

Research Article

Disseminating information on the free healthcare initiative to communities and the effect on health outcomes in western rural Sierra Leone

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ABSTRACT

This research is geared towards understanding the flow of information on the free health care initiative, and the effect on health outcomes in communities around the western rural district of Sierra Leone. This study focused on how information disseminated to beneficiaries about the free health care initiative affects the level of facility utilization, and the effect on maternal and child health. This study was undertaken at peripheral health units and their respective catchment communities in the western rural district of Sierra Leone. This research was conducted on a selected group of people: pregnant women, lactating mothers, and mothers with children under the age of five years. A quantitative method was adopted in this study because of its flexibility, and validity of the kind of result it will provide. There were two sets of questionnaires designed for data collection: a PHU questionnaire, which is meant for the interview of facility staff in charge, and the beneficiary questionnaire that is meant for the interview of the different categories of beneficiaries in the different selected communities. The results of this research have revealed that the primary means of effective communication is through the radio. There has been some improvement in the maternal and child health over the last six years as well as an increase in facility utilization, and a drop in the number of maternal and child deaths. In addition, this research points to several gaps in the health sector in Sierra Leone, which affected the delivery of the free health care delivery in Sierra Leone.

Keywords: Sierra Leone, Rural communities, Free Healthcare, peripheral Health units, Anti natal Care.

INTRODUCTION

Sierra Leone is ranked 179 on the UNDP human development index and is one of the least developing countries in world on the human development indices, (UNDP human development index report, 2016). One of the major factors for this has to do with the poor health service delivery in the country that has a significant effect on pregnant women, lactating mothers, and children less than five years of age. There has been a decline in the health sector in Sierra Leone since independence (1963). The resulting effect is seen through a high rate of maternal and infant mortality. The World Bank and World Health Organization (WHO) analyses show that one woman dies in childbirth for every 112 births in Sierra Leone. That rate is 2.5 times higher than in nearby Ghana, 42.4 times higher than in the USA, and 222.5 times higher than in Sweden, where the rate is one death per 25,000 births. Furthermore, nearly one in five children born in Sierra Leone dies before they reach 5 years of age. (Trend in Maternal Mortality, 1990 to 2010).

It has long been observed that patients in remote communities will act accordingly to the information and instructions that they receive from health facility staff, especially in remote communities. These rural communities have the utmost trust in the nurses, and this has been observed to have a direct impact on the overall delivery of the free health care in Sierra Leone (Sierra Leone Integrated Household Survey, 2011).

In the first few months following the implementation of the free health care initiative, utilization of health services increased sharply amongst all beneficiary groups. For example, use of health care services by

children under 5 years increased by 2.5-fold, the number of pregnant women making at least one antenatal care (ANC) visit increased by 20%, and average monthly institutional deliveries increased by approximately 18 %. (Edoka *et al.*, 2016).

Results from other studies on the free health care in Sierra Leone showed that children under 5 year of age gained increased access to surgical care. An analysis of case load and patient characteristics, (Groen *et al.*, 2013) reported a 500% increase in the number of children under 5 years receiving surgical care, which was considerably larger than the 17% increase observed in children over 5 years. The method used was a regression discontinuity design (RDD) that was applied in the case of young children before-after estimation approach, adjusted for time trends in the case of expectant and recent mothers. The study makes use of two recent household surveys the 2011 Sierra Leone Integrated Household Survey (SLIHS), to estimate the effect of the FHCi in children under the age of 5 years, and the 2013 Sierra Leone demographic and health survey (DHS), to estimate the effect on maternal health care seeking behaviors. (DHS Final report, 2013)

Although in the month before the free healthcare initiative was launched, an average of 170,000 children received care from Sierra Leone's hospital facilities each month and in the months after free health care, the number exceeded 340,000, or double (John Donnelly, 2011).

However, a few years after the launch of the free health care initiative, the country started noticing a decline in facility utilization which depicts an indication of arising issues around the delivery of the free health care services so much that it has been a cause for alarm.

Due to this decline, the free health care service delivery is observed not to have met the needs of its beneficiaries given the enormous challenges observed in the process of its delivery. The dissemination

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of information to beneficiaries of free health care is observed to be crucial to the effectiveness and sustainability of this initiative. There have been prospective breakages and missing links in the flow of information to beneficiaries of the free health care initiative since its inception. There are speculative possibilities of misleading information provided to beneficiaries at the service delivery level which has triggered interest in undertaking this study. Some of these observed challenges linked with efficacy of the flow of information are beneficiaries of the free healthcare still paying fees for health care services, increase in maternal and infant mortality, low institutional delivery, low anti natal care and post-natal visitation, and irregularity in under five vaccinations.

If the root courses of these barriers are fully understood, sanity and stability will be observed in the health sector.

DATA COLLECTION METHODS

Study Area

The Western Area Rural District is one of the 14 Districts of Sierra Leone. It is located mostly around the peninsula, in the Western Area of Sierra Leone. The Western Area Rural District has a 2015 census population of 442,951. The district's capital and largest city is Waterloo. The Western Area Rural District borders the country's capital Freetown to the east and west; Port Loko to the north; and the Atlantic Ocean to the south and east.

The Western Area Rural District is one of the most ethnically diverse districts in Sierra Leone. No single ethnic group forms a majority in the district.



Population, Sample selection and Sample size

The population for the research work was drawn from the western rural of Sierra Leone. This study is limited to the scope of selected sample of peripheral health units, and catchment communities in the western rural district of Sierra Leone. The sample size is a range of selected PHU and their catchment communities. The respondents to this study were health facility staff and beneficiaries of the free health care initiative within the selected catchment communities.

The catchment communities that were covered were of the two extremes, that is; one community where the facility is located and the farthest catchment community from the facility. This is to ensure precision and reliability on the data collected as there will be more likelihood of having reliable information in a smaller sample when the two extreme catchment communities are considered.

List of Randomized PHUs/Health Facilities in Western Rural District

Table 1 List of randomly selected PHU or health facilities in western rural district

	Facility Name	Facility Type	Free Health Care	Selected
1	Goderich Health Centre	CHC	Yes	Selected
	Lakka Ogo Farm	CHC	Yes	No
	Jui Police Clinic	CHC	Yes	No
2	Grafton	CHC	Yes	Selected
	Tokeh	MCHP	Yes	No
	Songo	CHC	Yes	No
3	Newton	CHC	Yes	Selected
	York	CHC	Yes	No
	Borah Maternity	CHP	Yes	No
4	Tombo	CHC	Yes	Selected
	Charlotte	CHP	Yes	No
	Gloucester	CHP	Yes	No
5	Kent	CHP	Yes	Selected
	Leicester	CHP	Yes	No
	Lumpa	CHP	Yes	No
6	Rogbangba	MCHP	Yes	Selected
	Rokel	CHP	Yes	No
	Deep Eye Water	MCHP	Yes	No
7	Fogbo	MCHP	Yes	Selected
	Hamilton	MCHP	Yes	No
	Mabureh	MCHP	Yes	No
8	Macdonald	MCHP	Yes	Selected
	Madaka	MCHP	Yes	No
	Makokonday	MCHP	Yes	No
9	John Thorpe	MCHP	Yes	Selected
	New London	MCHP	Yes	No
	Sussex	MCHP	Yes	No
10	Waterloo	CHC	Yes	Selected

Method of Data Analysis

For effectiveness and quality control in data collection and analyses, the use of an advance technology called (CAPI) is been adopted in the whole data collection and analyses process. CAPI is a "computer aided personal interview" which is widely used for data collection. It is very effective in terms of data collection and validation, and most importantly readily makes the data available for analyses without any prior data entering from hard copy questionnaire.

There are other robust techniques adopted in terms of maintaining precision, validity and reliability in data collection. Therefore, the use of smart phones with an open data kit (ODK) application has been considered in the data collection process. The use of CAPI allows for hard copy questionnaires to be transformed into electronics form, instead of using the actual paper questionnaire which has lots of challenges.

FINDING: RESULTS & DISCUSSIONS

How is the disseminated information on the free health care initiative reaching the targeted beneficiaries

Results from the findings shows that relevant health information are shared to beneficiaries through several channels of which the most effective have proved to be through the mass media and community engagement.

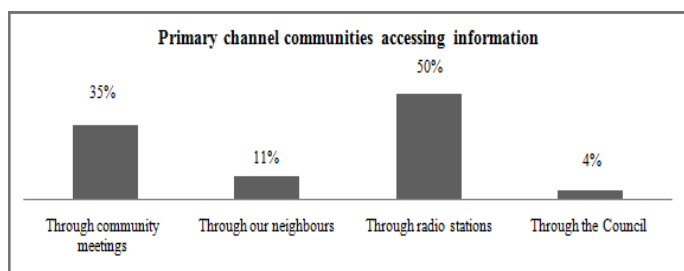


Figure 1: Primary channel communities accessing information

50% of the beneficiaries said their primary channel to access information through radio station and 35% mostly rely on community meetings, the remaining 11% and 4% mostly access information through neighbors and through the district council respectively.

Apart from the primary channels of the free health care beneficiaries accessing information, there are other channels through which information is accessed according to the responses of the respondents shown in the graph below.

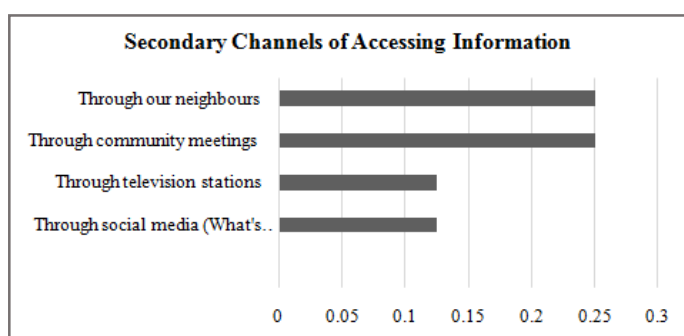


Figure 2: Other channels communities accessing information

Leading secondary information was accessed mostly through social means such as television stations, and other social media platforms like what's app, Facebook, and through the local council structures, the councilors and honorable members of parliament.

When the free health care initiative was introduced in the year 2010, people in remote communities come to know about the initiative and assurance was ensured through the kind of service beneficiaries began to receive at the PHUs. Below is a graph on the channels through which people come to know about the free health care initiative. It turns out to be that majority of people come to know about free health care through radio stations.

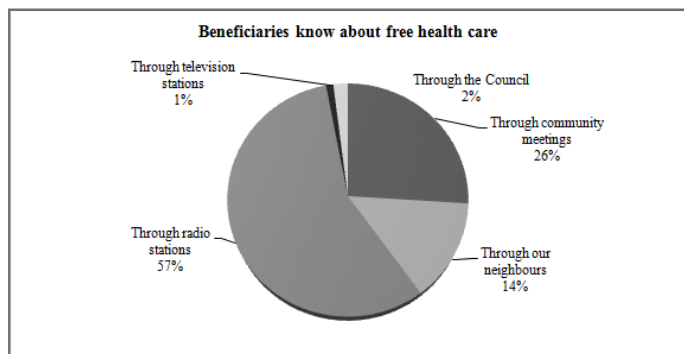


Figure 3: Beneficiaries know about free health care

57% of the beneficiaries interviewed said they came to know about the free health care initiative through radio stations, 26% through community meetings, 14% through neighbors, 2% through the council, and 1% through television stations.

Facility utilization as result to the information on free health care delivery filtering down to the beneficiaries

Facility utilization is looked at from several measurable indicators that are used to determine the extent at which beneficiaries are making use of the free health care services in their communities. This section shows analyses on anti-natal attendance, post-natal attendance, and their dropout rate, immunization for children less than five years.

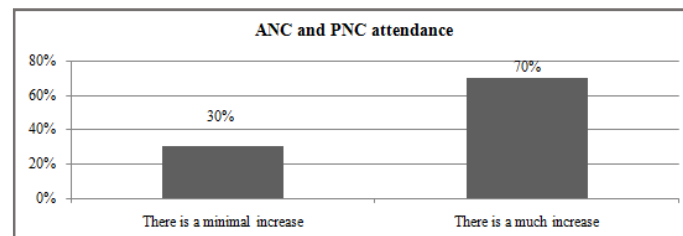


Figure 4: Observed ANC and PNC attendance by the PHU staff

Result from the indicator on ANC and PNC shows that there is an increase in ANC and PNC attendance with 70% of the PHUs showing much increase in ANC and PNC attendance, and 30% showing minimal increase. The trend on ANC and PNC from the year 2011 to the year 2016 also show an increase in ANC and PNC attendance

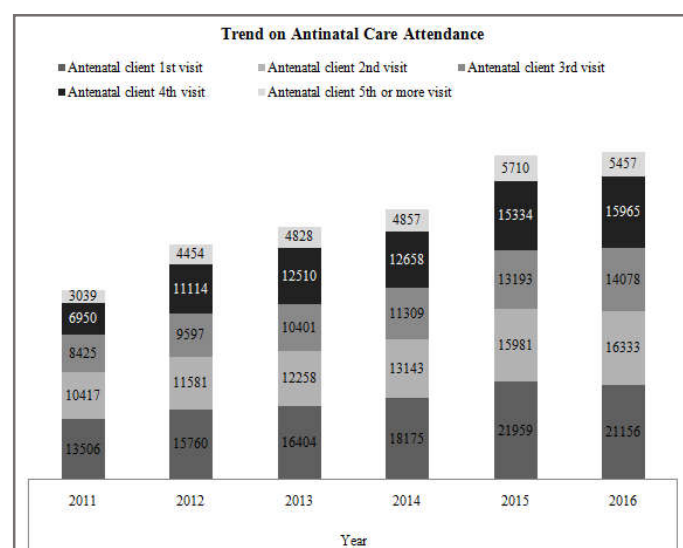


Figure 5: Trend on antenatal care attendance

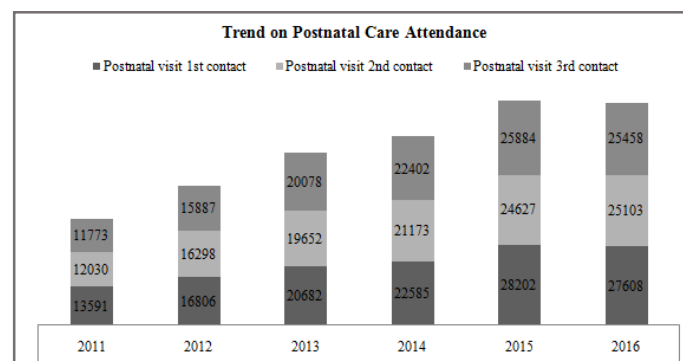


Figure 6: Trend on postnatal care attendance

Behavior changes around beneficiaries of the free health care and health outcomes

This section presents the results of findings on the trend on mobility, maternal and infant mortality in due cause to the kind of health

service delivered by the PHU staff. The nurse's attitude towards patients is one of the major issues that may affect the highlighted indicators in this section.

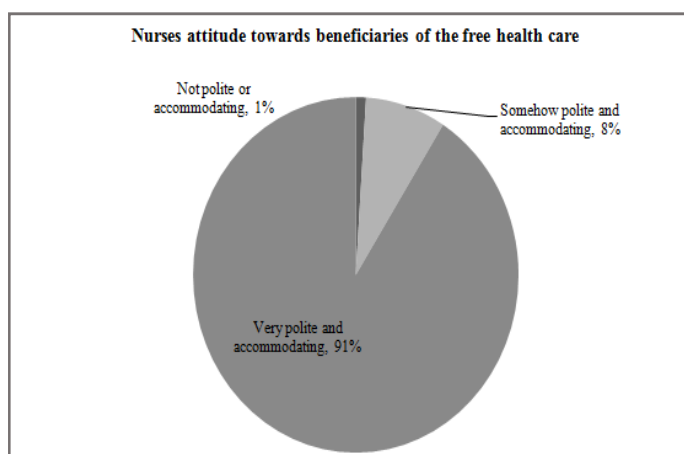


Figure 7: Nurses' attitude towards beneficiaries of free health care

91% of the beneficiaries interviewed are pleased with the attitude of the nurses as they are very polite and accommodating to them. 8% of the beneficiaries said the nurses are somehow polite and accommodating to them, and only 1% said the nurses are not polite or accommodating to them at all.

Looking at other indicators on behavior change, the graph below shows how beneficiaries respond to certain challenges directly faced from the nurses in PHUs

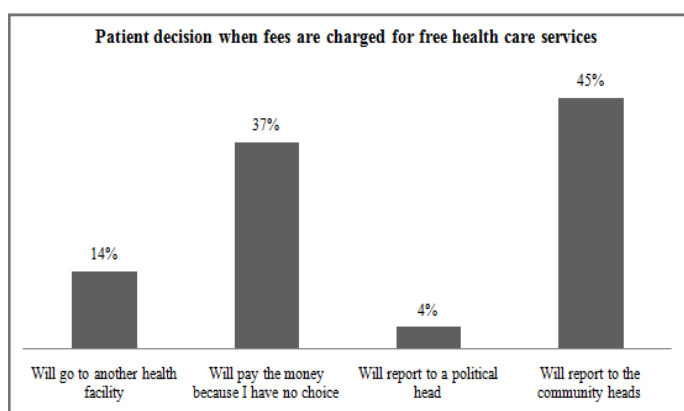


Figure 8: Patient decision when fees are charged for free health care services

Results show that 45% of the beneficiaries are ready to make complaints to their community heads when treated badly or are not provided with the required services as beneficiaries, 37% agree that they will pay for free health care services if the nurse demands it from them, 14% of the beneficiaries said they will go to another health facility, and 4% said they will all on the attention of the political leaders in the community.

From the result of this finding, it could be seen that the attitude of nurses will to a large extent influence facility utilization which will in turn have a ripple effect on the level of morbidity amongst deprived beneficiaries, and influence maternal and infant mortality. Result from the study shows an increasing trend in institutional delivery and a drop in maternal death.

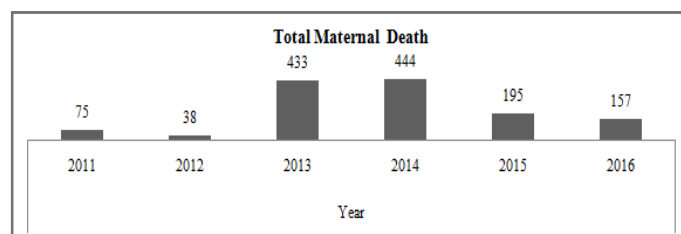


Figure 9: Trend on Maternal Death

Infant mortality also shows a drop in trend as more mothers are going to deliver at the health facilities. The graph below shows a trend on live birth as against still birth which is most times as result to the behavior of women during their pregnancy

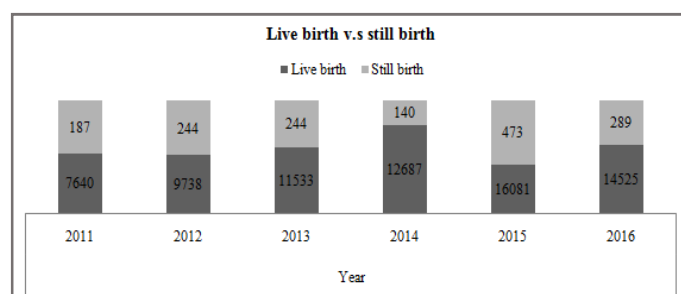


Figure 10: Trend Live birth vs. still birth

CONCLUSIONS

The health management information system is made of four levels, national, district, chiefdom and facility level (Sierra Leone ministry of health and sanitation DHIS-2 Health management information system manual). Health information is disseminated using a top bottom approach that is from the national level to the facility level through the district and chiefdoms, and from facility level to the national level in the reverse. It was understood out of this study that information on health records are collected at facility level using facility registers. Details of the register are transferred into summary forms that are sent to the districts. At district level, details in the summary forms are imputed into the Sierra Leone health management information software (DHIS-2) to be accessed at national level.

On the aspect of effective verbal information sharing, the result from this research shows that it is DMO's responsibility to ensure that information is shared and disseminated to beneficiaries of the free health care initiative. The nurses at their facility level are expected to disseminate vital information to their catchment communities, but it turns out to be that majority of the beneficiaries are accessing basic health information from the radio either through announcement or radio discussion programs. As presented in the result, 50% of the beneficiaries said their primary channel of accessing information is through radio stations, and it also shows that 57% of the beneficiaries interviewed initially came to know about the free health care initiative through radio stations. 26% were informed through community meetings organized by the nurses and also during health talks at the PHU when patients go for treatment.

Results from the research also show that beneficiaries are accessing information through other members of the community, social media, like what's app, Facebook messenger. Also, at the walls of the PHUs are posters of the free health care initiative that explains to people that they should not pay for health services as long as they fall under the category of the free health care initiative.

Results from this study show that there is a general improvement on the health system in the country. There is an increasing trend in facility utilization, according to the data on maternal and child health services. ANC and PNC visitation increases from 13,506 in the year 2011 to 21,156 by the year 2016. The figures on institutional deliveries also increase from 8,564 in the year 2011 to 14,246 by the year 2016. The mortality rate also dramatically decreases. Maternal mortality decreases after the year 2011 when the free health care initiative was introduced. In the year 2011 and 2012 it was 75 and 38 death cases respectively, it started rising again in the year 2013 and 2014 because of the EBOLA outbreak, when most people were afraid to make use of the facilities right around the country. But in the year 2015 and 2016 after the EBOLA, the maternal death cases dramatically reduce again. From the result of this study, the level of live birth conducted in facilities increase from 7,640 in the year 2011 to 14,525 in the year 2016. This shows a reduction in infant maternal mortality.

No adherence to immunization and clinical attendance for pregnant women lactating mothers, and children less than five years is one of the identified major causes of maternal and infant mortality. According to result from this study there is a decrease in the immunization dropout rate for children less than five years with 16.1 and 16.5 in the year 2011 just after the free health care initiative was introduced to 4.1 and 6.9 in the year 2013, and later rise up to 10.4 and 10.9 in the year 2014 when the EBOLA outbreak was on, and later again decreases to 2.8 and 9.1 by the year 2016 for immunization on Pentavalent 1st dose to Pentavalent 3rd dose Drop Out Rate and Pentavalent 3rd dose to Measles dropout rate respectively. Utilization for children less than five years grows from 83,024 in the year 2011 to 148,712 by the year 2015.

Results from this study also point out the friendly attitude of nurses in terms of their communication and mannerisms, towards beneficiaries of the free health care around the western rural district. 91% of the beneficiaries interviewed said the nurses are very polite and accommodating, 8% said they are somehow polite and accommodating in their delivering their services. It was clear that the nurses always educate beneficiaries through health talks during clinic hours as 91% of the beneficiaries interviewed attest to that.

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