multi-stage convenient sampling method was used to sample the women and the sample size for each sub-county was proportionately calculated according to their target population. The study instruments included questionnaires and KII and FGD guides. Data was collected in the households and at the facilities and analyzed using SPSS and the results presented as appropriate.

Results

To establish the facility characteristics, a total of twenty three (23) facilities were sampled for the study and all the facilities were government owned with 48% being health centres serving a population of between 5,000 to 10000 people and 46% dispensaries. The skilled workforce consisted of registered midwives (29%), registered community health nurses (40%), Enrolled community health nurses (27%) and other cadres (0.4%). All the 23 administrators confirmed the availability of maternity, family planning and child health services. In addition, 2% of administrators reported the availability of maternity services at night and weekends.

To assess the sustainability of the community midwifery care model the affordability of the maternity services, the community acceptability of the midwifery services and the acceptability of the midwifery model by both the community and the skilled birth attendants were measured.The relationship between the community and the health system, in terms of support and referrals as well as the linkages between the two, were also measured.

The proportion of women who had free maternity services during the delivery of their previous babies was 81% while only 4% could pay between Ksh 1500 and 6000 as shown in Figure 1. There were also those who did not pay because they either gave birth by themselves or were assisted by family members or neighbors.

Table 1: Summary of the demographic characteristics

Information		Facilities (n = 23)	Proportion (%)
Facility type	Hospital	1	4
	Health Centre	11	48
	Dispensary	11	48
ANC attendance(%)	< 50	8	35
	50 -99	11	48
	> 100	4	17
Delivery Coverage (%)	< 50	6	26
	50 -99	15	65
	> 100	1	4
No. of Beds	0-5	11	48
	6-10	7	30
	11-20	3	13
	>20	2	9
Staffing:			
From health centers		36	75
From dispensaries		12	25
Information		**Mothers (n=373)**	**Proportion (%)**
Age in Years	< 18	19	5
	18 - 25	171	46
	26 - 35	152	41
	36- 50	26	7
Parity	0 -2	169	45
	3 - 5	166	45
	6 - 7	33	9
	> 7	2	1
ANC Attendance			
Facility by a midwife		356	95
TBA		9	2
None		8	2
Skilled birth delivery		307	82
Non-skilled birth delivery		66	18

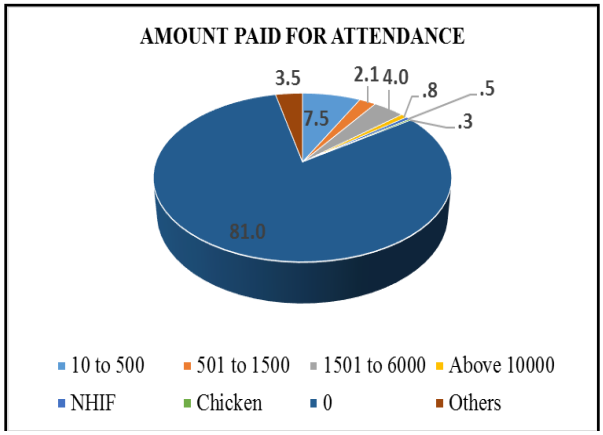

Figure 1: Amount of Money Paid for Maternity Services (n=373)

The other component of sustainability was satisfaction and acceptability of the program for purposes of ownership. The women were asked if they were happy with the services of the midwives and the community health volunteers who served them. From Fig.2 it may be observed that 83% of the mothers were generally happy with the services rendered by the midwives. This showed a statistical relationship with the proportion of skilled birth attendance which was 82% ($p < 0.001$)

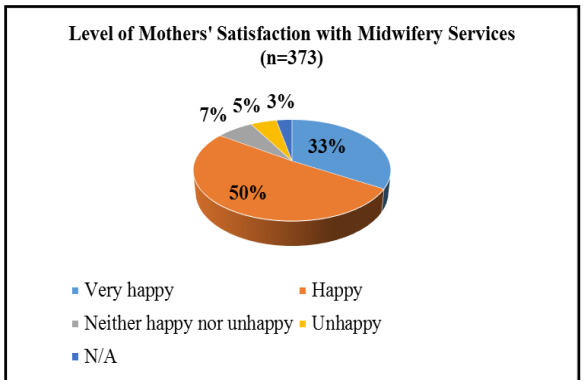

Figure 1 Proportion of Mothers happy with Midwifery services (n=373)

The level of mothers' satisfaction with the community health volunteers was also

measured and the proportion of respondents that were happy with their services was 79%. When asked whether they would accept that the midwives conduct deliveries at their homes, 68% responded in affirmative.

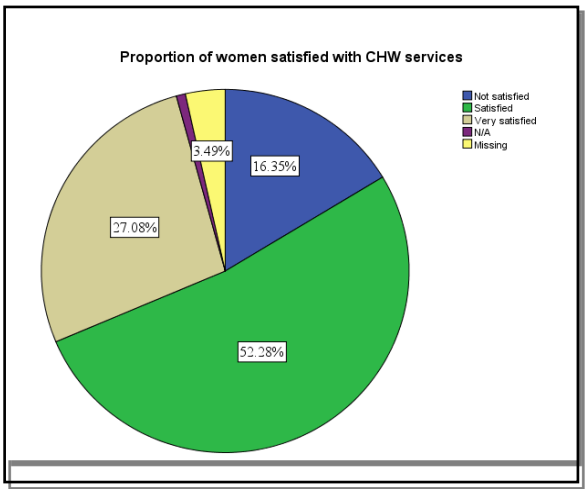

Figure 2: Proportion of women satisfied with CHV services

Discussion

In this study the community health volunteers performed the basic primary health care for health promotion and referral of women to deliver in the health facilities. The focus group discussions established their roles, most of which were supposed to have been taken up by the proposed out of work community midwives. It was observed that they had taken the roles of the more expensive professional community midwives thus lowering the costs in terms of remuneration, and especially if more professionals would be deployed to the community units. In a study done in Siaya in 2014 (Syagga, 2017), the CHVs moved from household to household on a one-to-one basis to discuss midwifery issues among other health issues. Swerissen (2007) noted that to ensure sustainable business, CHVs had to be trained and deployed locally for personalized door-to-door interactions promoting demand for health services through referral and follow-up just as was found out in this study. In this study the women also showed their satisfaction with the services of the CHVs by indicating that they were happy with them. Maternal perception of care and satisfaction with services was important in this regard as perceived quality was a key determinant of service utilization. The women's satisfaction with the services of the midwives translated into improved skilled birth attendance and was statistically significant ($p<0.001$). As much as women were satisfied with the community midwifery model, they did not want the deliveries conducted in their homesteads. This may support the fact that the health centres and dispensaries may be regarded as part of the community health care given that they are within the community.

The concept of sustainability in public funded health care embraces questions of what is socially and ethically acceptable, or how societies decide what they can afford. This is important for the ownership of a program and subsequently for the sustainability.The CHVs were involved and their remunerationwas lower than employing qualified midwives to do what they had been doing, other than skilled birth attendance. This would be a saving for the government in terms of human as well as financial resources. Their services were acceptable to the women thus increasing the level of compliance.They had also taken over the role that was supposed to be taken by the more qualified and more expensive community midwives, making them more effectively useful in the community midwifery practice thus, they might be used in the promotion of skilled birth attendance thus making community midwifery affordable for all stakeholders.

Conclusion

Community midwifery model is sustainable when the CHVs are involved and works with the health centres and dispensaries as part of community level of the health system whereby the women are referred to the facilities for skilled attendance.

Recommendation

The stipend for the CHVs should be stepped up and be consistent with their workload in order to enable them concentrate on their work with ease in order to ensure sustainability of the model.The facilities should be adequately staffed to ensure the sustainability of the model.

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