ENUGU FORUM POLICY PAPER 12

DEBATING POLICY OPTIONS FOR NATIONAL DEVELOPMENT

COMMUNITY-DIRECTED INTERVENTION AND HEALTHCARE PROVISION IN NIGERIA

AFRICAN INSTITUTE FOR APPLIED ECONOMICS
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<td>CBI</td>
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<td>CDD</td>
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<td>CDI</td>
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<td>CDTI</td>
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About Enugu Forum

Introduction

Opening new spaces for domestic policy dialogue is one of the most important potential gains of democratic governance. Democratic space creates public policy arena in which government can be engaged by private sector and civil society on what it is doing or not doing, and hence be pressured to perform. Since the return to democratic rule in 1999, there has been an upsurge of private sector and civil society engagement with governments on economic policy and development issues. But, the upsurge of civic advocacy on economic and development issues has not been matched with commensurate improvements in the quality of debates on policy alternatives and roadmaps for national development.

ENUGU FORUM is intended to provide a civic arena for proposing and debating policy alternatives and roadmaps towards social, economic and political progress of the country. It is hoped that the FORUM will foster interaction between government and non-state actors towards good governance, accountability and participatory democracy.

Identity and Mission

Enugu Forum is a civic platform devoted to intellectual conversation and of policy issues affecting the growth and development of the country. It was founded in 2001 to promote informed and credible avenues of stakeholder dialogue and policy advocacy. It seeks to improve the policy process through high quality debate and non-partisan discourse of alternative solutions to contemporary development questions.

The Forum deploys both intellectual and empirical insight to nurture a shared understanding and objective scrutiny of policy issues on social, economic and political development of the country.

Activities

Enugu Forum's activities take several forms:

* Public Lectures
* Seminars
* Workshops
* Conferences
* Roundtables
* Symposia
The activities bring together diverse stakeholders including government officials, private sector operators, independent think-pots and civil society to exchange and constructively critique perspectives and experiences on critical policy imperatives. Attendance is by formal invitation.

**Outputs**

The outputs of the Forum's activities take the form of communiqué outlining key outcomes of discussions, conclusions and recommendations. The presentations and proceedings are further developed into Occasional Papers, Working Papers or Policy Briefs widely circulated to inform, sensitize and enlighten stakeholders.

**Structure and Organisation**

Enugu Forum is structured into a Steering Committee, a Coordinating Committee and the General Members. The Steering Committee governs the Forum through guides and policies agreed in consultation with the General Members. The Coordinating Committee executes the activities and programmes.

**Membership**

There are two classes of membership: individual and corporate. The Forums' activities are open and can be attended by all interested persons but formal invitations are issued to members and designated guests only. To be a member, one needs to register in the appropriate category. Registration can be done during the Forum's events, or at the Host Organisation - African Institute for Applied Economics, Enugu.

**Sponsorship**

Ownership of the Forum resides in the members. It is run on the goodwill contributions from corporate bodies and individuals. Sponsorship includes provision of venue, refreshments, logistics and facilitation of Guest Speakers and Resource Persons.

**Host Institution**

The Enugu Forum is hosted by the African Institute for Applied Economics (AIAE) Enugu. AIAE is a non-governmental, not-for-profit and independent organization devoted to economic policy research towards promoting evidence-based decision making.
Enugu Forum Policy Papers

Enugu Forum Policy Paper Series publishes the proceedings and outcomes of workshops, conferences, seminars or public lectures held by the Enugu Forum. The Series provides documentation of the topical presentations, debate, comments and perhaps consensus/communiqué of the Forum. It is intended to disseminate the Forum's intellectual discourse to a wider audience. The essence is to stimulate broader policy debate, promote multi-perspective dialogue and shared understanding of policy options. Enugu Forum Policy Papers constitute an advocacy instrument to canvass alternative development solutions and policy roadmaps, for the overall purpose of enriching the policy discourse in the country. The Series also draws attention of government, private sector and civil society to salient dimensions of contemporary development challenges in Nigeria.
The Enugu Forum is a civic platform for informed debates as well as canvass policy options for growth and development in the country. The Forum which started in 2001 is facilitated by the African Institute for Applied Economics (AIAE). In line with its mission to promote evidenced-based policies, the forum provides a platform for discussion of policy issues not just what an individual thinks but evidenced based research effort. The unique value for public debate is that it discusses policy issues from evidence-based perspectives, not based on mere thoughts, imaginations or speculative thinking. The forum comprises civil society organizations, private sector organizations, government, technocrats and academia.

As Nigeria joins other countries in the final countdown to the MDGs timeline of 2015, it has become essential for stakeholders (government, researchers and development practitioners) to take stock of MDGs achievements, challenges and chart the imperatives for accelerated progress towards the globally-benchmarked targets. Experience has shown that the areas where Nigeria has the most challenges include the health-related MDGs particularly MDG 4 reduce child mortality and improve maternal mortality (MDG 5). The challenges are underscored by the fact that under-five mortality was about 157 deaths per 1,000 live births in 2008 while maternal mortality was about 545 deaths per 100,000 live births in 2008; both of which fall far short of the MDGs targets.

Over the years, the federal, state and local governments have designed and implemented several schemes and projects to promote child and maternal health. Within the framework of these efforts, community-directed health care provisioning is acknowledged as an important element of sustainable health care system for the achievement of the MDGs. The involvement of local communities in the health care system is justified by the imperatives of legitimacy/ownership, efficiency, accountability and sustainability.

Upon the need to offer a platform for research-based insights on community-directed interventions in health care provisioning, the Enugu Forum Policy Seminar was convened on the 5th of May 2010. The Seminar provided opportunity for presentation and discussion of research information about community-directed interventions and an assessment of the empirical challenges in implementing and managing community-directed interventions for sustainable and effective results.
The Forum was attended by researchers, government officials, development practitioners and civil society groups including community-based associations, traditional leaders and health professionals.

This Policy Paper is therefore intended to extend the dissemination of the key messages of the Forum, beyond and outside the confines of the event. The objectives are to inform and guide policymakers and development practitioners in efforts to promote community participation in health care provisioning for the achievement of the health-related MDGs in Nigeria. It is also hoped that this Policy Paper will convey important lessons that will stimulate greater public interest and informed debate about the challenges and opportunities for community involvement in health and development activities in Nigeria.
**Abstract**

Despite massive development of health technologies and commodities for ensuring good health, the health status of populations in African countries, including Nigeria, continue to deteriorate or at best remains stagnant. The health targets of the Millennium Development Goals, especially as they concern women and children remain unachievable as maternal mortality ratio and child mortality rate are disquietingly high even as 2015 draws close. The slow or no progress to attaining good health, here, appears to not only reflect lack of knowledge and resistance to change behavior, but more important lacking access to health resources and limited support of programmes by local communities.

The community directed intervention (CDI) demonstrates the potentials for increasing access to, and effective utilization of different health interventions. The paper presents case studies of successful application of the CDI strategy in the delivery of such interventions as vitamin A supplementation, malaria and onchocerciasis control in Nigeria and elsewhere in Africa. It showed however, that the effectiveness of the CDI approach is dependent on effective sensitization and mobilization of stakeholders, appreciation of the intervention by local communities and availability of intervention commodities in adequate quantities and qualities. It also showed that the CDI strategy empowers to communities to take control of their health problems and demands for solutions.

**1.0 Introduction**

In 2000, world bodies set health goals to be reached by 2015. Unfortunately, less than five years to the target year, Nigeria, and in fact countries in sub-Saharan Africa are yet to be on the path of attaining the set goals, going by the progress made on the key indicators in the past ten years, which show stagnation and at best slow change. As we march closer to 2015, the year marked for attaining health for all, concerns for reaching the goals set in the Millennium Development Goals (MDGs) document for health become very disquieting.

Maternal and child health constitute two major indicators of development, the world over. Nigeria’s maternal deaths rose from 37,000 in 2000 to the 59,000 mark in 2005 with a population of 140 million. India with a population of over one billion reduced its maternal mortality from 136,000 to 117,000 between 2000 and 2005. With an estimated annual maternal death of 59,000, Nigerian maternal deaths ranked only
after India's 117,000 maternal deaths, on absolute terms. In relative terms, the Federal Ministry of Health (FMoH) and World Health Organization (WHO, 2007) estimate that over 50,000 women die each year in Nigeria due to complications of pregnancy and child birth is the worse in the world (Abdul'Aziz, 2008). Nigeria contributes nearly 10 percent to the global burden of maternal mortality, despite accounting for less than 2 percent of the world's population (Okonofua, 2010). Similarly, more than one million children under five years die each year due to preventable causes (Abdul'Aziz, 2008). Figures 1 and 2 show very poor development in terms of child health within the last decade (NPC and ICF Macro, 2009).

These sorry circumstances of health of mothers and children in Nigeria exist in spite of the numerous effective interventions. Till date, Nigeria has some of the lowest uptake of evidence-based interventions for improving maternal and child health in the world. Contraceptive prevalence rate is abysmally low (less than 10%); only 60 percent of pregnant women go for antenatal services in health clinics and of this, only 30 percent do so more than once; only 30 percent of the pregnant women have access to skilled birth attendants (Okonofua, 2010).

Malaria is another major killer of children and women during pregnancy. The effect of malaria parasitemia has been documented from different scientific efforts. This is in spite of the existence of effective Insecticide Treated Nets (ITNs). The NPC and ICF Macro (2009) reports of very low ITN ownership and even lower usage rate in Nigeria.

Some of the explanations for the poor health indicators are located in the poor health infrastructures in Nigeria. The situation is further aggravated by poverty and ignorance which account for women's inability to access critical ANC services and drugs (Daily Sun Editorial, 2007). In many cases, medical facilities are few and thinly spread. In the hard to reach rural areas, with difficult terrain and road network, modern health facilities are such luxuries the dwellers can hardly afford, even when they wish. With inadequate transport facilities to get women who experience complications during pregnancy to hospitals in the urban centers, many pregnant women die of preventable health problems such as malaria infection.

These health realities in Nigeria call for a rethink of the mechanisms and channels of availing people in need of health services with appropriate interventions. Previously, the orthodox health system determined and directed health care delivery in Nigeria, as in most other African countries. For many years, under this orthodox health system, health services and Non Governmental Organizations (NGOs)
distributed health commodities to communities—immunizations, vitamin A, bed nets, Ivermectin, guinea worm filters, condoms, antiretroviral and tuberculosis drugs among others.

Unfortunately, the health status of the countries worsened and at best remained constant due to inadequate access to the interventions by those needing them. For instance, childhood mortality rate in Nigeria remained high at 194 per 1000 births (WHO, 2007), and this is largely due to pneumonia, diarrhea, malaria and measles, which are easily prevented through simple interventions (United Nations, 2008). The potentials of the Insecticide Treated Nets (ITN) in enhancing child survival have been well documented in randomized controlled trials. Fegan et al. (2007) demonstrated that ITN was associated with 44 percent reduction in childhood (1-59 months) mortality with the level of protection corresponding to 7 deaths averted for every 1000 ITN distributed in Kenya. However, in spite of the efforts to promote ownership and use of ITNs in households less than 2 percent of households in Nigeria own an ITN (Nigerian Demographic and Health Survey, 2003). Similarly, measles, pneumonia and vitamin A deficiency remain childhood killers in African countries yet the proportion of suspected cases, which are given adequate care remains very low (UN, 2008). Measles can be effectively prevented with a relatively inexpensive vaccine but only few cases are reached with the vaccine due to logistic problems that literally overwhelm the health systems.

Worse still, antenatal care attendance, which is an essential safety net for healthy motherhood and childbirth, is low due to poor access to health care facilities in the resource poor countries. Adolescent pregnancy also contributes to the cycle of maternal and childhood mortality. According to the Millennium Development Goal Report for 2008 (UN, 2008), “very early motherhood not only increases the risk of dying in childbirth, it also jeopardizes the well-being of surviving mothers and their children. Young mothers frequently miss out on educational and socio-economic opportunities”. Many very early pregnancies can be controlled with appropriate family planning interventions.

The Community-Directed Intervention (CDI) approach demonstrates that communities can effectively carry out the tasks of reaching the needy populations with basic health services and proven interventions. The logic and values of CDI distinguishes it from other Community-Based Interventions (CBI) or interventions directed at, or focusing on alleviating health problems of communities. In the latter case, the health system design and implement interventions in the communities focusing at the need of specific communities. In doing this, the peculiar realities of
the communities could be factored into the design. However, this is often dependent on how much the health system knows about the community. Compliance with prescription is often epileptic. Worse still, sustainability of such interventions is only assumed but never realized. The intervention collapses as soon as the initiators depart from the communities. Community ownership of such interventions is lacking among the members of the communities and their leadership structures.

CDI happens when communities take charge of distributing health commodities themselves with guidance from the health service. It is the process in which community itself directs the treatment process (Remme, 2004; Okeibunor et al., 2004). Community, is here, conceptualized as a group of people living together within a defined territory, practicing common ownership, with a system of social organization based of small self-governing structures. The community decides collectively whether they want any intervention, how the intervention will be collected from the medical store at the health centre, when and how it will be distributed, and who in the community will be responsible for the distribution. In a nutshell, communities take charge and make choices for organizing distribution. For example, they can decide to adopt central place, house-to-house or a mixed approach to distribution. In this arrangement, the health services and its partners take on participatory approach in introducing possible intervention(s) and the concept of Community-Direction highlighting community ownership from the onset. From then on, the community takes charge of the process, usually through a series of community meetings for decision-making on implementation and how to carry out its roles in the implementation process. The CDI strategy emphasizes the need to empower communities to take-on or own their health interventions.

Each partner, namely the community, the health services and others (local and international development agents) have varying roles in CDI. CDI is based on the principle of community involvement and participation (Brieger, 2000). Communities are empowered to take all major decisions on what and how to deliver interventions and also make contributions to support the implementation of the interventions. This process combines effectiveness in coverage with ownership and sustainability. The health system merely performs facilitating roles to build the capacity of the community implementers.

Commitment to community empowerment process is of primary importance in CDI and it is critical that all partners demonstrate commitment to this process. Partners, especially health system should not dominate but rather contribute according to their roles and responsibilities to empower the communities, and that they share a
common objective. As a process, CDI involves the following:
1. Community entry and meeting with chiefs and the leadership structures
2. Community orientation and facilitation meeting
3. Community selects distributors
4. Community volunteers trained
5. Community conducts census
6. Community plans dates, approach
7. Community collects ivermectin
8. Community distributes ivermectin
9. Monitor, treat and/or refer reactions
10. Community submits treatment records

2.0 CDI and Onchocerciasis
CDI was first tested for use in the control of onchocerciasis, which was made possible with the availability of Ivermectin for annual mass treatment of endemic communities in Africa. A major challenge for onchocerciasis control is to deliver ivermectin treatment to all target communities and to sustain high treatment coverage over a very long period of time (Okeibunor et al., 2004). In most African countries, where 99% of those infected live, the principal treatment strategy is Community-Directed Treatment with Ivermectin (CDTI) in which it is the community itself that directs the treatment process (Remme, 2004). In a generic sense this is referred as community directed intervention, where communities decide collectively on the adoption of any intervention. CDI is thus, the product of a systemic and persistent search for a system of carrying service to all communities in onchocerciasis endemic areas, most of which were in the hard to reach areas, on a sustainable basis for many years. These communities are characterized with extremely difficult terrain and bad road network. Modern health facilities, here, are such luxuries the dwellers can hardly afford, even when they wish.

The Special Programme for Research and Training in Tropical Diseases (TDR) first tested the utility of CDI for African Programme for Onchocerciasis Control (APOC). The research was conducted to learn if communities could deliver the Ivermectin more effectively than agency outreach had done in the past. When CDI proved successful, it was adopted as APOC’s official strategy. There are now thousands of communities throughout Africa benefiting from annual onchocerciasis control through CDI (Amazigo et al., 2007). By 2009 CDI for onchocerciasis control was operating in 19 Countries, 111 Projects, and 120,000 Villages with at least one CDD per village and 55,000,000 ivermectin treatments provided annually.
By the turn of the 1990s, studies revealed that CDI was used to promote guinea worm control, immunization programs, Vitamin A distribution, water and sanitation projects and schistosomiasis control as well as other health and development activities in many communities.

The availability of community directed distribution encouraged other programmes to involve communities and Community Directed Distributors (CDDs) in other health interventions (Okeibunor et al., 2004). The question arose as to whether additional Tasks added to the CDI Structure were a Threat or Strength. APOC funded a preliminary assessment which indicated that a large number of CDDs are already involved in other health and development (H&D) activities (e.g., distribution of vitamin A, malaria treatment, polio immunization, Guinea worm eradication, nutrition, water protection, serving as community health workers etc) (Homeida et al., 2002).

According to Okeibunor et al. (2004), the success of CDI in onchocerciasis control drew attention from other disease control programmes and there were various attempts to use the CDI system with its CDDs for other health interventions.

### Table 1: List of Additional Tasks for the CDI System

<table>
<thead>
<tr>
<th>Additional Activity</th>
<th>Percent of Communities</th>
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<tbody>
<tr>
<td>Immunization</td>
<td>55%</td>
</tr>
<tr>
<td>Community Dev</td>
<td>49%</td>
</tr>
<tr>
<td>WatSan</td>
<td>44%</td>
</tr>
<tr>
<td>Agric</td>
<td>10%</td>
</tr>
<tr>
<td>HIV/AIDS</td>
<td>6%</td>
</tr>
<tr>
<td>Family Planning</td>
<td>6%</td>
</tr>
<tr>
<td>Guinea Worm</td>
<td>2%</td>
</tr>
<tr>
<td>Vit A</td>
<td>2%</td>
</tr>
<tr>
<td>Other</td>
<td>27%</td>
</tr>
<tr>
<td>Mix</td>
<td>82%</td>
</tr>
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</table>
Confronted with ambivalence on the implications of additional tasks on the CDI system, APOC/TDR conducted a study to examine the levels of involvement of CDDs in other health and development activities, its relationship with the performance of CDTI, and the attitudes of CDDs and health workers towards greater involvement of CDDs in additional activities. The results showed that performance of CDDs in the distribution of Ivermectin increased with increase in the number of tasks each CDD took on. The treatment coverage per community increased significantly with increase in the mean number of additional activities of the CDDs in the community (linear regression, Intercept: 67.7%, slope 2.5%, R=0.238, P=0.05). See Figure 1. The results also revealed that CDDs and health workers had a positive opinion on adding other health & development activities (See Figures 2 and 3).

The next step in the research process was testing intentional add-on of other interventions to ivermectin distribution in a logical and systematic way. Choice of interventions was based on an analysis of complexity of each additional intervention as well as the complexity of the package of interventions.

### Table 2: Complexity of Individual Interventions

<table>
<thead>
<tr>
<th>Complexity of Combination of CDD and CDTI</th>
<th>• Effort needed to deliver at community level</th>
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<tr>
<td></td>
<td>• Skills needed by community implementers</td>
</tr>
<tr>
<td></td>
<td>• Cost of intervention to the end-user</td>
</tr>
<tr>
<td></td>
<td>• Monitoring and supervision requirements</td>
</tr>
<tr>
<td></td>
<td>CDTI &lt; Vit. A &lt; ITN &lt; DOTS ~ Home Mgmt Malaria</td>
</tr>
</tbody>
</table>

The Study Design involved the implementation of the following additional interventions in communities where there was already CDI for ivermectin distribution: Vitamin A, Insecticide Treated Nets, Directly Observed Treatment Short-course (DOTS) for tuberculosis, and Home Management of Malaria. These were added in a phased manner in four study districts in seven study sites. Each site also had a control district where CDI for onchocerciasis control continued but the additional interventions were delivered through the normal health care system as seen in Table 3. The full report can be found on the web (TDR, 2008).
The study involved 7 multi-disciplinary research teams from 5 countries in West, Central and East Africa, and represented both anglophone and francophone Africa. Nigeria was strongly represented with 4 teams from the Northern and Southern parts of the country.

Among the selection criteria for health districts/LGAs to be included in the study were that all five intervention programmes (CDTI, DOTS, ITN, HMM and Vit A) should be operating in the district or be planned to be implemented in the coming year. Other criteria were the performance of CDTI (treatment coverage at least 65% of the total population) and that the district/LGA should have at least 50 communities to allow for randomization at the evaluation stage. The study covered 45 health districts/LGAs in 5 countries. The average population for one health district/LGA in these countries is about 100,000 people, and the total study population was around 4.5 million people.

One operational unit (Ward, Subdistrict, Health area, Canton, full LGA) was selected, from the five District/LGAs, where all the five intervention programmes (CDTI, DOTS, ITN, HMM and Vit A) are implemented in the traditional health system model. The selection took account of the degree of operationalization of interventions.

For evaluation purposes 10 communities were randomly selected from the 50+
communities in each operational unit (district/LGA). Five households were randomly selected from each of the ten communities in each unit, giving a total of 50 evaluation villages and 250 evaluation households per study site and 1759 household in the entire study covering countries in the different zone in Africa. The importance of this large sample size is that it did not only enhance the statistical power of the data collected but ensured that typical and not ideal household and communities were included in the study.

Addition of these 4 interventions required additional steps, which actually served as critical factors for a successful setting up of CDI at national and district level beyond the community CDI steps outlined previously. These are seen in Figure 4. The steps involved meetings with partners at the National and District levels of the health system. This includes the private health care providers in the project focus. Objectives of such meetings are to plan, define and agree upon a CDI strategy, and the roles and responsibilities of the different partners in the selection of interventions to be offered through the CDI package. Partners also used the opportunity of the stakeholders' meetings to plan for continuous advocacy and health education using appropriate IEC strategies and materials at all levels. Another key issue covered during the meetings at these levels is the training of health personnel at all levels on CDI and available interventions. The staff trained at the National and District levels proceed to introduce the first line health facility staff to the CDI process and its effectiveness as well as train them on available CDI interventions as required.

2.1 Framework for the Implementation of the CDI Process

To implement CDI process for the delivery of intervention or programmes in any community the following step must be observed. These steps were successfully applied in the scale-up of the CDI approach in onchocerciasis control in 19 countries and communities in Africa. The first major step in the CDI process is approaching the community. The success of the step goes a long way to determine the success of the CDI process in the delivery of interventions in the community. In approaching the community with CDI, the facilitator should adopt the following protocol:

a. Discussion of target diseases and interventions:

i. Definition of the health problems and discussion of community experiences with the diseases;
ii. Information on the benefits of the available interventions;
iii. Availability of help from health service and contributions of other partners for the interventions.
b. Discussion on roles and responsibilities of the community: Community members collectively decide whether they want the proposed interventions to be delivered at the community level. If this is agreed, they then decide how, when, where and by whom the interventions are to be implemented; decide what support to provide to implementers; and how to supervise and monitor the process, including the specific steps below:
   i. Identification of specific tasks and resources;
   ii. Collective selection of community implementers;
   iii. Authority to make decisions on timing of intervention
   iv. Decisions on suitable methods for intervention delivery;
   v. Flexibility to change the timing and methods of delivery of the interventions if found to be necessary;
   vi. Collection of intervention materials;
   vii. Supervision of implementers by community members;
   viii. Management of side effects (if any) and referral of serious cases to the nearest health posts; and
   ix. Decide on support (financial or otherwise) to implementers.

The next challenge is to approach and meet with the entire community. This includes:
   a. health education of entire community on the interventions and their benefits, conducted annually prior to beginning of intervention activities;
   b. discussion of roles and responsibilities of the community in the CDI process (repeat the steps described above);
   c. community decision-making on how, when, where and by whom the intervention is implemented; and
   d. Collective selection of community implementers.

Having entered the community and introduced the interventions and the CDI approach, the next set of tasks include:
   a. census-taking for information on quantity of intervention materials required;
   b. collection of intervention materials; and
   c. delivery of the interventions.

Finally, there is the need for:
   a. supervision and monitoring by community and health care services;
   b. reporting by community implementers to the health services.
2.2 Effectiveness of the CDI Approach

**Vitamin A Coverage**
The ultimate aim for CDI approach is to attain sustainable increase in the number of eligible persons receiving interventions. Annual Ivermectin distribution continued in all the intervention and comparison districts. Vitamin A supplementation improved in the intervention districts more than the comparison districts (see Figure 5). Coverage with vitamin A supplementation was significantly higher in the Districts using CDI approach than those using the traditional approach (P<0.01).

**Malaria Intervention**
Figure 6 shows that more households in the intervention districts, where the CDI approach was employed in the promotion of ITNs than the comparison districts, where access to ITNs was ensured only through the health facilities got closer to the RBM targets of at least one net per household. Similarly, Figures 7 and 8 revealed that ITN use among children and pregnant women increased in the intervention districts than the comparison districts.

On appropriate treatment of malaria Figure 9 revealed that generally there were greater tendencies to appropriate treatment of malaria in the intervention districts than the comparison. In both years 2 and 3, the districts where CDI approach was used had higher proportion of children with fever managed according to the RBM prescriptions. The findings also revealed that the longer the application of the CDI approach the better the compliance with the RBM prescriptions in the management of childhood fevers. For instance, greater proportion of children in the districts that implemented the management of childhood fevers using the CDI approach for three years managed childhood fevers appropriately than those who had it for only two years (see Figure 9).

2.3 Cost of Implementation
Generally, the integrated implementation of health interventions using the CDI approach cost less. At the District health care level, for instance, the multi-country CDI study revealed a significantly higher cost of delivery of interventions using the traditional (health system centered) approach than the CDI approach (p=0.007). However, there was no significant difference at the frontline health facility level, which may be attributed to the fact that traditionally, the health worker at this level implemented intervention activities at this level in an
integrated manner. In terms of the opportunity cost, the recently concluded CDI study revealed that the cost, at the community level was slightly higher (p=0.24) when interventions are delivered in an integrated manner using the CDI approach than when they implemented vertically with the health system dominating (TDR, 2008). All the same, a critical analysis of the data revealed that when this is spread over many people covered over a long time, the opportunity cost at the community level has the likely of dropping in the CDI system than the traditional system.

3.0 Key Lessons Learnt
The CDI study revealed some key lessons that helped in realizing the success story for the respective interventions. It was noted for instance that community participation and uptake of the interventions is greatly influenced by the perception of the disease as an important health problem that affects all sections of the community. This is very true of the level of community participation when the disease in question is malaria. For many people interviewed, malaria is the topmost health problem in the communities. In a study of health problems confronting pregnant women in Akwa Ibom State, for instance, the respondents were quick to list malaria, second only to fever. The following quote from the husband of a woman who just delivered a baby, less than six months preceding the survey, in an FGD in Esit Eket typifies the perception of health problems of pregnant women in the communities. According to him,

Their sickness during pregnancy includes malaria. It caused so many women death in this community after and during the delivery, the placenta (obiod) is out of its tracings. Unfortunately after delivery the person dies and leaves the baby....

Malaria is one of the common problems associated with pregnancy in the study area. According to a grandmother in an FGD session in Eket, “what I know is that pregnant women like having malaria”. Another grandmother in Eket enumerated how the malaria in pregnant women affects their babies. According to her,

The problem it carries is that even a baby in the womb if delivered immediately is affected. In the hospital you will hear the nurse will mention different type of malaria that the baby is born with. It comes with death....

Yet another grandmother from Eket noted that,

When the mother is pregnant she does not receive treatment for the malaria to finish, it affects the baby from the womb because the baby feed from the mother. If it is a different type of malaria that affects the
mother, it will affect the unborn baby as well. These perceptions no doubt influence the willingness of the people to participate in programmes to control malaria in the community. Qualitative data show CDI as having greater impact on ITN distribution and access among community members. In Kaduna, the ITN programme manager noted that

...it (CDI) has impacted positively on our programme. Now there are designated centres where the target groups can buy at subsidized price. More partners are coming in to distribute these ITNs to the target population. It has improved coverage of activities, improved communication amongst stakeholders effective monitoring. It has no negative impact that I am aware of.

Another factor responsible for the success of the CDI process is the availability of the commodities. CDI gives voice to the people. CDI created demand for the intervention commodities. It follows therefore that the supply angle needed fulfillment in other to meet the demands else the programme would fail in reaching the desired coverage. For instance, Shortage of ITN became very noticeable and people made demands. In Kaduna a distributor said,

... because of the CDI I had difficulties with people who would not get nets due to shortage of nets accused me of keeping their nets. ITN is difficult because of the shortage, it creates many problems and people quarrel with me.

Beyond making the commodity available people became more conscious of the right to own nets and put pressure on the system for the supply of nets. They demanded nets that were perceived to be theirs. This way demand is created unlike the traditional system where people perceived the intervention to belong to government. In the latter scenario the people reluctantly sought interventions.

It is also important that the people perceive the benefits of the interventions. Where people fail to see the benefits of taking the intervention commodities they are more reluctant to seek the intervention. Since malaria is perceived as a very serious malaise in the society, and they know the efficacy of nets in preventing malaria, the people became anxious to access the nets and prevent malaria. A typical statement from a community leader from Kaduna State, attests to the influence of the perceived benefits of intervention and the success of the CDI process. According to him,

... we got involved because we know the importance of these drugs and nets. We are involved in awareness creation and ensuring coverage. (Community Leader, Community of Ungwar Masara,
Jemaa District
The success of CDI is also linked to the relative simplicity of the implementation of the interventions. Distribution of nets and distribution of vitamin A require very simple techniques. The requirements of technical expertise are minimal in each case. Community members are easily trained to deliver the commodities and diagnosis is simple. With the community members in charge of distribution, it becomes easy to promote community ownership and sustainability. When the communities are adequately engaged in the programme, they work assiduously to promote its success. For example,

...we got involved in the CDI activities through awareness creation, we ensure coverage and people are available to receive treatment....

“My committee got involved in the CDI process .... We were mandated by the community to ensure supply and distribution of Ivermectin to all community members. Two years ago we got additional responsibility when other CDI interventions were introduced. Our role is to ensure that the supplies are received in our community and distributed based on the agreed criteria. We also indirectly supervise distribution of the commodities. It is our responsibility to get involved because it concerns the health of the community. Our role in the partnership is to ensure that our community gets it share of the commodities and that the commodities are distributed. We ensure implementation at the community level.” (Leader, Community Based Organization, Kurmin Baba community, Kachia LGA).

When we expect the drugs and fail to get it we can go to the officer and ask why has the drug not been given to us. ... My people who fail to get net also complain and the CDD will go and collect their own (Leader, Yorro LGA).

I am very happy doing the work because it is helping my people. And you see that because I am doing this work many people know me in this community and even you people know me. When NID, RBM and HIV come with their programmes they also involve me (CDD, Bali LGA).

3.1 Conclusion
The core of the CDI concept is to empower communities to take responsibility for their health and health outcomes. It empowers communities to take major decisions that affect their health. Such decisions are made in a participatory manner within the
context of community meetings where everyone is invited and given the opportunity to speak. CDI gives the communities the voice and power to demand good health. This also creates the grounds for the sustainability of the health programme. The involvement of all stakeholders in the health of the community members promoted ownership of the interventions. Studies have also shown that involvement and participation of stakeholders and community members create not just ownership but sustainability of programmes long after the initiator of the programme exits (Amazigo, et al., 2007). The involvement of all stakeholders in the implementation of CDI ensured that all stakeholders are carried along. The stakeholders get good understanding of the problems as well as the available solutions and options. The stakeholders also understand the resource constraints as well as local resources that would support the implementation of the programme. An understanding of the various dimensions of the programme act as motivator of the community volunteers, who were ready to work without incentives in many cases. A community volunteer once said “it makes me happy to distribute the commodities because I am serving my community” (A Woman CDD, Imo State, Nigeria). This is a typical expression of CDDs in different countries when asked why they are distributing Ivermectin. Similarly, a community leader in Ruvuma Region, in Tanzania, queried, “why should I pay my child for running errands for me. This is his (CDD's) contribution to the community. Others have their own contributions to make...” In another interview with a community Leader in Cameroon, the leader argued that,

we did not assign more CDDs to be trained because that would deny the community of too much manpower for other assignments.... Any person we set aside for the distribution of health commodities is exempted from other community work.

In Kaduna a CDD said

I am willing to carry out these activities because I want to assist people and it is part of my duty. The community feeds us when supervise; it is not adequate. Govt. provides transport allowance for supervision it is adequate. I am motivated by service to the people and my God.

While engaging communities in the decision-making process is important to the success of CDI, the TDR study on CDI for major health problems in Africa found that the engagement of stakeholders and decision-makers at the regional and national levels, particularly government and health system officials was equally crucial and germane for successful CDI. It follows therefore, that plans for the adoption of the CDI strategy for the delivery of interventions must develop steps for engaging the critical stakeholders at all levels in the process of planning and implementation. While it may seem that government is abdicating its responsibilities to the people by
having the people deliver health interventions that are supposedly the responsibilities of government, CDI actually provides a rally points for the communities to reflect on their health realities and decide on how to address them. In line with its philosophy, CDI empowers the communities with voice to demand what is due to them. Communities have been known to go to the health facilities to demand explanation for late and inadequate supply of intervention commodities. Community Self Monitoring (CSM) is an aspect of the implementation of the CDI process. Through the CSM the communities monitor the implementation of the interventions and ask questions when it is necessary. The communities are only required to reach out, collect their allocations of intervention commodities and distribute among themselves.

With respect to costs to the health system, CDI was also more efficient than the traditional delivery systems. Without any significant increase in costs to the health district and first line health facility (FLHF) level, the CDI process ensured higher coverage for different interventions. The interventions reached many hard to reach areas. At the community level, there was an increase in 'opportunity costs' with CDI, no doubt. This is a reflection of greater time commitment from community implementers who generally volunteered their time, thus forgoing other opportunities for earning incomes with their time. Intrinsic incentives, such as recognition, status, knowledge and skills gain, as well as altruistic satisfactions, were generally perceived as more powerful motivators in the process than material incentives.

In conclusion, CDI is a strategy primarily designed to target the poor and hard to reach populations. While its effectiveness in this direction has been proven among rural populations, studies are underway to test its workability in conflict situations and among nomads in Africa. WHO/TDR is currently supporting studies to test CDI among the urban and non onchocerciasis endemic as well as in nomadic populations and populations in conflict in many Africa countries including Nigeria. it is hoped that in the next 3 to 4 years, results will begin to come in the confirm the applicability of CDI to these populations. Meanwhile, anecdotal information from some focused studies show that it can work among the urban populations of both the rich and poor. The study on the control of malaria in pregnancy in Akwa Ibom, was implemented using the CDI approach in both rural and urban population of Eket senatorial zone of the state. The results show that it has effectively increased access of pregnant women to ANC services, intermittent preventive treatment of malaria in pregnancy (IPTP) and ensuring that pregnant women and children under five years sleep under ITN.
Observations and Recommendations

Observations

? There is slow progress on key health indicators, signalling that, health-related aspects of the Millennium Development Goal (MDGs) may be difficult to attain by 2015.

? Health system remains the only veritable institution that will reverse the ugly trend on the slow progress of the health indicators.

? It is necessary that the communities are optimally involved in order to help the healthcare delivery system achieve its objectives using the Community-Directed Intervention (CDI) process.

? Population characteristics, community terrain and communal conflicts are major obstacles for community health professionals to reach the communities. This is noted to have exacerbated the challenges of inequalities among different populations across our communities.

? CDI is a generally accepted model that will accelerate the attainment of the MDGs.

? The merits of CDI process include better coverage, cost effectiveness, community ownership which results in a more sustainable outcome.

? The attention given to the rural poor is not usually extended to the urban poor in the healthcare provision process and that this ugly trend needs to be attended to by the government.

? There is a fragmentation of healthcare interventions across communities and that there is need for better coordination and synergy among the multiple government and non-government stakeholders.

? There is need to put in place effective institutional and managerial mechanisms to address community-driven programmes to ensure that programmes meet their targets.

? Community-based competitions, conflict of interests and related pressures sometimes tend to undermine the effectiveness of CDI.
Recommendations

- Community-Directed Intervention (CDI) is a more sustainable health intervention approach. This entails the involvement of the community leaders and the relevant stakeholders in the entire process.
- The use of Community Directed Distributors (CDDs) is a complimentary tool for actualizing CDI. However, this will require enlightenment of health workers and community members.
- The political economy of organisational change is necessary for the attainment of the benefits of CDI. This would put the CDI process as a broad based tool for community health intervention strategy when it is scaled up to capture other community health intervention scenarios.
- Feedback from communities (using the voice initiative) is necessary to ensure sustainability of community-based projects.
- Community health monitoring strategy should be employed to checkmate fraudulent practices observed in healthcare delivery in our communities. It calls for monitoring of health workers who sell healthcare materials for commercial purposes.
- Organisational and legal framework should be integrated into the healthcare intervention process for a successful CDI.
- For greater accountability, CDI health workers should be drawn from among the beneficiary communities.
- Technical issues related to the use of healthcare facilities like the use of mosquito treated nets should be addressed at the implementation level.
References


NDHS. (2003). Nigeria Demographic and Health Survey. Calverton, Maryland: NPC and ORC Macro/USAID.


**Figure 1:** Trend in Mortality of Children in Nigeria

![Figure 1: Trend in Mortality of Children in Nigeria](image)

**Figure 2:** Trends in Nutritional Status of Children Under Five in Nigeria

![Figure 2: Trends in Nutritional Status of Children Under Five in Nigeria](image)
**Figure 3**: Treatment Coverage and CDD Involvement in Additional Tasks

Mean no. of additional activities per CDD in a community

- **Togo**
- **Kaduna**
- **Cameroon**
- **Calabar**
Figure 4: CDD opinion on adding other health & development activities
Figure 5: Health worker's attitude towards adding other health & development activities for the CDDs

[Boxplot diagram showing the distribution of health worker attitudes across Calabar, Cameroon, Kaduna, and Togo with respective sample sizes of 37, 9, 40, and 19.]
Figure 6: Additional Steps in Implementation of CDI at the District and National Levels
Figure 7: Vitamin A Coverage in the intervention and comparison Districts

Figure 8: Household with at Least 1 ITN in the Intervention and Comparison Districts
Figure 9: Children Sleeping under ITN

Figure 10: Pregnant Women Sleeping under ITN
Figure 11: Appropriate treatment of children with fever in the Intervention and Comparison Districts