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Knowledge, Perception and Feasibility of Community Health Influencers, Promoters and Service (CHIPS) Program Among Community Health Workers in Nkanu West and Awgu Local Government Areas, Enugu State, Nigeria

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Abstract

Background: Primary health care (PHC) is the bedrock of our National Health Policy. PHC has two components: Community level and Primary health care facility level. Universal Health Cover cannot be achieved without significant investment in the community level component. Hitherto, the community component of PHC remains a neglected area of PHC program. CHIPS, a community-based programme was designed to allow traditional institution to select individuals who will administer basic medical needs and referring people in their communities to designated medical facilities when necessary. ***Method:*** This is a cross-sectional descriptive community-based study that was conducted among community health workers in Nkanu West and Awgu Local Government Areas of Enugu State Nigeria using self-administered questionnaire. Convenience sampling technique was used to select community health workers in the two local government areas. ***Results:*** 77.4% of the study population were not aware of the program. 26.9% are of the opinion that the families in the communities will welcome the idea of home visits. 23.3% perceived the implementation process to be slow, there was poor community awareness (22.0%), poor community participation (19.3%) and no community mobilization (19.3%) yet. ***Conclusion:*** From our study, the response rate on how best to organize CHIPS and the challenges it may face, is low. The striking thing is that the challenges of the past community health workers are still that of the present. So it is of utmost importance to constructively look at the content of the planning, implementation and its evaluation, and then draw strength from the weaknesses of the already existing community health programs.

Keywords: primary health care, Universal Health Cover, health for all, community health workers

1. Introduction

Community health workers are known by different names in different countries such as activista, community health promoter,

community heath representative, lady health worker, wealth promoter, basic health worker, village health promoter, village health helper etc. They carry out functions related to health care delivery; trained in some way in the context of the intervention; and having no formal professional or paraprofessional certificated or degreed tertiary education. (Maddison A.R & Schlech W.F., 2010) The most widely accepted definition given by the WHO study group states that community health workers should be members of the communities where they work, should be selected by the communities, should be answerable to the communities for their activities, should be supported by the health system but not necessarily a part of its organization, and have shorter training than professional workers.

The health for all concepts is an action statement which means that certain structures and policies must be put in place, followed by implementation, supervision/monitoring and evaluation. This aims at ensuring that highest level of health is attained by all at all times. Globally, it is challenging, worst in the developing countries with a great multitude of problems ranging from dearth of trained personnel to low public health financing. The rural area despite constituting a greater proportion of the population in the developing world is ensnarled with difficult accessibility, poor social amenities, health deterrent cultural and religious inclinations, literacy and ignorance such that there's a lack of awareness, motivation amongst individuals, families and the community on where and when to seek appropriate care. The late Director-general of WHO argues that: there is a chronic shortage of well-trained health workers. The shortage is global, but most acutely felt in the countries that need them most. For a variety of reasons, such as the migration, illness or death of health workers, countries are unable to educate and sustain the health workforce that could improve people's chances of survival and their well-being. (World Health Organization and the Global Health Worker Alliance, 2008; WHO, 2006)

According to the World Health Organization (WHO). 3.5 million of the 8.2 million child death globally occur in the first week of 4 weeks of life with 91% and 61% of these neonatal deaths occurring within the first week and first day of life respectively. (World Health Organization, 2005) About 342,900 women worldwide died from causes related to pregnancy and childbirth in 2008. (Uzondu A.C, Doctor V.H, Findley E.S, & Afenyadu Y.G. Ager A., 2015; Hogan M.C, Foreman K.J. Naghavi M, Ahn S.YAVang M. Makela SM, et al., 2010) Sub-Saharan Africa bears a disproportionate burden of these deaths, with 3 of 5 of these deaths occurring in the region. Nigeria alone with one of the highest maternal mortality ratios (MMRs) in the world-had an estimated 50.000 maternal deaths that year. Sub-Saharan Africa has just 3% of the global health workforce1 and an estimated 1.5 million more health workers are needed just to be able to provide basic health services in the region. Further, in contrast to many countries where the MMR has declined over recent decades. Nigeria is one of the few countries in the world, here maternal mortality has shown no substantial reduction (516 per 100,000 live births in 2008 compared with 576 per 100.000 live births in 2013). (National Population Commission, 2014; United Nations Children's Fund, 2008) Thus, the country has for some time been signaled as one that will fail to meet the Millennium Development Goal (MDG) of reducing maternal mortality by 75% by 2015. Renewed interest in the potential role and contribution of community health workers has gained momentum in recent years. (Gilmore B, & McAuliffe E., 2013; Koon A.D, Goudge J & Norris S.A., 2013) The emerging "WHO Global Strategy on Human Resources for Health (HRH): Workforce 2030: encourages countries adopt a diverse, sustainable skills mix, harnessing the potential of community-based and mid-level health workers in inter-professional primary care teams". Many such cadres are community volunteers tasked with mobilizing community members to access the formal health system. (WHO., n.d.; Bamisaiye A, Olukoya A, Ekunwe EO & Abosede OA., 1989) Community Health Workers (CHWs) act as a mitigating factor to the HRH crisis by providing essential MCH (Maternal and Child Health) care at the household and community level, reducing inequalities in health care for marginalized populations, providing education and mainly curative health services, and having the essential role of liaising between the community and more skilled workers and facility-based services. Primary health care is the bedrock of our National Health Policy. (The Earth Institute, 2011) PHC has two components: Community level

and Primary health care facility level. UHC (Universal Health Cover) cannot be achieved without significant investment in the community level component. Hitherto, the community component of PHC remains a neglected area of PHC programming.

It is estimated that 7.2 million doctors, nurses, and midwives are urgently needed to provide essential health services worldwide. (Maddison A.R & Schlech W.F., 2010) The World Health Organization (WHO) revealed that 57 countries of the world have a critical shortage of health workers and 36 of these countries are in sub-Saharan Africa including Nigeria and the African continent bears 24% of the global disease burden but could only account for 3% of the health workforce and a paltry 1% of world's financial resources. (Bhutta Z.A. Lassi Z.S, Pariyo G & Huicho L., 2010; Campbell, J., G. Dussault, J. Buchan, F. Pozo-Martin. M. Guerra Arias, C. Leone, A. Siyam, & G. Cometto, 2013; World Health Organization, 2008; UNFPA, 2011) The 2014 State of the World's Midwifery report found that, in 79% of countries surveyed, midwives supervised CHWs concerning sexual, reproductive, maternal, and newborn health, suggesting that countries often informally integrate CHWs into the health system. Uzochukwu et al. (Uzochukwu S.C, Ossai E.N, Okeke C.C, Umeobiri A.K. Ndu A.N. & Chukwuogo O., 2016), in a study to assess the recruitment and distribution of public sector health workers and the determinants of variation in their distribution in Enugu state, Nigeria. Comparable proportions of the health workers in the two study groups, (urban 88.7% and rural 6%) were of the opinion that the imbalance in the distribution of health workers affects the quality of healthcare delivery in the rural area. Also, significantly higher proportion of the health workers in the urban were of the opinion that indigenous health workers should be trained to work in their areas of origin after graduation and that centers for training of health workers should be located in the rural areas. (Uzochukwu S.C, Ossai E.N, Okeke C.C, Umeobiri A.K. Ndu A.N. & Chukwuogo O., 2016)

One of the major objectives of PHC in developing countries is to improve the health status of individuals and the community through health promotion and increased utilization of preventive curative and rehabilitative health services, question of perception and utilization of individuals and the community with respect to PHC service is of considerable interest to health policy makers. (Campbell J, Buchan J, Cometto G, et al., 2013) Renewed interest in the potential role and contribution of community health workers has gained momentum in recent years. The World health report 2006: working together for health recognizes shortages of professional health workers as one of the key ingredients in the growing human resource crisis, particularly in low-income countries. One strategy to address this crisis is so-called "task-shifting"—a review and subsequent delegation of tasks to the "lowest" category that can perform them successfully. (WHO, 2007; Berkman ND, Lohr KN, Ansari M, et al., 2008) It is in this context that the concept of using community health workers has gained currency again. Evidence suggests that CHW programs thrive in mobilized communities but struggle where they are given the responsibility of galvanizing and mobilizing communities, low use of CHW programs is a common problem and often, it's seen to be linked to poor community introduction of the program, which often then leads to political tensions between traditional hierarchies and the structures set up under a new regime or to a preference for formal, established health services. (Olaniran A, Smith H, Unkels R, Bar-Zeev S & van den Broek N., 2017) Also over the years, despite repeated policy pronouncements and government promises, very little progress has been made in significantly reducing child and maternal mortality as well as prevalence of diseases that constitute threats to public health. (Nwankwo U I, Udeobasi O C, Osakwe S C & Okafor O G., 2017) And ministries of health face difficulties planning for an appropriate skills mix without a common understanding of expected and competencies. (Frontlinehealthworkers.org, n.d.) Alongside these efforts, much work has been done to conceptualize the partway through which community participation might increase access to health services, improve health outcomes and promote health enhancing behaviours. (Campbell C., 2013; Campbell C & Jovchelovitch S, 2000; Kilpatrick S., 2009) Despite a growing interest in 'evidence-based public health' and the proliferation of theoretical literature into community participation, there remains a dearth of tools and indicators for evaluating how communities participate in and

influence programs in practice. So whilst research exploring the community response to local health services has importantly focused on the impact or outcomes of their participation, measured in terms of factors such as changes in knowledge, attitudes and behaviour, few efforts have been made to explore how the process of community participation be assessed and lead to changes. (Levesque L, et al., 2005) Relatedly. there is a lack of evaluations that have examined local stakeholder's own perspectives of their participation.

This study is to assess the knowledge, perception and feasibility of the community health influencers, promoters and service program among community health workers in Enugu.

The Alma-Ata Conference held in Russia in 1978. Member states of the World Health Organization (WHO) adopted primary health care (PHC) strategy, considered as comprehensive enough to address problems that existed in these countries which adversely affected quality of life. Primary health care refers to essential health care, based on practical, scientifically sound and socially acceptable methods and technology, made universally available to individuals and families in the community through their full participation and at a cost that the community and the country can afford to maintain at every stage of their development, in the spirit of self- reliance and self-determination. (Baatiema L, Morten S, Rifkin S & Campbell C., 2013) It could also be viewed as medical care a patient receives upon his or her first contact with the health care system, before being referred elsewhere within the system. (Daniel C & Mora B., 1985) As stated in the above definition, community participation is one of the key elements of primary health care and it's on this that the concept of community/village health worker is deeply rooted. However, the use of community members to render certain basic health services to their communities is a concept that has existed for at least 50 years and is known by many different names in different countries with innumerable experiences throughout the world.

Medical interventionists who provide health behavior advice and information are characterized numerous ways in the literature, most commonly as natural helpers, lay health advisors or educators, and community health workers. (Earp J.A. Viadro C.I, Vincus A.A. et al., 1997) Historically, the Chinese barefoot doctor program is the best known of the early programs, and Thailand has also made use of village bate volunteers and communicators since the early 1950s. Throughout the world, community health programs range from large-scale: national programs to small-scale; community-based initiatives. (Brownstein IN, Cheal N, Ackermann SP. et al., 1992) Such large scale ones were the Ceara program as summarized by McGuire, 2002 as follows: When a drought hit the region in 1987. Ceara's state government began to hire community health agents, mostly w omen, as part of a job-creation program. Each of the new health agents was given three months' training and assigned to make monthly visits to 50-250 households to provide prenatal care, vaccinations, and checkups, as well as to promote breastfeeding and oral rehydration. (Eng E, Parker E & Harlan C., 1997; Love M.B, Gardner K. & Legion V., 1997; McGuire J.W., 2002) By 1992, 7.300 community health agents had been hired; along with 235 half-time nurse supervisors. Also in Indonesia the government restructured its health system in 1982, with a focus on district health development. Village health volunteers, selected and paid by local communities, became part of health posts set up within each district. (Yahya SRR., 1990) Their activities included family planning, health education, growth monitoring, nutrition support, immunization and treatment, particularly of diarrhoeal diseases. Yahya reports that the dramatic increase in village health posts led to significant health status achievements: infant mortality dropped by 30% within seven years and immunization coverage improved many-fold. In Niger, CHW programs evolved from the work of volunteer health workers whose work started in the We 1960s in the primarily agricultural Maradi Department, along the Nigerian frontier, with a population of 730 000 people. (Fournier G & Djermakoye I., 1973)

In Ghana, the Ministry of Health introduced substantial numbers of community or village health •workers in the late 1970s as part of a substantial review and reorganization of MOH activities aimed at implementing PHC strategic. The initiative was driven by the MOH and integrated into national health service structure, with the MOH providing training, technical supervision and necessary supplies (Morrow, 1983). In 1991, the Government of Ghana had

launched a national Community health program in which volunteers were deployed to communities, and paid professional nurses were stationed at district and sub-district health centres. This community health program reflected international advocacy for two strategies. One emphasized the potential value of community-based volunteer health services in extending affordable primary health care to all households. Advocates of volunteer programs argued that vibrant social institutions for organizing daily life could be marshaled for organizing community-based management, financing and leadership of health services. Reliance on existing social institutions would reduce costs, sustain services and generate social acceptance of health and family planning services. (Morrison J, Tamang S. Mesko N. Osrin D. Shrestha B. Manandhar M. Manandhar D, Standing H & Costello A., 2005)

Nigeria the community health extension workers (CHEW) were to bring health care as close as possible to where people live and work, and would constitute the first element of continuing health care process. (Knippenberg R, Levv-Bruhl D, Osseni R et al., 1990) CHEWs are health workers specially trained to provide primary health care in Nigeria. They are members of a community who are chosen by the community members or organizations to provide basic health and medical care to their community.

The emerging "WHO Global Strategy on Human Resources for Health (HRH): Workforce 2030" encourages countries to adopt a diverse, sustainable skills mix, harnessing the potential of community-based and mid-level health workers in inter-professional primary care teams. Sub- Saharan Africa has just 3% of the global health workforce 44 and an estimated 1.5 million more health workers are needed just to be able to provide basic health services in the region. Largely in response to these health worker shortages, the World Health Organization (WHO) launched the "treat, train, retain" initiative in 2006 in an effort to strengthen and expand the global health workforce. This included the development of more formal cadres of Community Health Workers (CHWs), defined as "members of, selected by, and answerable to the communities where they work; supported by the health system; and receiving less training than formally trained health workers". (Ikpeme B.M, Oyo-Ita A.E & Akpet O., 2014; Dynes M.M, Stephenson R, Hadley C & Sibley LM., 2014; WHO, n.d.; World Health Organization, 2006; World Health Organization and the Global Health Worker Alliance, 2008)

Onyeneho et al looked at Perception and utilization of public health services in Southeast Nigeria: Implication for health care in communities with different degrees of urbanization. Consequently, respondents in the study expressed poor perceptions of the general health services in the communities. (Onyeneho N, AmazigoU. Njepuome N, Nwaorgu O & Okeibunor J., 2016) More than half (50.4 %) the respondents rated health care services as bad, with the highest negative rating coming from rural dwellers (55.4 %), while peri-urban and urban respondents had an equally negative rating of 47.9 % each.

In 2016, Rachlis et al, conducted a study to determine community perceptions of community Health workers (CHWs) and their roles in management for HIV tuberculosis and hypertension in western Kenya. (Rachlis B, Naanyu V, Wachira J. Genberg B. Koech B, Kamene R, et al., 2016) Considering that negative perceptions of CHWs may impact their effectiveness at supporting linkage and engagement with chronic disease care and management. A qualitative study was conducted to explore perceptions of patients, caregivers, community leaders and healthcare workers, including perceptions of CHWs role in chronic disease management. Study participants were purposively sampled from the three AMPATH sites: Chulaimbo, Teso and Turbo. Specifically, individuals were recruited if they could provide different perspectives on CHWs and their roles, could share their experiences, behaviours and perceptions, and have an understanding of the cultural and societal context, perceived CHWs to be just like peers (i.e., as patients). Participants identified several key roles of CHWs in communities including promoting primary health care services, encouraging testing for various conditions, and demystifying hospital care: The CHWs can easily identify symptoms of various diseases like malaria, high blood pressure but a herbalist doesn't "Traditional healer. Chulaimbo." They tell it's community to come for HIV testing and generally about hygiene. CHWs may also be integral linkage to care: "CHWs have contributed a lot to service provision, facility linkage and also de-stigmatization"-Traditional healer.

Chulaimbo. "She talked to me very well until I decided to come here because I know that it is my life and that of my child." -Caregiver, Chulaimbo. Related to this is retention of patients in care including acting as adherence supports Binders for healthcare seeking behaviours as one participant noted: "In case one forget anal is the reminder" -PLWH. Chulaimbo. CHWs also make regular home visits and reach out to remote villages: "They bring information to the household when they walk around the and teach, people gather courage and come for medication"- TB patient, Chulaimbo. Finally, several participants in our study had never been in contact with a CHW and suggested that they are unknown in some areas: "I have never seen them" -TB patient, Chulaimbo. (Rachlis B, Naanyu V, Wachira J. Genberg B. Koech B, Kamene R, et al., 2016) Negusse et al in a study that looked at the Initial community perspectives on the Health Service Extension Program in Welkait. Ethiopia that all participants had received visits from their HEW (recall this was an inclusion criteria), although only 12% had seen their HEW at the recommended weekly intervals, and 3% at two-weekly intervals. Some 85% received visits at only monthly or less frequent intervals. Some 27% did not know the name of their HEW. In descending order, the following themes were reported as being addressed: personal and environmental hygiene (83%), cooking practices (75%), cleaning and plastering of house (47%). Construction of pit latrine and waste disposal (37%). Immunization of children (23%), separation of people and animals (22%) and use of contraception (13%). Although the HEWs were supposed to visit households weekly, this had not happened. The reasons for this clearly need to be ascertained, but anecdotal accounts suggested a lack of administrative support and monitoring may be partly responsible. (Negusse H, McAuliffe E & MacLachlan M., 2007)

Findley et al in Implications of the SURE-P MCH National Village Health Worker Experience in Northern Nigeria for the Road Map for Village Health Workers in Nigeria reported that 100% of the VHWs were thanked by the community for their work. (Findley S.E, Afenyadu G, Okoli U. Baba H, BatureR. Mijinyawa S. Bello-Malabu J & Mohammed Sidi A., 2016) The focus groups provided additional insight to how the community welcomes them. One VHW said that when she makes visits, women "put their house in order, and leave their work to talk with me as soon as I come." Half (47%) reported that people came to them with questions and asking for help. A majority (61%) and they felt respected. They also received thanks, though less frequently, from the Ward Development Committee (WDC) (29%) and the PHC facility committee (12%). They reported that the WDC thanked them for their contribution to improving the community's health. One-fourth of the VHWs said that the most rewarding part of their work was seeing more women it for ANC and delivering at the facility, and the next most rewarding part of the work was seeing men supporting their wives to go to the clinic for care for themselves or their children. About one in ten VHWs also said that it was rewarding to receive support from the community for their contributions to health improvements. There were no significant differences between the 2013 and 2014 cohorts in the aspects they found rewarding. One-fourth of the VHWs also reported that the most difficult part of their work was delay in payment of their stipend. About one in twelve were bothered by making referrals for care to facilities that were not up to standard. and others found it difficult to make time for home visits. Paying for transport was a problem for 16% of the 2013 cohort and 9% of the 2014 cohort.

In Akwa Ibom, Nigeria, Okeibunor et al. utilized a before and after parallel group design for analyzing the extent to which community based interventions can improve malaria prevention during pregnancy. (Okeibunor J.C., Orji B.C., Brieger W., Ishola G., Otolorin E., Rawlins B., Ndekhedehe Fi.U, Onyeneho N & Fink G., 2011)

Perceptions are determined by the people's level of satisfaction with the health service, as well as their assessment of the attitude of health workers, which often determines whether they would return in future. To achieve universal health for the people, it is imperative that all stakeholders understand the people's perception of health service, to ensure successful interventions. This is critical to developing appropriate promotional messages and campaigns, aimed at creating demand for particular health interventions. Social-psychologists argue that perception, in the context of health, is structured on the basis of variables like "risk perception (the degree to which one feels susceptible to certain health risk). 'self-efficacy: (confidence in one's ability to like necessary action)' and action-outcome

expectancies" (ones belief that the proposed action is contributory to the expected outcome). However, data on perceptions of health interventions and services have generally been collected quantitatively and comparatively low on qualitative methods of inquiry.

Approaches to training have changed over the years. While in the past complaints about inappropriate training—which was too theoretical, too classroom-based or too complicated – were quite common (Gilson et al, 1989) (Gilson L, Walt G, Heggenhougen K, Owuor-Omondi L. Perera M, Ross D & Salazar L., 1989), today competence-based approaches are usually used, as Gilroy & Winch report in the case of CHW training in the management of sick children (Gilroy & Winch, 2006) (Gilroy K.E, Winch P., 2006).

It Tanzania, VHWs would undergo three to six months training (Chagula & Tarimo, 1975) while in Nigeria. VHWs were trained for three months in groups of 20, and sent for refresher courses twice a year subsequently (Hilton D., 1983). It is widely acknowledged and emphasized in the literature that the success of CHW programs hinges on regular and reliable support and supervision (Ofosu-Amaah, 1983).

Gilson et al, (1989) point out that "the cost of supervision has in particular, been overlooked, although the frequent contact required to support CHWs effectively can generate supervision costs that represent 40% of the cost of one CHW". But not only has the cost been overlooked often the need for supervision has been either overlooked or underestimated, or not adequately planned for. Also, who supervisors should be and what their tasks are is often ill-defined. Ofosu-Amaah (1983) mentions cases in which community participation in supervision was successfully implemented, but this remains the exception: supervision is left mostly to staff mainly nurses) in the health services. They, however, may not understand the CHWs' or their own role properly and furthermore may resent the additional task (Gilson et al, 1989).

What difference supervision can make is described by Curtale et al. (Curtale F & Bhola S., 1995), (1995) in their study of the impact of a nutrition intervention on a CHW program. They found that "continuous supervision diminishes the sense of isolation that CHVs usually experience in the field and helps to sustain their interest and motivation to do their assigned tasks" A number of studies have found that if regular refresher training is not available, acquired skills and knowledge are quickly lost (Ashwell & freeman, 1995) and that, on the other hand, good continuing training may be more, important than who is selected.

CHIPS is a community-based program where individuals with basic criteria including commitment, agility, among others, would be selected by traditional institutions to carry out basic medical needs of the people in their communities, diagnose and call on the next port of call, when necessary. Successful individuals must be resident within the community and would be adequately trained before deployed to render the services the program is targeted. 10 CHIPS agents are to be engaged per ward and if you multiply that by about 10.000 wards, it will be the largest network of community health workers in Africa.

WHY CHIPS?

The difficulty in recruiting doctors prompted the use of community health extension workers in rural areas. In a study by Adefalu et al. (Adefalu L.L, Awoete O.M, Aderinoye-Abdulwahab S.A & Issa B.A., n.d.) on the perception of community health extension services among women in a rural community in Ilorin East. Kwara State showed that first aid treatment was the most effective community health extension service used by the rural women while dental and mental health care were reported to be the least effective services including home visits. Availability of home visit services was reported by low proportion of the respondents in this study. Experience with the existing Federal Government Midwives Service Scheme (MSS) showed that providing midwives in rural clinics was not enough to encourage women to utilize services at PHC facilities. In view of the level of health awareness, one begins to question the extent to which health care has been taken to the doorstep of the rural people. One of the hindrances to the development of health especially in Nigeria has to do with insufficient number of medical personnel as well as their uneven distribution. Also, Nigeria is losing about one million women and under 5 children to totally preventable causes on yearly basis.

2. Methodology

This is a cross sectional descriptive community-based study that was conducted

among community health workers in Nkanu West and Awgu Local Government Area, Enugu. Enugu state, Nigeria, to determine the knowledge, perception and feasibility of community health influencers promoters and service program among community health workers in Nkanu west and Awgu Local Government Areas, Enugu Community health workers in Nkanu west and Awgu local government area of Enugu state, which included the community health officers, senior and junior community health extension workers, village health workers, and the community health technicians.

2.1 Inclusion Criteria

a. Participants must be residents of the community.

b. Participant must be working in the health centre.

c. Community health workers who are available at the time of the survey and willing to participate are included.

2.2 Exclusion Criterion

a. Respondents that refused consent.

The desired level of accuracy for the survey was set to a confidence level, Za (the standard normal deviate) of 95% (1.96 two sided) and an absolute precision (relative margin of error, D) 0.05. The prevalence of the attributes, p was set conservatively to 0.25 which yield the sample size. The minimum sample size, n was determined by the following equation.

$$n = Za2 \quad p(1-p) = 1.962 \quad 0.25(1-0.25) = 288$$
$$D2 \qquad\qquad 0.052$$

20% (58) of the calculated sample size was added (a total of 346 participants) to make up for invalid and unreturned questionnaires. A total of 400 questionnaires was printed and used in the process of data collection. 305 valid questionnaires were retrieved and analyzed. Convenience sampling technique was used. First, we selected Nkanu West local government area as our study location and surveyed community Health workers in 21 of the 22 health centres in the local government. Then, the rest of the sample was gotten by surveying community health workers in some health centres in Awgu Local Government Area.

Data was collected using self-administered questionnaires. The questionnaire was designed by the researchers and pre-tested in Enugu town. The variables were analyzed using frequency tables, proportions, mean and standard deviation using the statistical package of the social sciences (SPSS) software.

2.3 Ethical Consideration

Approval to conduct the study was obtained from the research and ethics committee of the University of Nigeria Teaching Hospital. Ituku-Ozalla.

Participation was voluntary as verbal informed consent was obtained from the respondents and they were assured of confidentiality and anonymity.

2.4 Limitation of Study

During the course of this research which involved transporting ourselves to the community, the following challenges were encountered.

1) RELUCTANCY: some of the respondents were reluctant to feel the questionnaire due to personal reasons and some refused consent.
2) ABSEENTEEISM: some of the respondents weren't present in the health centres most days of the week.

3. Results

3.1 Sociodemographic Factors of Respondents

Table 1. Sociodemographic Factors

Socio-demographic Factors	Values	Frequency	Percentage
Age	20-24	29	9.5
	25-29	92	30.2
	30-34	53	17.4
	35-39	65	21.3
	40-44	39	12.8
	45-49	21	6.9

	>50	6	2.0
	Total	[r] 305	100.0
	Mean Age: 33.31; **SD:** 7.55		
Sex	Male	116	38.0
	Female	189	62.0
	Total	305	100.0
Number of Years Worked	<1	20	6.6
	1-4	169	55.4
	5-10	67	22.0
	>10	47	15.4
	NONE	7	.7
	Total	305	100.0
Marital Status	Married	196	64.3
	Single	95	31.1
	Widowed	11	3.6
	Separated	J	1.0
	Total	305	100.0
Designation	CHO	96	31.5
	CHEW	70	23.0
	JCHEW	38	12.5
	Others (Technicians)	101	33.1
	Total	305	100.0
Level of Education	Primary	h[25]	8.2
	Secondary	79	25.9
	Tertiary	201	65.9
	Total	305	100.0

From the demographics factor of the respondents, the age range of 25-29 constitute the majority (30.2%), few (9.5%) is less than 25 years of age and very few (2.0%) greater than 50 years of age. The mean age is 33.31 while the standard deviation is 7.55. 64.3% are married, and 62.0% are females. Also, majority (33.1%) is other designations which include the village health workers, technicians etc. and 65.9% had tertiary education.

3.2 Evaluation of the Knowledge of Chips Among Respondents

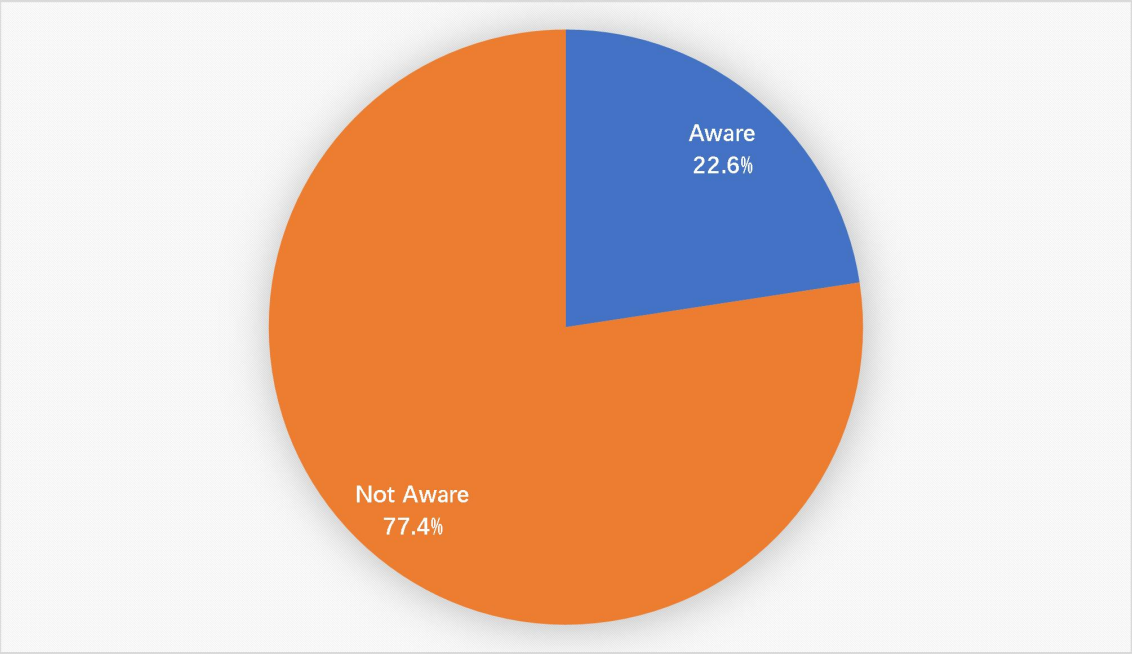

Figure 1. Showing the Awareness of Chips Among Respondents

From the pie chart above 236 (77.4%) respondent have not heard of the CHIPS program while 69 (22.6%) have heard of the program

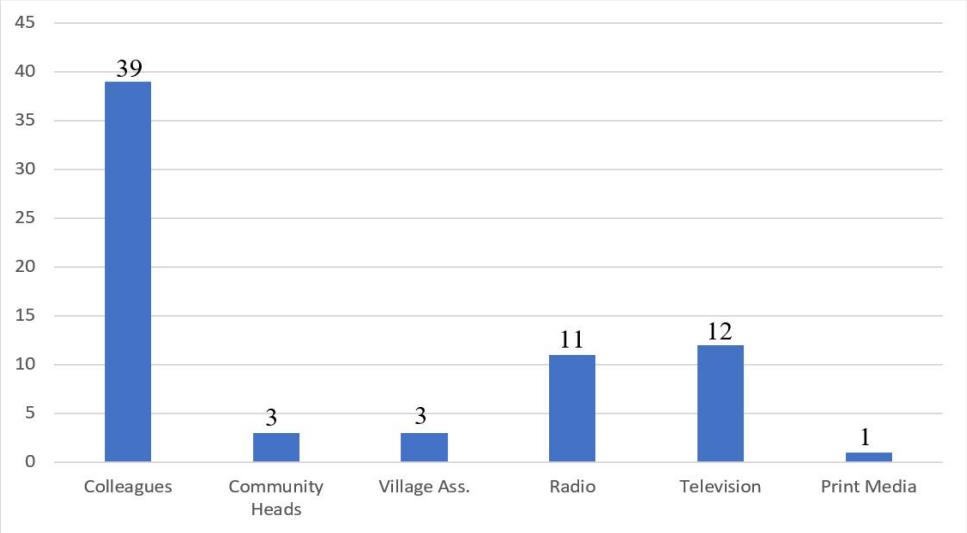

Figure 2. Showing respondents source of awareness (N=69)

Majority of the respondents heard about CHIPS from their colleagues (39), television (12) and radio (11).

Table 2. Relationship Between Awareness on Chips Program and Sociodemograpihc Factors of Respondents

Sociodemographic Factors	**Values**	**Aware of CHIPS**		**X2 (p-value)**
		Frequency	**Percentage**	

Age	20-24	6	20.7	0.029
	25-29	32	34.8	
	30-34	6	11.3	
	35-39	12	18.5	
	40-44	6	15.4	
	45-49	6	28.6	
	>50	1	16.7	
Sex				0.001
Male		38	32.8	
Female		31	16.4	
Designation				0.000
CHO		38	39.6	
CHEW		18	25.7	
JCHEW		6	15.8	
Others		7	6.9	
Level of Education				0.000
Primary		1	4.0	
Secondary		2	2.5	
Tertiary		66	32.8	

The tables above show that majority of those that have heard of the program are of the age range 25-29 (34.8%), mostly community health officers (39.6%) and attained the tertiary level of education (32.8%).

Table 3. Respondents Further Knowledge on Chips Program and Its Objective

Further Knowledge on the Program	Frequency	Percentage
Volunteer Health Program	38	12.5
Primary Health Care Program	62	20.3
Rural Area Only	27	8.9
Both Rural and Urban Areas	39	12.8
For the Underserved Community	45	14.8
Funded by the Government	45	14.8
Funded by the Community	17	5.6
Requires total Community Participation	37	12.1
Knowledge on the Objectives of the Program		
Expand access to basic primary health care services	64	21.0
Reduce barrier to uptake of PHC services	53	17.4
Reduce delay in seeking health care	64	21.0
Reduce maternal and infant mortality	69	22.6

Table above shows that only (62) 20.3% of the respondents are aware that it is a primary health care program and (69) 22.6% knows that one of its objectives is to reduce maternal mortality.

Table 4. Operational Activities of the Chip Program in Enugu

Factors	Frequency	Percentage
CHIPS is Operational in My Community	16	5.2
Level of Implementation of the Program in Enugu		
Training of State facilitator	12	3.9
Training of CHEW and ward focal persons	13	4.3
Training of CHIPS agents and traditional rulers	13	4.3
No implementation yet	17	5.6

In the table above, 16(5.2%) of the respondents claimed that the program is operational in their community while 17(5.6%) attested to no implementation yet.

Table 5. Showing Respondents Knowledge About Chips Agents

Factors	**Frequency**	**Percentage**
Criteria for the Selection **of** CHIPS Agents		
Nomination by the community	39	12.8
Resident in the community-	56	18.4
Readiness to serve the community	72	23.6
Preferably female	32	10.5
Age of 25 and above	44	14.4
Preferably married	34	11.1
Preferably with a minimum of primary school leaving certificate	15	4.9
Previous experience as a community health worker	37	12.1
Preferably a village health worker	30	9.8
Role Of CHIPS Agents Play in the Community		
Identify the pregnant women and children	61	20.0
Conduct home visits	70	23.0
Educate pregnant women on importance of ANC	74	24.3
Generate demand for immunization	62	20.3
Provide basic First Aid services	64	21.0
Record keeping and transmission	49	16.1
CHIPS will be supervised by CHEW	48	15.7

The table above shows that readiness to serve the community was the criteria majority (23.6%) are aware of as one the qualities of the CHIPS agents while 24.3% are aware that one of the roles of the CHIPS agents is to educate pregnant women on the importance of ANC. 15.7% of the respondents knows that CHIPS agents are to be supervised by CHEWs.

Table 6. Perception of Chips Program and Chips Agents Among Respondents

Perceptions	Frequency	Percentage
Positive Perceptions		
Level of Community participation is adequate	31	10.2
Program will improve the health seeking behaviour of community	75	24.6
Communities are ready to accept the program	58	19.0
Families will accept the idea of home visits	82	26.9
The program is not being properly **implemented**	15	4.9

Negative Perceptions		
No political will to drive the program	46	15.1
The government is not ready to release funds	37	12.1
Poor community awareness	67	22.0
Poor community participation	59	19.3
No community mobilization	59	19.3
Implementation process is slow	71	23.3

The table above shows that 26.9% of the respondents claimed that the families will accept the idea of home visits and 24.6% attested that the program will improve the health seeking behaviour of community. And 23.3% are of the opinion that the implementation process is slow while 22.0 are of the opinion that the community awareness is poor.

Table 7. Showing the Perception of Chips Agents Among Respondents

Perception	**Frequency**	**Percentage**
Positive Perception		
More effective to convert CHEWs/JCHEWs to CHIPS agents	58	19.0
Work of CHIPS agents is the same with that of other community health workers	35	11.5
CHIPS agents will make more impact in reducing maternal and child mortality than the community health extension services	52	17.0
Negative Perceptions		
CHIPS Agents will substitute JCHEWs/ CHEWs	23	7.5

4. Respondents Knowledge on the Feasibility of Chips Program in Enugu State

Table 8. Operation of Chips in Enugu State

Factors	**Frequency**	**Percentage**
Knowledge on the number of Agents to be recruited	2	0.7
Knowledge on when community mobilisation will start in Enugu	3	1.0
Means of Community Mobilisation		
Churches	76	24.9
Community meetings	72	23.6
Fliers	48	15.7
Radio	69	22.6
Newspapers	27	12.1
There will be fixed number of House visits per day	28	9.2
It's necessary to put a target on the number of house visits per day	54	17.7
Factors Which Hinders Meeting up with the House Targets		
Poor community introduction of the program	69	22.6
Transportation problems	76	24.9
Poor remuneration	45	14.8
Lack of incentives	64	21.0
Bias in the recruitment process	54	17.7

This table shows the responses on when and how community mobilization will be done in Enugu state, the factors that may hinder the success of the program. Only 0.7% knows the number of workers that will be recruited, 1.0% knows when community mobilization will start while on the means of mobilization; churches (24.9%) and community meetings (23.6%).

Table 9. Showing the Organisation of Chips Program in Enugu State

Factors	Frequency	Percentage
CHIPS agents will be assigned close to their homes	59	19.3
CHIPS agents will be well paid	64	21.0
There will be opportunity for employment promotion	52	17.0
Means of Transportation for Chips Agents		
Public Transport	20	6.6
Private transport	35	11.5
From of Transportation		
Vehicle	37	12.1
Motorbike	27	8.9
Bicycle	3	1.0
The Government will provide means of transportation	60	19.7
CHIPS agents should be FULL-TIME workers	60	19.7

Table 10. Availability of Drugs and Healthcare Services

Factors	**Frequency**	**Percentage**
Availability of Drugs		
From the village health centre	34	11.1
The government will give it directly to them	40	13.1
From the patent medicine dealers	10	3.3
The individuals/ families will buy them	11	3.6
The community will provide them	12	3.9
Health Care Services Included in Chips Strategy		
Maternal and Child healthcare	75	24.6
Disease prevention and control	71	23.3
Child delivery	44	14.4
First aid treatment	63	20.7
Education on hygiene and sanitation	70	23.0
Immunisation and promotion of sanitation	67	22.0
Use of ORS in diarrhea	70	23.0

Table 10 shows the responses of the participants concerning the source of the sources of the drugs for CHIPS interventions and the health care services included in the program. The government recorded 13.1% and the village health centre recorded 11.1%. On the health care services; maternal and child healthcare recorded the highest (24.6%) while the child delivery services recorded the lowest (14.4%).

Table 11. Training and Management of Chips Agents

Factors	Frequency	Percentage
Training Chips Agents Receive to Enable Them Work Effectively		
One month priority health services training	48	15.7
Two months further training and retraining	33	10.8
Annual in service sessions	44	14.4
Classroom based training	16	5.2
Practical sessions	63	20.7
Review and assessment	56	18.4
There will be supervisory management of CHIPS agents to enable them perform well	75	24.6

Table 11 shows that 24.6% agree that there will be supervisory management of CHIPS agents to enable them perform well. 20.7% agree that practical sessions are important. 18.4% are of the opinion that reviews and assessment is necessary. 15.7% knows there's going to be one month priority health service training.

5. Discussion

In this study, a total of 305 community health workers were sampled, of which 189 (62.0%) are females and 116 (38.0%) are males. 64.3% are married and the predominant age range is 25-29 (30.2%). Number of years worked was 55.4% (l-4years) and 15.4% (>10years). A study done in Calabar, cross river, on the work profile of community health extension worker reported 71.6% females, 77.0% married, predominant age 42.5%(35-39years) number of years worked 10-19years (49.9%). There are similarities however, the differences may be due to the fact that, we sampled other community health workers in addition to the CHEWs. This is also same with what was reported by Ebuehi in Ogun.

In assessing the knowledge about CHIPS, it was found that more than two-third (77.4%) of the studied population were not aware of the program, this could be attributed to the fact the program is still new in the country and of the few that were aware of the program, they heard from colleagues (56.5%) which means that, though the program is on its early stage the level of awareness creation through means of mass communication is poor. We recorded a very low percentage (4.3) of the respondents that heard of the program from the community heads and village association which is not good enough for the program as it's suppose to empower traditional institutions in the process of its implementation to select individuals that will administer health needs. Among those that have heard of the program which is 69 persons (22.6%); 62(20.3%) agreed it's a primary health care program while 14.8%, 14.8%, 12.8%, 12.5% and 12.1% also agreed to the program being for the underserved communities, to be funded by the government, it's for both the rural and urban areas, a volunteer health program and requires total community participation respectively. The same numbers of persons that have heard of CHIPS (22.6%) are that it's meant to reduce maternal mortality while 21% are aware that it's meant to both expand access to basic primary health care services and reduce delays in seeking health care.

From our study, we documented a low knowledge about the CHIPS agents and what they are to do in the community. Among the criteria for selection of the CHIPS agents, readiness to serve the community recorded the highest (23.6%), followed by resident in the community (18.4%). This is low probably because of the generally low level of awareness of the program among the respondents. However, the job content of the community health extension workers is to that of the CHIPS agents.

From our study, 26.9% of the respondents are of the opinion that the families in the communities will welcome the idea of home visits. This is one of the contents of the community health extension workers program. Uzondu et al (Uzondu A.C, Doctor V.H, Findley E.S, & Afenyadu Y.G. Ager A., 2015), reported that the CHEWs were originally trained to spend 60% of their time within the communities doing home visits and 40% at designated rural health clinics. This points to the fact that home visits aren't going to be new to the communities. Findley et al (Findley S.E, Afenyadu G, Okoli U. Baba H, BatureR. Mijinyawa S. Bello-Malabu J & Mohammed Sidi A., 2016) in their study done in Northern Nigeria reported that. One VHW said that when she makes visits, women put their house in order, and leave their work to talk with me as soon as I come. We also reported 24.6% being of the opinion that Program will improve the health seeking behaviour of community. Findley also reported that one-fourth of the VHWs said that the most rewarding part of their work was seeing more women going for ANC and delivering at the facility, and the next most rewarding part of the work was seeing men supporting their wives to go to the clinic for care for themselves or their children.

We also reported 23.3% of the respondents that perceived the implementation process to be slow, poor community awareness (22.0%), poor community participation (19.3%). No community mobilization (19.3%). This may not be much of a problem at the moment as the program is still in the pipeline. However, they must be considered in the implementation process as it can affect the how the people will see the program, which will certainly affect its success. Onyeneho et al (Onyeneho N, AmazigoU. Njepuome N, Nwaorgu O & Okeibunor J., 2016), in their study of the perception and utilization of public health

services in Southeast Nigeria, more than half (50.4%) the respondents rated health care services as bad with the highest negative rating coming from rural dwellers (55.4 %).

Our study showed that 19%o of the respondents felt it will be more effective to convert CHEWs/JCHEWs to CHIPS agents. This may not be totally out of place as Ikpeme et al (Ikpeme B.M, Oyo-Ita A.E & Akpet O., 2014), reported that most of the community health extension workers (>50%) in Calabar are experienced and have worked for more than years. This is not in keeping with our observation which showed that most of the community health workers have worked for between 1-4 years. There is a need for explicit principles and guidance from the national level on ways of integrating and aligning these efforts to optimize synergies and build sustainable platforms for the scale-up of CHW programs towards achieving universal health coverage. Though 11.5% of the respondents feels that the work of the chips is similar to that of the other health workers, we also reported that 17.0% of the respondents feels that the CHIPS agents will make more impact in reducing maternal mortality than the community heath extension services. However, 7.5% of the feels the CHIPS agents will substitute the CHEWs/JCHEWs; this in keeping with the fear of job security which can create a strain between the two supposedly complementary programs. There is global recognition and consensus that the health related millennium development goals will only be achievable through community health care services close to homes and community where people live and there is no need for the conflict between community care where lesser skilled health workers may be used and health centre care where higher skilled health workers are necessary. The WHO has made it very clear in its twin reports on PHC.

From our study, the response rate on how best to organize CHIPS, the challenges it may face, the means of community mobilization, transportation for the CHIPS agents, setting targets for the CHIPS agents, how frequent should home visit be, the plans to kick start the program in Enugu was low. Only 0.7% had an idea on the number of CHIPs agents that will be recruited and 1.0% on when community mobilization will start in Enugu. On the means of community mobilization, churches, village meetings, and radio recorded 24.3%>, 23.6% and 22.6% respectively as means of community mobilization. This is important for those implementing the program as it is aimed at empowering traditional institution in selecting the CHIPS agents. Among the factors that were considered as to be hindrances in achieving the targets by CHIPS agents, transportation recorded 24.9% which was the highest. Though the response rate was low, it constituted the major challenge to the program. This is similar to what Uzondu et al (Uzondu A.C, Doctor V.H, Findley E.S, & Afenyadu Y.G. Ager A., 2015), reported in their study done northern Nigeria. we also reported poor community introduction of the program and lack of incentives as factors that can jeopardize the program. This is also similar to what was reported by Nwankwo et al (Nwankwo U I, Udeobasi O C, Osakwe S C & Okafor O G., 2017) in their study done at Mbaukwu, 88.6% of the respondents wanted government to address all facets of PHC at Mbaukwu community for enhanced performance. Specifically, they want government to offer incentives to encourage primary health care workers, put in place good policies and monitoring and evaluation schemes, train and retrain health workers at Mbaukwu every 6 months, recruit more health care workers or staff, provide transport means for outreach services/field work, promptly pay health workers salary and allowance including adequate supply of drugs, reagents and other materials. Poor remuneration was also factored in, 14.8% reported that it could be a challenge to the program. This a problem for already existing community health care program in the country as Findley et al reported in the study of SURE-P MCH National Village Health Worker Experience in Northern Nigeria: one-fourth of the VHWs also reported that the most difficult part of their work was delay in payment of their stipend. And in the Solomon Islands, attrition was attributed to multiple causes in addition to inadequate pay Assigning CHIPS to Households close to their homes and transportation are two factors that should be considered together. 19.3% of the respondents are of the opinion that assigning the CHIPS agents to households close to their homes will be a step ahead for the program as it will alleviate to some extent the transportation cost for the workers. Findley also reported that paying for transport was a problem for 16% of the 2013 cohort and 9% of the 2014 cohort.

6. Conclusion

This is a pre-implementation evaluation of the community health influencers, promoters and service program in Enugu, Nigeria. At the time of this study, the program is yet to be rolled into action. The level of awareness among community health workers is poor which is worrisome as the community health officers and community health extension workers are supposed to be part of the implementers of this program despite being in operation in some parts of the country. More so, CHIPS program is a new venture but of similar concept to what we have had in the past years. Some of which is still in existence, some are not. The striking thing is that the challenges of the past are still that of the present. So it is of utmost importance to constructively look at the content of the planning, implementation and its evaluation, and then draw strength from the weaknesses of the already existing community health programs. It is necessary to ask, what will be the meeting point of the CHOs, the CHEWs, YHs and the CHIPS agents since the curricula are similar; integration is better than segregation. What is needed therefore is not another cadre of community health workers replacing or competing with CHEWs CHOs/VH, but a cadre that can complement the work of the CHEWs to ensure a more comprehensive coverage in terms of maternal health services and other health services needed in the community. CHIPS has the potential to obviate the health challenges of the rural population but may fail if proper attention is not paid to the critical areas such as financing, monitoring, training, retention and retraining of the CHIPS agents.

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