

FUNDING AND THE SUCCESS OF IMMUNIZATION IN SOME SELECTED LOCAL GOVERNMENTS (LGS) IN KADUNA STATE, NIGERIA

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ABSTRACT

*The study examines correlation between Local Government (LG) funding and the success of immunization program. To achieve this objective the study hypothesized that, funding and other support contributes to success of immunization in Kaduna state. Six LGs were selected from the three senatorial districts in the state. Both primary and secondary sources of data were utilized. Data gathered were subjected to correlation test using SPSS software. The results indicated that all the *r*- values were above 0.500 and ranged from 0.902 to 0.938 indicating significant correlation between LGs funding of immunization and the success of the program in the state. Policy implication indicates the need for increase funding of immunization at the Local Government level so as to complement development partners' efforts.*

Key words: Funding; Success of Immunization; Local Government

Introduction

Immunization is one of the cost effective strategies aimed at reducing mortality rate due to vaccines preventable diseases. In Nigeria the federal government is responsible for setting up of the national health policies, coordinating and implementing of national health programs, evaluating and monitoring immunization in the country through the National Program on Immunization. The central government is also responsible for buying vaccines and allocating them to zonal cold stores. The state government is responsible for distributing vaccines to Local Government central storage facilities and managing state health and other budgets. The

state also takes part in coordinating immunization within its jurisdiction. At the lower level, the LG deliver the immunization to grass roots communities. By this arrangement, each level of government participates in the delivery of immunization.

Therefore funding of immunization is the collective responsibility of all the three tiers of government, private sector and development partners. In 2003 Nigeria expended \$12,906,678,018 to immunization and with total health expenditure from all sources to \$73,764,508. The projected cost of vaccines per LGA in 2012 was \$194,697(CHECOD, 2013). From 2010 to 2013 alone, Nigeria has

received a sum of \$230,168,552 from the development partners (CHECOD, 2013; PHC Reform, 2013; Uzochukwu, 2014). However this increasing funding does not correspond with the mortality rate and other health indicators in the country. Research (Allo, 2008; Elah, 2012; Gidado et.al,2010) indicates correlation between funding and the success of immunization in Nigeria. While how effective management of funding affects the success of immunization in Kaduna state has not been given adequate attention in literature. Kaduna state, Nigeria is one of the countries with high mortality rates as a result of vaccine preventable diseases. While there are studies on funding of immunization at the national level, we know little about funding of immunization and its effects on the success of immunization at the local level. This study fills this gap. The main objective of the study is to examine the contributions of funding on the success of immunization program with particular reference to some selected LGs in Kaduna state. The study is divided into four sections, the first contain the introduction, scope of the study, the methodology and the definition of concepts. The second section is the literature review and theoretical framework, the third section present data collated from the field work. The last and not the least present findings, conclusion and recommendations.

Scope of the study

Scope of the study is limited to six LGs in Kaduna state. The justification behind the choice of the state is based on the reason that, the state is the second most populous state in the North-western Nigeria, and among the states with poor healthcare status in the country (NPC, 2006; NBS, 2008). Preliminary studies (Allo, 2008; Elah,2012) have also indicated resistance to immunization in the

state. Another reason is that even though immunization coverage in Nigeria had increased, yet Kaduna state remains one of the states in Nigeria that still recorded higher mortality rate of 74.9 per 1000 in 2014 as a result of vaccines preventable diseases(Allo, 2008, Elah, 2012).

The work covers a period of five years of the present democratic dispensation (2009-2014). The rationale behind the choice of this time frame is because the period represents the era when Local Government percentage of revenue from the federation account had risen to 20.60 percent.

Methodology

The Research Design

The survey research method was used. In this regard, sample from the subset of the main population was utilized. There was effort to make sure that our sample fully possesses the qualities of representation so as to reduce the rate of sampling error. The researcher used the survey method to find out the level of Local Government performance in delivering immunization service in Kaduna state. To this end, funding is the variable used to investigate its effects on the success of immunization at the Local Government level.

The Population of the Study

The survey covered six LGs: two from each of the three senatorial districts within Kaduna state. The LGs are as follows: Sabon Gari, Giwa, Kauru, Jema'a, Kaduna North and Kubau LGs. The total population of the six Local Governments according to 2006 census was 1661780. Sample size was obtained using Yamane's formula in Glenn (1992:1) where the researcher arrived at 400. Below are the summary of sources and methods of data collection.

Table1: Summary of sources and methods of data collection

Variables	Indicators	Sources of Data collection	Data collection method(s)
Level of funding	Volume of funding of immunization Regular disbursement of fund for immunization Incentive for immunization	Official records at the states ministry for LGs and the respective LGs under study.	Documents reviewed Questionnaires administration to the staff of LGs
Success of Immunization	Reported cases or outbreaks Number of children dying	Official records at the states ministry for LGs and the respective LGs under study.	Documents reviewed Questionnaires administration to the staff of LGs, Interviewed with women

Researchers' Design, 2016

Definition of Concepts

The key variables in the study were operationalized below in such a way that they can be measured using measurable indicators. To this end, we have used level of funding as independent variables while success of immunization program as dependent variables.

Level of funding

Funding has been defined by Ikya (2000) as the process of providing an institution, a project, organization e.t.c. with money to carry out its activities. Funding in this study refers to financial support for immunization at the Local Government level. "Funding" has been broken down into following measurable indicators: volume of funding of immunization, regular disbursement of fund for immunization, incentive for immunization

Success of immunization

Collins English Dictionary (2014) defined "success" as the favorable or prosperous termination of attempts or endeavors; the accomplishment of one's goals. It also implies the achieving of something desired, planned or attempted. It involves achieving what is intended to achieve. In this work "success of immunization" implies number of reported cases or outbreaks in a particular area, number of children dying in a particular area.

Local Government

Local Government as a concept has attracted several definitions. Unlike other concepts, it has not generated controversy (Ighodalo and Sola, 2010). Appadorai (1975:287) defined LG as a government by a popular elected bodies charged with administrative and executive duties in matters concerning the inhabitants of a particular district or place. The definition restricted LG to government formed by a popular elected bodies charged with the responsibility of administering a particular area. Similar conception by the United Nation office for public Administration (1961:11) as cited in Ola (1984) views local government as "a political sub- division of the nation (or in a federal system, a state), which is constituted by law and has substantial control of local affairs including the power to exert labor for prescribed purpose. The governing body of such entity is elected or otherwise locally selected".

Literature Review

Immunization has proven to be one of the most significant and successful advances developed by human species in diseases prevention. Immunization is a cost-effective public health intervention aimed at reducing morbidity and mortality associated with infectious diseases (Uzochukwu et al, 2014). Globally, 27m children do not receive routine immunization which resulted in the death of 2

million children every year (Abdulkarim, 2011). Studies indicate different factors related to the state of immunization in Nigeria. Elah's (2012) indicates that immunization coverage in the Northern Nigeria were among the lowest in the world partly due to poor funding, management, lack of investment in personnel, facilities and drugs. Not only immunization alone, the Nigerian health system has been grossly under-funded with per capita expenditure of US\$9.44 and among the worst in the world (Oyekale and Eluwa 2010). While Uzochukwu et al (2014) indicates that inadequate finance and accountability were among the challenges of immunization service delivery in Nigeria. Much of these studies have sought to relate adequate funding or management to the success of LG healthcare service delivery. While adequate attention was not given to management of finance and the success of immunization service delivery. Focusing on the Kaduna state, Nigeria where high incidences of mortality rates as a result of vaccines preventable diseases (VPDs) are likely to be affected by mismanagement of finance. This study examines the nexus between funding and the success of LG immunization in Kaduna state, Nigeria.

Local Government: A Brief Theoretical Explanation

In theorizing the justification for the existence of Local Governments, i.e. articulating the functional responsibilities that Local Governments are supposed to perform. Adeyemo, (2010) identified three schools of

thoughts, they are: The Democratic participatory school The Efficiency services school and; The Developmental school. Advocates of democratic school of thought (Mill, 1964; Mechanize, 1964) hold that, Local Government function to bring about democracy (Ola, 1984; Adeyemo 2010). In this conception, LGs essentially emerged to perform the sensitization function in the art of politics (Gboyenga, 2007). In reaction to democratic participatory school of thought, efficiency services school emerged and holds that LG exists for efficiency service delivery (Ola 1984). The developmental school on the other hand emphasized on how Local Governments in the developing countries could be 'an effective agent for better life socially and economically, and a means to better share in the national wealth' (Adeyemo, 2010). Adeyemo (2010) further maintained that, none of the three schools of thought is irrelevant to the success or failure of National Health Services delivery. Essentially, Primary Health Care Services Delivery (Adeyemo, 2010: 3). However, for the purpose of this study the researcher has chosen efficiency services school as a theoretical framework for the study. This is because the provision of health care service in Nigeria is under the concurrent legislative list, but the primary health care service delivery including the actual delivery of immunization service is shouldered on LG because of its closeness to the grassroots communities and the expectation that it would be better and efficiently provided by the local authorities.

Data Presentation

Table 2: Nigeria Financial report (in US\$) for immunization from 2006 to 2013

Variables	2006	2007	2008	2009	2010	2011	2012	2013
Gross National Income (US\$) per capita (Atlas)1	840	970	1,160	1,160	1,460	1,710	2,490	2,760
Surviving Infants2	5,177,961	5,310,729	5,446,901	5,583,074	5,722,651	5,865,717	6,012,360	6,162,669
Total Population2	143,314,909	147,187,353	151,208,080	155,381,020	159,707,780	164,192,925	168,833,776	173,615,345
National DTP3 Coverage3	40	42	53	63	54	45	41	N/A
General Government Expenditure on Health (GGEH)4 US\$ per Capita	2,880,524,390 \$20	3,941,953,034 \$27	4,918,533,893 \$33	3,609,734,676 \$23	3,353,229,741 \$21	4,741,687,764 \$29	4,961,065,370 \$29	N/A N/A
Government Expenditures on Vaccines - US\$ (JRF6470)3 US\$ per Surviving Infant	26,133,100 \$5	N/A N/A	21,000,000 \$4	11,920,800 \$2	14,400,000 \$3	N/A N/A	N/A N/A	40,629,508 \$7
All Source Expenditures on Vaccines - US\$ (JRF 6480)3 US\$ per Surviving Infant	[Indicator not incorporated until 2010]				20,290,900 \$4	N/A N/A	N/A N/A	73,764,508\$12
Reported % Govt. Expenditures on Vaccines (JRF 6490)3	100	N/A	90	74	71	N/A	N/A	55
Government Expenditures on Routine Immunization - US\$ (JRF 6500)3US\$ per Surviving Infant	89,599,000 \$17	N/A N/A	N/A N/A	N/A N/A	23,825,400 \$4	N/A N/A	N/A N/A	N/A N/A
All Source Expenditures on Routine Immunization - US\$ (JRF 6510)3US\$ per Surviving Infant	[Indicator not incorporated until 2010]				26,836,300 \$5	N/A N/A	N/A N/A	N/A N/A
Reported % Government Expenditures on Routine Immunization (JRF 6520)3	87	N/A	70	N/A	89	N/A	N/A	N/A

Source: Feedback on Financial Indicators 6470-6520, WHO/UNICEF - Joint Reporting Form (JRF), 2015.

Table 2 presents Nigerian government expenditure on immunization from 2006 to 2013. Available data indicates that Nigerian government expenditures on vaccine kept on fluctuating over the years. In 2006 Nigeria spent \$26,133,100. The figure dropped to \$21,000,000 and \$11,920,800 in 2008 and 2009 respectively. The figure appreciated to \$14,400,000 in 2011 and finally reached \$40,629,508 in 2013. These figures represent 100% and 90% of the total expenditures on vaccine in the years 2006 and 2008 respectively. The percentage declined to 74% and 71% in 2009 and 2010 respectively. The percentage finally decreased to 55% in 2013.

On the routing immunization, available data indicates that the Nigerian government spent \$89,599,000 and \$23,825,400 in 2006, and 2010 respectively. This compared to the total percentage of government expenditures of 87%, 70% and 89% in 2006, 2008 and 2010 respectively. Total expenditures of routing immunization from all sources in 2010 amounted \$26,836,300. To complement the government financial support to immunization and that of the development partners, the table below shows the details.

Table 3: Funding of immunization by the development partners to Kaduna state (2009-2014)

S/No	Funding organization	Funding Purpose	Amount per round	2009	2010	2011	2012	2013	2014
				Times10	Times 9	Times 9	Times 10	Times10	Times 8
1	WHO	Training of health Personnel, monitoring of immunization and pluses.	N120 M	N1200M	N9600M	N9600M	N1200M	N12000 M	N960M
2	Centre for Disease Control (CDC)	Training of health Personnel and supervision of immunization	N500,000	N5M	N4500,000.	N4500,000.	N5M	N5M	N4M
3	Rotary international	Supervision of immunization	N200,000	N2M	N1800,000	N45,00,000	N2M	2M	1600000

Source: Kaduna state primary Healthcare Agency, 2015.

The table 3 above indicates that from 2009 to 2014 WHO has been supporting immunization in Kaduna state in form of financing training of health personnel, monitoring of immunization and pluses in Kaduna state for One Hundred and Twenty Million Naira (N120) per each round. Similarly Centre for Disease Control (CDC) has been supporting immunization with Five

Hundred Thousand Naira (N500, 000) per each round in form of training of health personnel and supervision of immunization. The Rotary International also has been supporting immunization with Two Hundred Thousand Naira (N200, 000) for supervision of immunization.

Table 4: Funding support by WHO for the December, 2009-2014 Sub-National Immunization Plus Days (SNIPDS) Campaign in Kaduna State

S/N	LGs	Allocation in Naira(N)	2009	2010	2011	2012	2013	2014
1	Giwa	N2,817,550	Times10	Times 9	Times 9	Times10	Times10	Times 8
			N2,817,5500	N253579500	N253579500	N2,817,5500	N2,817,5500	N22540400
2	Jema'a	N1,143,250	N1,143,2500	N1028920	N1028920	1,143,2500	1,143,2500	9146000
3	K/North	N2,976,700	N2,976,7000	26790300	26790300	N2,976,7000	2,976,7000	23813600
4	Kauru	N1,108,750	N1,108,7500	N9978750	N9978750	N1,108,7500	1,108,7500	23813600
5	Kubau	N3,222,700	N3,222,7000	3,222,7000	N3,222,7000	N3,222,7000	3,222,7000	25781600
6	S/Gari	N2,330,050	N2,330,0500	N2,330,0500	N20970450	N2,330,0500	N2,330,0500	18640400

Source: Kaduna state primary Healthcare Agency, 2015.

Table 4: indicates that Kubau and K/North LGs have received the highest contribution by the WHO of N3, 222,700 and N2, 976,700 respectively per round. The Giwa and S/Gari LGs have received a total of N2, 817,550 and N2, 330,050 respectively. Jema'a and Kauru had received the least support of N1, 143,250 and N1, 108,750 respectively per each round.

Table 5: Local Government budgets for Immunization in Kaduna State from 2009-2014

LG	Year	Proposed Estimate	Actual	Total Budget for PHC Dept.	RI	IPDs	NIDs	CC activities
LG/ S/Gari	2009	95,872,970	50,978,458					
K/ North		150,245,600						
Kauru				69,653,200	400,000		500,000	
Kubau				64,500,000	12000000		500,000	
Jema'a				55,731,492			500,000	
Giwa								
S/Gari	2010			49000000	8000000			
K/ North								
Kauru				49,600,000	16000000	40,000		
Kubau	-	-	-	115,100,000		8000000	5,500,000	
Jema'a	-	-	-	51,574,000		10000000		
Giwa		84,072,000				10000000		
LG/ S/Gari	2011							
K/ North								
Kauru								
Kubau				85000000	8000000			
Jema'a				48,600,000	8000000			
Giwa				90,500,000	8000000			
S/Gari	2012			372,226,012				
K/ North								
Kauru				106,178,947				
Kubau								
Giwa								
Jema'a								
S/Gari	2013			495,888,839				
K/ North								
Kauru				449,310,319				
Giwa								
Kubau								
Jema'a								
S/Gari	2014			154,875,483	24,575,483			
K/ North				375,442,805	35000000		3000000	
Kauru				351,959,345	35000000		3000000	500,000
Kubau	-	-	-	154,875,483	24,515,483	35000000		
Jema'a	-	-	-	295,478,797	15000,000	35,000,000	300,000	
Giwa	-	-	-					

Source: Kaduna state Ministry for LGs, (2015).

Table 5 indicates that Eight Million Naira (N8000, 000), has been the usual allocation for RI support to the six LGs in the state from 2009 and 2011; except for Kubau Local Government which had budgeted a sum of sixteen million naira (N16000,000). The total allocation for RI support increased to fifteen million (N15000, 000) in 2014 which is the least and to thirty five million naira (35000, 000) as the case of Kaduna North and Kauru LGs respectively. For IPDs support a total of N4M budgeted by the Kauru LG in 2010, while

Jema'a and Giwa LGs allocated N10M each, whereas Kubau budgeted Eight Million Naira (N8000, 000) for the program. The budget figure for Kubau and Jema'a appreciated to Thirty Five Million Naira (N35, 000,000) each in 2014. Table 5 represents LGs budgets in Kaduna state while the table below represents staff respondents' views on funding of immunization. To collaborate what the LGs had budgeted and what was provided with the views of the staff respondents in relation to funding of immunization.

Table 6: Funding and Immunization service delivery

S/N	VARIABLES	RESPONSES	LOCAL GOVERNMENTS						
			K/North	S/Gari	Kubau	Giwa	Jema'a	Kauru	Total
1	Was the volume of funding for immunization adequate?	Yes	35(9%)	31(8%)	23(6%)	27(7%)	32(8%)	16(4%)	164(41%)
		No	51(13%)	38(9.5%)	46(11.5%)	41(10.25%)	35(8.7%)	25(6.25%)	236(59%)
		Total	86(21.5%)	69(17%)	69(17%)	68(17%)	67(16.7%)	41(10%)	400(100%)
2	Was there regular disbursement of fund for immunization in your district?	Yes	52(13%)	45(45%)	48(12%)	46(12%)	46(12%)	30(7.5%)	267(67%)
		No	34(8.5%)	24(6%)	21(5.2%)	22(5.5%)	21(5.2%)	11(2.7%)	133(33%)
		Total	86(21.5%)	69(17%)	69(17%)	68(17%)	67(16.7%)	41(10%)	400(100%)
3	Was there incentive for immunization in your district	Yes	46(11.5%)	45(11.2%)	48(12%)	46(11.5%)	46(11.5%)	30(7.5%)	261(65.2%)
		No	40(10%)	24(6%)	21(5.2%)	22(5.5%)	21(5.2%)	11(2.7%)	139(34.7%)
		Total	86(%)	69(%)	69(%)	68(%)	67(%)	41(%)	400(100%)

Source: Field survey, 2015

Data in Table 6 reveals that the majority of the respondents administered with questionnaires in the six LGs (267 out of 400) representing 67% of the respondents agreed that funding for immunization was adequate in their districts or communities. While 236 respondents (59%) did not agree that the volume of funding was adequate. This proves that though government and other donor agencies donate adequate funding for immunization in the six local governments studied in the state. The respondents testified that funding for immunization during the period under study was inadequate.

Item No 2 of the table indicates responses on the disbursement of fund for immunization

in the three local governments studied. Respondents were asked whether there was regular disbursement of fund for immunization. Whereas 133(33%) did not agree that there was regular disbursement of fund for immunization within the period under study. Item No. 3 on Table 6 indicates responses on the pattern of incentive(s) for immunization in the six LGs studied. The results indicate that 261 of the respondents (65%) testified that there was incentive for immunization. 139(35%) did not agree that there was incentive for immunization in their districts.

Table 7: Responses on the Success of Immunization

S/N	VARIABLES	RESPONSES	LOCAL GOVERNMENTS						
			S/Gari	Giwa	K/North	Kubau	Kauru	Jema'a	Total
1.	Are there reported cases or outbreaks in your district/ community?	Yes	24(6%)	29(7.2%)	22(5.5%)	29(7.2%)	29(7.5%)	24(6%)	157(34%)
		No	62(15.5%)	40(10%)	67(16.7%)	39(9.7%)	40(10%)	17(4.2%)	265(66%)
		Total	86(21.5%)	69(17%)	69(17%)	68(17%)	67(16.7%)	41(10%)	400(100%)
2.	Are there children dying in your district/community than before?	Yes	21(5%)	13(3%)	21(5%)	14(4%)	21(3%)	14(4%)	104(26%)
		No	65(11%)	56(14%)	45(11%)	54(14%)	46(%)	30(%)	296(74%)
		Total	86(21.5%)	69(17%)	69(17%)	68(17%)	67(16.7%)	41(10%)	400(100%)
3.	Could you attribute that to immunization?	Yes	53(13%)	43(11%)	53(13%)	44(11%)	51(12.7%)	28(7%)	272(68%)
		No	33(8.2%)	26(6.7%)	16(4%)	24(6%)	16(4%)	13(3.2%)	128(32%)
		Total	86(21.5%)	69(17%)	69(17%)	68(17%)	67(16.7%)	41(10%)	400(100%)

Source: Field Survey, 2015.

Table 7 presents a level of success of immunization in the six LGs under study, the results indicates that 265 respondents representing 66% testified that there were no reported cases of outbreaks in their districts, 157 of the respondents representing 34% testified that there were reported cases or outbreaks in their district/community. To investigate the success of immunization in term of mortality rate, respondents were asked whether children are dying in their communities, the majority of the respondents 296 representing 74% said there was no high mortality rate in their communities (i.e. the six LGs), 104 of the respondents representing 26% said yes. To ascertain responses of staff respondents on whether they could attribute the success of reducing child mortality in their communities to immunization, the majority of the respondents numbering 272 (68%) said yes, 128 of the respondents representing 32% said "No". These responses correspond with increased coverage across the LGs as presented in appendix I.

Interview Responses and Focus Group Discussion (FGD) with Health Personnel in the six LGs.

This section present result from the facility survey, focus group discussion (FGDs) and interview conducted with health personnel in the six LGs. Ten health staff respondents and two each from the Kaduna state Ministry of health, Ministry for LGs, Kaduna state Primary Health Care Development Agency and women from six LGs. Results from the interview and Focus Group Discussion (FGD) were presented. Available information confirmed that there were shortages of health financing at local level. Evidence from the interview indicated that development partners have supported immunization in all the Local Governments visited. The study also found that, there was no material inducement given by the LGs for RI service delivery, either within or outside the area of primary assignment. In essence, RI service delivery is considered by the LGs as a routing duty of a health personnel. As such no extra financing or motivation given by all the Local governments visited. Evidence from Kaduna state primary healthcare agency revealed that, the state has been receiving

one hundred and forty million naira (N140M) per each round of immunization from the WHO. While Center for Disease Control (CDC) and Rotary International have been contributing Five Hundred Thousand Naira (N500, 000) and Two Hundred Thousand Naira (N200, 000) for every round respectively. This indicates that WHO has been the largest

Donor agency to Kaduna state. In terms of motivation the study found that, there was no extra financial support for RI to L.G staff because RI is considered as a routing duty for health staff. However, some financial supports were given for certain services. The supports were as follows:

Table 8: Financial Support for RI. to LGs staff in Kaduna State

Staff beneficiary	Service rendered	Amount
RI in charge provider	Outreach service	N2,000
	Vaccine collection	N1,500
	Submission of data	N500
Town announcer	Announcement	N500
Mobilizer	Mobilization	N500

Source: Kaduna North LG, 2014

Others include religious (JNI and CAN representatives) and traditional leaders (ward head or his representative as the case may be). For IPDs, the study discovered that the federal government through the CENTER FOR DISEASE CONTROL (CDC) disburses money to WHO for IPDs administration. The WHO disburses the money to state PHCDA and from then to respective Local Governments. Each Local Government is paid through its designated account depending on the number of staff and Adhoc staff involved in the exercise. Details of payment are as follows:

Staff	beneficiary
The focal person	N3000 per day
Team leader	N1,500 per day
Cold Chain Officer	N2,000 per day

Source: Kaduna North LG, 2014.

The study indicates that, there was no adequate motivation for RI staff. Evidence from the investigation revealed that RI service delivery is considered as a routine duty of health personnel or RI provider. A stipend amount were also given in the previous years to staff that rendered their services in outreach, risk or suspected areas. The study also found that the Local government has forty six (46) district heads and six (6) emirs. Each district head was given five thousand (N5,000) as a transport allowance to the immunization committee meeting where

matters of noncompliance in a particular district(s) were discussed and resolved.

Test of Hypothesis

Funding is very critical to the success of any program. To this extent, the study hypothesized that the higher the level of funding enjoyed, the more likely the success of the immunization program. Questions related to funding and successes of immunization program were asked. Funding as a variable was operationalized into volume of funding, regular disbursement and

incentive(s). Staff respondents were requested to react to the questions.

Staff respondents were asked questions related to the hypothesis. Table 8 indicates the level of government financial support to immunization program in Nigeria. Funding was operationalized in terms of volume of funding, regular disbursement and incentives for immunization for immunization. While, success of immunization was operationalized in terms declining rate of reported cases or outbreaks and the number of children dying.

Hypothesis: H_1 : The higher the level of funding and other support, the more likely the success of the immunization program.

Decision rule: Reject the null hypothesis and accept the alternate one if the calculated value is greater than critical value. Accept the null hypothesis and reject the alternate one if the calculated value is less than the critical value.

Table 8: Correlation between Level of Funding and Success of Immunization

		Success of Immunization
Incentive for Immunization	Pearson Correlation	.937**
	Sig. (2-tailed)	.000
	N	367
Adequacy of funding	Pearson Correlation	.938**
	Sig. (2-tailed)	.000
	N	367
Regular disbursement of fund for immunization	Pearson Correlation	.902**
	Sig. (2-tailed)	.000
	N	367
Success of immunization	Pearson Correlation	1
	Sig. (2-tailed)	
	N	367

**. Correlation is significant at the 0.01 level (2-tailed).

Comparison: The results indicate that the calculated p-values for adequate funding were less than the significance level of 0.01. Therefore, there exists a significant relationship between level of funding and success of immunization program. The results confirmed a strong positive correlation for the choice variables tested at one percentage significance level with Adequacy of funding the highest ($r = 0.938$), followed by Incentive for Immunization ($r = 0.937$), and Regular disbursement of fund for immunization ($r = 0.902$ with $p < 0.01$). All variables had a high and positive significance. The r- values ranged from .902 to 0.938. All r- values were above 0.500. This shows that there is a strong correlation between level of funding and

success of immunization program in the communities under study. The null hypothesis was therefore ignored and the substantive one that there is relationship between Level of Funding and Success of Immunization program adopted. Therefore, the level of funding determines the success of the immunization program.

Discussion of Major Findings

Funding is very critical for the success of any program. The study investigated the relationship between funding and the success of immunization program, the study indicates that over the years LGs in the state have been receiving three million five hundred thousand naira (N3.5M) monthly allocations for

immunization. This amount has been part of the LGs supports to immunization which were directly deducted from the monthly allocation. Development partners WHO, CDC, UNICEF, GAVI and Rotary International have also spent huge resources for the successful immunization exercise in the state. WHO has been the major development partner to the state with Forty Two Million Naira (N42M) per each round of immunization. This to a large extent has reduced the number of infant and under five mortality rates from 100 per 1000 in 2003 to 74.9 per 1000 in 2014. The study found out that there was averagely regular disbursement of funds for immunization service delivery to six LGs in the state. Local Government financial commitment toward immunization was very impressive as indicated by level of their commitment toward immunization and other logistic supports for the exercise. There was a reasonable funding support to meet the logistic needs and staff welfare. It is evident that a statutory budget is allocated to immunization in each LG studied. This is in compliance with the National Policy on Immunization. This study found that at least a sum of N3, 500000 is deducted monthly by the state ministry for LGs from the LGs federal statutory allocation. This is to complement support from private and other development partners within and outside the country. This has also proved the hypothesis that “the higher the level of funding and other support, the more likely the success of immunization program”.

Recommendations

1. Funding is very important for effective service delivery; there is need for the government at all levels to increase their financial and other logistic supports on immunization program. Immunization requires sufficient funding to cater for the growing Nigerian population; the need to increase funding at all tiers of government become necessary. At least 35% of the budget of each tier of government should be allocated to health sector.
2. Health financing is very critical for sustenance of immunization in Nigeria. The need to sustain government support through adequate funding is necessary if Nigeria is to achieve its health care policy objective(s). More finance should be channeled toward enhancing immunization since it has proven to be a cost effective tool for controlling and eliminating life threatening infectious diseases in cheaper strategy.
3. Special incentives should be attached to routing immunization. This to a large extent will complement development partners’ effort on sustenance of routing immunization.
4. LGs in the state should review the remuneration of ad-hoc staff for more effective immunization service delivery. This to a large extent will enhance commitment and faithful to the responsibilities shouldered on them. Special incentive should be attached to health personnel who are working in remote areas or villages. This to a large extent will reduce the level of over concentration of health personnel in LG capitals and cities.

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Appendix I: Immunization Coverage for six LGs in Kaduna State from 2009 to 2014

2014

S/No	LGA	Total Pop	0-11mths	Surviving Infants	Preg W	BCG	OPV3	Penta 3	Measles	YF	TT2+	BCG	OPV3	Penta 3	Measles	YF	TT2+
1	Jema'a	353,093	14,124	12,725	17,655	12024	10203	10825	9497	9956	9998	94	80	85	75	78	57
2	Kaduna-North	53,116	18,125	16,330	22,656	21086	17393	17345	14728	14336	19159	129	107	106	90	88	85
3	Kubau	57,286	14,291	12,877	17,864	22224	14043	12299	16829	16295	18533	173	109	96	131	127	104
4	Giwa	362,837	14,513	13,077	18,142	21707	15423	14815	15812	15216	20805	166	118	113	121	116	115
5	Kauru	215,362	8,614	7,762	10,768	7103	6216	6474	5985	6087	7072	92	80	83	77	78	66
6	S/Gari	363,400	14,536	13,097	18,170	16308	12293	12385	11019	10820	14607	125	94	95	84	83	80

2013

S/N	LGAS	BCG			DPT1	DPT3		DP3 DOR	OPV 3		MEASLES		TT2+		
		Target POP	No. Imm	% Coverage		No. Imm	% Coverage		No. Imm	% Coverage	No. Imm	% Coverage	Target POP	No. Imm	% Coverage
1	JEMA'A	12355	8,828	71	9,627	7,824	63	19	8,021	65	10,882	88	17140	10,547	62
2	K/NORTH	15855	19,199	121	19,707	14,420	91	27	14,652	92	17,811	112	21996	26,638	121
3	KUBAU	12502	12,162	97	17,462	10,333	83	41	10,761	86	13,121	105	17344	13,988	81
4	Giwa	12696	15,582	123	16,482	14,163	112	14	14,505	114	15,996	126	17613	20,267	115
5	Kauru	7536	8,942	119	9,872	8,253	110	16	8,038	107	9,701	129	10454	8,364	80
6	S/Garil	12715	14,101	111	14,899	10,823	85	27	10,471	82	14,445	114	17641	18,208	103

2012

1	JEMA'A	11995	12,996	108	7,540	5,073	42	33	7,876	66	10,636	89	16641	9,956	60
2	K/NORTH	15393	21,537	140	15,244	7,698	50	50	10,202	66	14,623	95	21355	16,172	76
3	KUBAU	12137	15,588	128	10,776	5,532	46	49	10,919	90	11,640	96	16839	10,573	63
4	Giwa	12326	20,269	164	10,848	6,536	53	40	13,331	108	13,677	111	17100	13,445	79
5	Kauru	7316	8,432	115	5,133	3,827	52	25	5,712	78	5,668	77	10150	4,911	48
6	S/Gari	12345	15,980	129	9,993	5,180	42	48	10,842	88	13,146	106	17127	12,694	74
2011															
	JEMA'A	11646	5,759	49	7,581	5,608	48	26	8,234	71	19,519	168	16157	5,476	34
2	K/NORTH	14945	6,826	46	7,785	5,471	37	30	4,682	31	8,731	58	20733	8,245	40
3	KUBAU	11784	7,042	60	8,386	6,914	59	18	8,848	75	20,708	176	16348	5,381	33
4	GIWA	11967	6,369	53	8,685	7,721	65	11	6,485	54	32,669	273	16602	7,817	47
5	Kauru	7103	2,789	39	5,400	4,331	61	20	3,696	52	5,335	75	9854	3,719	38
6	S/Gari	11986	6,970	58	8,158	6,834	57	16	5,548	46	22,494	188	16628	10,153	61

2010

S/N	LGAS	BCG			DPT 1	DPT-3			Unimm unized	Drop Out Rate	OPV3			Measles			TT2+		
		Target Pop	No. Imm	% Coverage		Target Pop	No. Imm	% Coverage			Target Pop	No. Imm	% Coverage	Target Pop	No. Imm	% Coverage	Target Pop	No. Imm	% Coverage
1	GIWA	11,618	10,932	94	13,125	11,618	9063	78	2,556	31	11,618	8,406	72	11,618	9,101	78	16119	14,881	92
2	JEMA'A	11,306	10,561	93	11,486	11,306	8939	79	2,368	22	11,306	6,513	58	11,306	8,899	79	15686	8,755	56
3	K/NORTH	14,509	16,639	115	13,869	14,509	11695	81	2,814	16	14,509	9,783	67	14,509	12,527	86	20129	19,392	96
4	KAURU	6,896	7,219	105	7,997	6,896	6991	101	(95)	13	6,896	5,631	82	6,896	6,353	92	9567	7,756	81
5	KUBAU	11,441	11,052	97	10,755	11,441	8699	76	2,742	19	11,441	8,879	78	11,441	8,809	77	15872	11,291	71
6	S/GARI	11,636	11,062	95	11,388	11,636	8727	75	2,909	23	11,636	7,759	67	11,636	8,472	73	16144	2,725	79

2009

S/N	LGAS	BCG			DPT-3			OPV 3			MEASLES			TT2+		
		Target Pop	No. Imm	% Coverage	Target Pop	No. Imm	% Coverage	Target Pop	No. Imm	% Coverage	Target Pop	No. Imm	% Coverage	Target Pop	No. Imm	% Coverage
1	GIWA	11,280	8,122	72	11,280	5,752	51	11,280	6,277	56	11,280	5,693	50	15649	10,025	64
2	JEMA'A	10,977	8,032	73	10,977	5,373	49	10,977	4,482	41	10,977	6,235	57	15229	6,142	40
3	K/NORTH	14,087	18,699	133	14,087	11,270	80	14,087	9,613	68	14,087	10,452	74	19543	21,926	112
4	KAURU	6,695	5,598	84	6,695	4,696	70	6,695	4,591	69	6,695	4,085	61	9289	5,204	56
5	KUBAU	11,107	12,336	111	11,107	8,296	75	11,107	8,415	76	11,107	8,920	80	15410	10,166	66
6	S/GARI	11,298	8,499	75	11,298	6,733	60	11,298	5,554	49	11,298	7,143	63	15674	7,095	45

Source: Kaduna state primary Health care Agency and Kaduna state Ministry of Health, 2015.