ORIGINAL PAPER

Factors influencing utilization of Natural Family Planning among Child Bearing Women in Chilonga Northern Province Zambia

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ABSTRACT

Objectives: The study sought to determine factors influencing utilization of Natural Family Planning (NFP) among child bearing women in Chilonga Catchment area. The literature review was mainly obtained from studies conducted globally, regionally and Zambia inclusively. Literature review revealed that information concerning the use of NFP method in Zambia is poor.

Methods: A cross sectional study was done in five health posts of Chilonga Catchment area between July to November 2010. Systemic random sampling was used with a sampling interval of 1: 5. Mothers coming for under five and antenatal clinics were interviewed. A total of 425 questionnaires were issued. Of these 411 were successfully utilized which gave a dropout rate of 3%.Teachers trained in NFP method were purposively selected into the study for Focus Group Discussions (FGD) that is 10 per FGD. Total number of teachers selected were 20.

Data was collected using a structured interview schedule comprising of open ended and closed ended questions .The study sought to answer the research question: What are the factors influencing utilization or non-utilization of NFP among child bearing women in Chilonga? The study was analysed using SPSS version 17.0 and content analysis. Chi-square was used to determine the association of between categorical variables.. The findings have been presented using frequency tables and cross tabulations.

Results: The majority (74%) of the respondents had heard of NFP method, though 26% had never heard of it. However, of the total, 58.4% did not know any method of NFP. Ever-used NFP was 50.4%, Current use of family planning (FP) was 38.4 % and most of the respondents (67.9 %) were in favour of NFP. Contraceptive pills were the commonest method in use 27.0% followed by NFP 23.6 %. There was no significant association between FP use and desired number of children ($\div 2 = 9.530$; $p > 0.023$). There was also no significant association between FP use and education status ($\div 2 = 0.263$; $p > 0.005$).

Conclusion: The majority of the respondents (72.8%) wanted to have more than 4-10 children. This means they did not know what impact large families will have on the poverty stricken households. There is some ignorance about NFP methods. They are more used to artificial harmful methods of Family Planning. Therefore, there is need to intensify Health Education in this area.

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KEY WORDS: *Abstinence, Couple, Determinants, Family Planning (FP), Fertility, Fertile period, Intra-spousal communication, Knowledge, Utilization:*

INTRODUCTION

Natural Family Planning (NFP) is a method of periodic abstinence from, and varieties of, sexual contact between the male and female in a couple who desire to plan the timing of the arrival of their children[1].By being able to estimate whether or not a woman is likely to be fertile at a given time, the chances of conception can be increased or decreased depending on whether that time period is used for abstinence from, or engagement in, unprotected intercourse[2].Natural methods of contraception are those which do not use any appliance of medicine. Some of these methods have been practiced throughout the world from prehistoric times. Even today natural methods are widely practiced by couples. Their popularity is due to several factors;

- They do not need any medical appliance or medicine
- They involve no cost
- They can be practiced most secretly by partners and
- Do not fall under any religious bar[3].

Natural family planning or fertility awareness refers to methods for family planning and preventing pregnancy by observing naturally occurring signs and symptoms of the fertile and infertile days of the menstrual cycle[1]. If these methods are used to prevent pregnancy, the couple avoids intercourse on the days during the menstrual cycle when the woman is mostly likely to become pregnant often called the fertile days. Fertility awareness is based on a scientific knowledge of the female and male reproductive systems and on an understanding of the signs and symptoms that occur naturally in the woman's menstrual cycle to indicate when she is fertile and when she is infertile. This is also called safe period method.

Zambia like other developing countries has promoted family planning since1970s.Family planning is viewed as a critical component of the essential package of health interventions. The Ministry of Health (MoH) developed family planning policy strategies and guidelines[4]. This document is used by health workers throughout the country. Zambia is one of the countries found in sub-Saharan Africa with a high population and according to the Demographic Health Survey[5] has a population of 11.7 million. Out of the total population it is estimated that 22% are women in their child bearing age. According to Zambia's National Population Policy of 1990, family planning services were to be made accessible and affordable to at least 30% of women of child bearing age[6]. Given this focus and commitment by the government of Zambia to increase utilization of family planning services by women, different services were encouraged.

Natural family planning method provides an alternative for those who for some reasons do not wish to use artificial methods[3]. Pregnancy can be avoided by timing of sexual intercourse in relationship to the woman's physiologically occurring infertile periods (safe periods).Because of the potential benefits of FP, it is important to any community when the births of children are spread.

The problem of low utilization of NFP is worldwide. The contraceptive utilization for women in Zambia is at 30%, NFP being 1%[5]. Review of records at Chilonga Hospital shows that the proportion of women using NFP method is low- 4%[5]. To solve this problem of low utilization of family planning methods, increased use of non-prescribed methods would be the best.

Few studies have been carried out in the country on reasons why clients least use non- prescribed methods, specifically natural family planning. In view of the above the researcher found it important to conduct a study to determine factors that may be influencing low utilization of NFP.

METHODOLOGY

Research design

A cross sectional study was done in five health posts of Chilonga Catchment area to determine factors influencing utilization of Natural Family Planning among Child Bearing Women. The study population comprised of Child Bearing Women. Systemic random sampling was used with a sampling interval

of 1: 5. Mothers coming for under five and antenatal clinics were interviewed. A total of 425 questionnaires were issued. Of these 411 were successfully utilized which gave a dropout rate of 3%. Teachers trained in NFP method were also purposively selected into the study for Focus Group Discussions (FGD) that is 10 per FGD. Total numbers of teachers selected were 20.

Data Collection

Data was collected through primary source which was face to face interview with child bearing women using a structured interview schedule comprising of open ended and closed ended questions. Two focus group discussions for in depth information were also conducted with Teachers trained in NFP methods using interview guide and audio tape.

Data was collected over a period of 4 months after approval to proceed with the study from the Biomedical Research Ethics committee of the University of Zambia. A pilot study was done at Chilonga Health Post; one of the clinics which was not part of the main study.

Data Analysis

Quantitative data analysis

All questions were coded and open ended questions were categorized. Responses were coded using numbers. Frequency tables were used to describe the sample and Cross tabulations were done to show relationship between dependent and independent variables. The SPSS package version 17.0 (Statistical Package for Social Sciences) was used.

Qualitative Data

The qualitative data that was derived from the focus group discussions was read and transcribed into computer files. The data was categorized into themes and assigned codes and analysed by content analysis.

Chi-square was used to determine the association between categorical variables and a p -value of less than 0.05 indicated significant association. Data has been reported in figures.

FINDINGS

Relationship between utilization of NFP and selected socio-demographic, knowledge, and influence factors

Table 1, shows that marital status, number of children, knowledge of NFP method, source of information /advice, in favour of NFP, whose decision to use NFP ,spouse being in favour, family planning method preferred by religion and information received on NFP from the clinic visited were significantly associated with utilization of NFP. Higher rates of utilization were observed among respondents who were married (93.7%) than respondents who were unmarried (6.3%). Respondents who had more than 1-3 children (100 %) had a higher rate of utilization than respondents who had no child (0%).There was higher utilization rate for respondents who had knowledge of NFP (95.6%) than those who had no knowledge (4.4 %). Respondents whose decision to use NFP was as a couple had a higher rate of utilization (47.8%) than respondents whose decision was self(12.7%).Finally, respondents whose spouses were in favour of NFP had higher utilization rate (83.9%)than respondents whose spouses were not (13.2%).Age, education level and religion were not significantly associated with utilization of natural family planning. Marital status, number of children, knowledge of NFP method, and decision making were significantly associated with utilization of natural family planning.

- Marital status 93.7%
- Number of children 100%
- Knowledge of NFP methods 95.6%
- Decision making 47.8%
- In favour of NFP 83.9%

Table 1: Relationship between utilization of NFP and selected socio-demographic, knowledge, and influence factors.

Variables	Eve r used NFP				Total		Chi - Square	P - value
	Yes		No					
	F	%	F	%	F	%		
SOCIAL -DEMOGRAPHIC								
Age in years								
18 -24	56	27.3	90	43.7	146	35.5		
25 -34	87	42.4	85	41.2	172	41.9		
35 -44	55	26.8	28	13.6	83	20.2	18.322	0.000
45 and above	7	3.4	3	1.5	10	2.4		
Total	105	100	206	100	411	100		
Marital status								
Single	5	2.4	23	11.2	28	6.8		
Married	192	93.7	173	84	365	88.8		
divorced	8	4	6	2.9	14	3.4	16.844	0.001
widowed	0	0	4	1.9	4	1		
Total	205	100	206	100	411	100		
Highest education level								
Never be en to school	16	7.8	18	8.7	34	8.3		
Primary education	144	70.2	146	70.8	290	70.6		
Secondary education	35	17	32	15.5	67	16.3	0.363	0.967
College	10	4.9	10	4.9	20	4.9		
Total	205	100	206	100	411	100		
Occupation								
Unemployed	12	5.9	23	11.2	35	8.5		
Employed	13	6.3	7	3.4	20	4.9		
Attending sc hool	6	2.9	19	9.2	25	6.1		
Housewife	173	84.4	149	72.3	322	78.3	19.248	0.001
Business	1	0.5	8	3.9	9	2.2		
Total	205	100	206	100	411	100		
Monthly income								
Below K300,000.00	136	66.3	149	72.3	285	69.3		
K300,000.00 -K500,000.00	41	20	19	9.2	60	14.6		
K500,000.00 -K700,000.00	6	2.9	11	5.3	17	4.1	10.638	0.014
Above K700,000.00	22	10.7	27	13.1	49	11.9		
Total	205	100	206	100	411	100		
Number of children								
None	0	0	12	5.8	12	2.9		
1-3	88	42.9	124	60.2	212	51.6	30.773	0.000
4-6	81	39.5	53	25.7	134	32.6		
7 and above	36	17.6	17	8.3	53	12.9		
Total	205	100	206	100	411	100		

KNOWLEDGE OF NFP								
Heard of NFP								
Yes	196	95.6	108	52.4	304	74		
No	9	4.4	98	47.6	107	26	99.500	0.00
Total	205	100	206	100	411	100		
Source of information								
Family	50	25.5	21	19.3	71	17.3		
Friends	32	16.3	20	18.3	52	12.7	9.870	0.043
Health care provider	101	51.5	50	45.9	151	36.5		
Media	2	1	6	5.5	8	1.9		
Old women	11	5.6	12	11	23	5.6		
Total	196	100	109	100	305	74		
NFP method Known								
Yes	173	84.4	106	51.5	279	67.9		
No	32	15.6	100	48.5	132	32.1	51.118	0.000
Total	205	100	206	100	411	100		
UTILIZATION OF NFP								
In favour of NFP								
In favour	173	84.4	106	51.1	279	67.9		
Not in favour	32	15.6	100	48 .5	132	32.1	51.118	0.000
Total	205	100	206	100	411	100		
Source of advice on NFP								
Health centre	104	50.7	37	18	141	34.3		
Private clinic	5	2.4	0	0	5	1.2		
Hospital	31	15.1	23	11.2	54	13.1		
Family/elderly	51	24.9	26	12.6	77	18.7	137.287	0.000
No where	10	4.9	117	56.8	127	30.9		
Church	2	1	2	1	4	1.0		
TBA	1	0.5	1	0.5	2	0.5		
Reading books	1	0.5	0	0	1	0.2		
Total	205	100	206	100	411	100		
INFLUENCE OF FAMILY, RELIGION AND HEALTH PERSONAL.								
Whose decision to use FP				7.8	42	10.2		
Self	26	12.7	16	10.2	43	10.5		
Spouse	22	10.7	21	23.8	147	35.8		
Couple	98	47.8	49	2.9	23	5.6		
Health care provid er	17	8.3	6	1.9	16	3.9	81.079	0.000
Family/friends	12	5.9	4	1	7	1.7		
Partner	5	2.4	2	52.4	133	32.4		
No one	25	12.2	108	100	411	100		
Total	205	100	206					

Spouse in favour of FP								
Yes	172	83.9	107	51.9	279	67.9		
No	27	13.2	66	32	93	22.6	50.188	0.000
not applicable	6	2.9	33	16	39	9.5		
Total	206	100	206	100	411	100		
Religious Denomination								
Catholic	75	36.6	68	33	143	34.8		
UCZ	44	21.5	60	29.1	104	25.3		
SDA	32	15.6	18	8.7	50	12.2	21.158	0.001
Pentecostal	30	14.6	49	16.7	79	19.2		
Jehovah's Witness	7	3.4	8	3.9	15	3.6		
Other	17	8.3	3	1.5	20	4.9		
Total	205	100	206	100	411	100		
Religious Denomination FP method preference								
Yes	144	70.2	115	51.1	259	63.0		
No	61	29.8	91	44.2	152	37.0	9.166	0.002
T otal	205	100	206	100	411	100		
Method preferred by rel.								
NFP	116	80.6	95	82.6	211	51.3		
Condom	9	6.3	5	4.3	14	3.4		
Not sure	8	5.6	8	7	16	3.9	0.959	0.916
Artificial	7	4.9	4	3.5	11	2.7		
Oral contraceptive	4	2.8	3	2.6	7	1.7		
Total	144	100	115	100	259	63.0		
Ever visited FP clinic								
Yes	134	65.4	91	44.2	225	54.7		
No	71	34.6	115	55.8	186	45.3	18.624	0.000
Total	205	100	206	100	411	100		
Receive d information on FP								
Yes	140	68.3	101	49.1	241	58.6	15.721	0.000
No	65	31.7	105	50.9	170	41.4		
Total	205	100	206	100	411	100		

Table 1 above shows factors associated with utilization of NFP

Focus Group Findings (FGD)

When natural family planning teachers were asked what they know about NFP and the difference of NFP to artificial family planning, the majority of the participants said that natural family planning is the natural way of spacing children, without the use of medicine. Concerning the difference of natural family planning to artificial methods of family planning, the respondents said that natural family planning does not have side effects or continuous costs and that they increase love and cooperation between couples. Some FGD members stated that ever since they started practicing NFP methods, they enjoy sexual intercourse more than before and their husbands first ask whether it is safe to have sexual intercourse. This had increased opportunities for communication in their marriages. One participant

said: "Natural Family Planning is not only a method but it also strengthens the marriage relationship. Unfortunately female illiteracy or their shyness imposed by culture and non-compliance are obstacles that frustrate natural Family Planning efforts". (Participant, Mufubushi).

We found that the majority of women's decision to use family planning comes from the husband. One participant said: "Our husbands tell us that if one is married and according to the tradition, she should expect to have more children". (Participant). Many respondents recommended natural family planning as the best method of family planning compared to artificial methods. The respondents also said they prefer NFP because it is readily available.

DISCUSSION

Demographic characteristics of the respondents-Child bearing women

The socio-demographic characteristics of the respondents which were relevant to the study and essential for interpretation included; age, marital status, level of education, occupation and number of children. In this study majority of Child bearing women were in the age group 25-34years 41.8% (172) and 18-25years 35.5% (146).According to ZDHF, "Zambian population is young with average life expectancy between 35-45 years[5]". The majority 88.8 % (365) of the respondents were married with 51.6 % (212) having had 1-3 children and 32.6% (134) respondents had 4-6 children (table 4)."This could be attributed to the fact that marriage is universal in Zambia and women marry at an early age. By the age of 17, nearly one third (1/3) of women had already had her first child, and by the age of 19, the proportion of child bearing increases to two thirds[8]".This shows that most of the Child bearing women are married and that their utilization of natural family planning could be affected by their marital status and their age. Again, Zambian youth indulge in sexual activity at an early age.

The respondents' education level ranged from primary education 70.6 % (290) to secondary education 16.3% (67) and College level 4.9% (20) .8.3% (34) had no education at all (table 4). The reason could be due to the fact that when girls drop out of school due to pregnancy they are forced to get married to the man responsible for the pregnancy instead of encouraging them to go back to school. School Health Survey conducted by DCM shows increased dropout rate among teenage girls in the schools.

In addition 86.8% (357) of the respondents were housewives or unemployed and only 4.9% (20) were engaged in some form of employment. This scenario would also affect utilization of NFP. Their low educational level could also be the reason for their unemployment. With little education and training, the benefits of NFP could be disseminated among women and their spouses. If practiced properly success rate is somewhere around 70%.

NFP promotes natural sex between the couples.

It is safe, inexpensive and has no side effects except pregnancy in case of failure.

Easy to practice. However, calculation of menstrual cycle and local temperature of the female genetalia is important to its success.

Discussions of variables

Knowledge of NFP

Section B of the questionnaire had questions that aided in determining the basic knowledge that Child bearing women had on natural family planning. Knowledge may influence one's action. As such, having knowledge on natural family planning may encourage one to use the method.

The findings showed that 74% (304) of respondents had heard of natural family planning and of these 36.5% (150) heard from the health care provider while 17.3% (71) their source of information was from their family .41.8% (172) could correctly state what natural family planning is while 14.6% (60) of respondents knew that natural family planning is spacing of children with the other 10.2% (42) knowing that it prevents from having children but 33.3% (137) had no idea at all, an indication that about 58.2% of the respondents have had limited knowledge on natural family planning (table 5). The findings also showed that only 41.6% (171) of respondents could state at least one method of NFP while 58.4% (240) had no knowledge of any method

(table 5). These findings are similar with findings in the study "factors leading to underutilization of natural family planning at Chilenje clinic, findings that stated that majority of clients were using other methods of family planning and had no knowledge about natural family planning[9]. In a Health Demographic Survey conducted by CSO, it was discovered that knowledge is a precondition to higher utilization of any given service[5].

The findings showed that 28.2% (116) of the respondents had no knowledge of benefits of NFP, 29.7% (122) said it has no side effects, 33.2% (151) said to space children or avoid unwanted pregnancy, 7.5% (31) said it is cheap and easy to use while 1.7% (7) said it has no benefit (table 5).The findings corresponds with a study by Nakiboneka in which it was found that, "Knowledge about NFP methods was insufficient among clients and that NFP methods are known to be free from side effects, with no continuous costs, and was used to space and limit childbirth[10]". The findings also relates with Fehring 2010 findings that stated that "NFP use is related to its benefits, among which are: no side effects, few health risks, affordable, and compatible with many women's value systems[11]". The findings of this study have brought to light the fact that Lactational Amenorrhea is the most known type of NFP that women use for family planning.

The findings further showed that 42.6% (175) of the respondents had no idea/knowledge of disadvantages of NFP, but 21.4% (88) said that one can become pregnant if she misses, 16.1% (66) said that it is difficult to abstain and to use, 4.1% (10) said it is not 100% safe and that no protection from HIV/AIDS, 1% (4) said that it requires discipline and commitment while 14.1% (58) said that it has no disadvantage **(**table 4**).**Despite some (43.3%) of respondents citing various disadvantages of NFP, 14.1% of respondents said there are no disadvantages.

Generally, the study revealed that 58.4% of respondents had no idea/ knowledge of NFP**.** This poses a great challenge on the part of health workers who have to ensure that knowledge is disseminated to all the concerned people.

Utilization of natural family planning methods

The researcher explored a number of factors that were thought to have influence on use of NFP. One of the factors explored was age. The result showed that about half 50.4% (207) of respondents had ever used NFP and about half 49.6% (204) had never used NFP **(**table 6**).**Most of these were in the age group 25 -34 years. There is no significant association between age and utilization of NFP as different percentages of the older and younger age groups (table 6) tended to ever use (42.4% and 26.8%) and never used (41.2% and 13.6 %) NFP respectively .Therefore age does influence use of NFP.

The study showed that most 67.9 % (279) of the respondents were in favour of NFP though only half of 100% had ever used NFP. The researcher also wanted to establish whether source of advice/information had any influence on utilization of NFP. The results showed that 48.6% and 36.5% of respondents got advice and heard from the health worker while 18.7% and 30% from family/friends respectively. Majority of these got advice and had information from the health worker. The health worker therefore seemed to have greater influence on use of NFP. This could be due to the fact that health workers are more knowledgeable on NFP and are able to give adequate advice or to counsel clients adequately. From this study it is evident that NFP services are not adequately being utilised. As 74% had knowledge but very few are using it.

This study revealed that religious denomination influences utilization of NFP **(**table 8). 63% (259) said their religious denomination prefers one method of family planning to another and the most preferred method was NFP by 51.3% (211) compared to 9% (32) whose denomination preferred artificial methods while the remaining 3.9% (16) were not sure. An association was done and the results were statistically significant (p-value =0.000).We therefore, reject the null hypothesis which states that there is no association between religion and utilization of natural family planning. There is an association between religion and utilization of natural family planning.

The study reveals that there was a significant relationship between utilization of NFP with marital status (p value=0.001). 93.7% (192) of the respondents who were married had used NFP. This result was statistically significant there by rejecting the null hypothesis which states that there is no association between marital status and utilization of natural family planning. In addition some respondents stated that they can't use family planning because they are not married.

The study also discovered that there was a significant relationship between having knowledge of NFP and use (p value=0.000).Majority 95.6% (196) of the respondents who used NFP had heard of NFP (table 9).This result was statistically significant there by rejecting the null hypothesis which states that there is no association between knowledge of a service and utilization. The major reasons for not using family planning methods included lack of knowledge and partner refusal. Thus knowledge may result in utilization of NFP.

Influence of Family, Religion and Health Personnel

The findings revealed that 69.6% (286) of the respondents discuss FP issues with their spouse and that 10.5% (43) of the respondent's decisions to use FP comes from their spouses. The findings also revealed that out of 205 respondents whose region preferred NFP, 70.2% (144) had used NFP where as 29.8% (61) of those whose religion had no preference had used it as well. Slightly above half 54.7% (225) of the respondents had visited the family planning clinic and 58.6% (241) of the respondents revealed that they received information on family planning when they visited the clinic. These findings oppose the evidence that was given that both health personnel and some members of the community have been against the use of natural family planning.

CONCLUSION

The purpose of the study was to determine factors influencing utilization of natural family planning in Chilonga Catchment area. A descriptive study design was used whose study unit comprised of antenatal mothers aged 18- 49 years. Data was collected using structured interview schedule and 2 focus group discussions. The sample consisted of 411 randomly selected respondents and 2 focus group discussions. Utilization of NFP was at 50.4% and 72.8% wanted to have more than 4-10 children. This means they did not know what impact large families will have on the poverty stricken households. There was some ignorance expressed about NFP methods. They are more used to artificial harmful methods of Family Planning. Therefore, there is need to intensify Health Education in this area.

Recommendations for improving utilization of natural family planning by the Government

The Ministry of Health in collaboration with government through partnership should plan for training natural family planning teachers as they are the ones who can teach people on family planning in their communities. This will also improve on utilization as some clients cited that they had never heard of NFP.

Ministry of Health should develop a program targeting tutors as many midwifery tutors are ill equipped to provide accurate and effective teaching /information on midwifery issues including natural family planning. This should include developing training materials on these issues aimed at preparing student lecturers /tutors to be effective incoming tutors.

There is need for the Ministry of health and the district to ensure that there is continuous community sensitization on family planning utilization throughout the year using different channels of communication, so that the messages reach the intended target groups in the community especially women. A program to sensitize communities on knowledge, attitudes, beliefs, practices and about women rights on family planning should be put in place. Such programs should involve combined effort from local counselors, the chiefs and their

village heads to ensure a strong advocacy and social support.

The Ministry of education should strengthen the FAWEZA to ensure that girls that drop out of school due to pregnancy are followed up so that they return to school. This will improve their education, social status and level of understanding and analysis of situations including utilization of NFP.

There is need for Ministry of Education to incorporate fertility awareness in the curriculum at secondary school level so that children are aware of the family planning methods available, natural family planning inclusive.

To the District Health Management Team (DHMT)/Hospital

To work in collaboration with government to ensure implementation of the programs that will be initiated by the government.

The DHMT to educate parents on the importance of educating the girl child through workshops involving PTA members, teachers, union officials, teachers' trainers, administrators, policy makers and the media, all working together can create a supportive learning environment for all girls that drop out of school due to pregnancy.

Since Chilonga residents seem to favour natural family planning, the district/hospital should embark on capacity building in this area.

The method of creating awareness on family planning needs should be evaluated by health care provider. Clients should be exposed to the methods of family planning available before they make a choice. Currently, Zambia is facing human resource crisis resulting in shortage of health workers in rural and urban clinics such as FP educators. There is therefore need to train TBA's, and CHW as natural family planning teachers and teach members of the community on the advantages of NFP.

There is urgent need to improve family planning delivery and accessibility by health care providers for example running family planning clinic in schools and communities.

Further Research

The study must be duplicated on a larger scale in other geographical areas to enable generalization of the results. A study should involve the following as well

Policy makers and top government leaders views on utilization of natural family planning.

Natural family planning teachers: to identify their gaps and challenges they are facing during their service delivery and how they can be addressed.

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