HIV/AIDS is fast becoming a chronic disease with the advent of antiretroviral drugs, therefore making home based care key in the management of chronically ill HIV/AIDS patients. The objective of this study was to determine the perception and practice of healthcare workers on HIV/AIDS related home based care in the health facilities in Ogun state, Nigeria.

Methods: This study is an analytical cross-sectional study. A multistage cluster sampling technique was used to obtain a representative sample of the primary health care workers in Ogun state. An interviewer administered structured questionnaire was administered by trained health workers to elicit the required information.

Result: A total of 350 health care workers were interviewed, 70% of the respondents could adequately describe the components of home based care. Only 38.7% were aware of the National guideline on home based care practices and 17.1% believe that home based care will not significantly improve the prognosis of PLWAs. Few 19.1% had ever been trained or ever involved 16.6% in home based care practices. Only 20 (5.7%) are involved on a weekly basis, 16 (4.6%) monthly and 22 (6.3%) quarterly. Reasons given for non implementation of home based care are inadequate number of healthcare workers 45%, lack of political will 24.4%, lack of implementation by facility managers 14% and inadequate funds 16.6%. Factors that were significantly associated with the practice of home based care were perception of its relevance in improving prognosis [OR = 54.21, CI = 23.22-129.52] and presence of a support group in the facility [OR = 4.80, CI = 2.40-9.57]. There was however no statistically significant relationship between adequate knowledge of home based care [OR = 0.78, CI = 0.39-1.54] and previous training on home based care [OR = 1.43, CI = 0.66-3.06].

Conclusion: The practice of home based care for HIV/AIDS among the study population is low and it is greatly influenced by perception of its effectiveness and relevance. The study recommends that the health care workers should be adequately educated on the importance of home based care in the management of chronic illnesses in order to enhance its practice.
though the practice among the formal health care workers is rare [7-10]. This is done in spite of a relatively easy access to institutional maternity services in urban areas. Previous studies about home health care in urban and peri-urban areas have reported that the utilization of home based services is more closely related to the needs of caregivers than the care needs level of the users [2]. It is usually determined by multidiimensional services indicators and care needs such as poor education, multiparity, and low socioeconomic status in rural areas in Africa [4,11-13]. Although there have been a few number of studies that focused on care at home, more information is needed about the range and severity of problems encountered by primary care professionals and the barriers that prevent optimal care in order to identify the educational and training needs of primary care teams.

The World Health Assembly in 2005 even declared supportive or palliative care as an urgent humanitarian responsibility [14]. Despite various palliative care programmes which have been developed, it is still only available to less than 5% of those in Africa who need it [14]. Assessment of the perception and practice of home based care by health care workers is vital to understanding the extent of practice among the study population and also to determine the factors that encourage its practice in an African population. This study was therefore designed to determine the perception and practice of health care workers on HIV/AIDS related home based care in the health facilities in Ogun state, Nigeria.

Methods
Study design
This study is an analytical cross-sectional study. The information was collected from health care workers in Abeokuta South local government area of Ogun State from February 10, 2008 to April 15, 2008.

The study area
The study was conducted in Ogun State which is one of the 36 states in Nigeria and was created in February 1976 out of the old western state. It is located in the South West Zone (which is one of the 6 geo-political zones) of Nigeria with a total land area of 16,409.26 square kilometers and a population of 3,507,735 with growth rate of 2.83% per annum (2006 National Census). However, the estimated HIV/AIDS prevalence in Ogun state was 1.7% in 2008 [15]. The state has twenty (20) Local Government Areas, with each LGA headed by an executive chairman. It is divided into 3 senatorial districts and 26 state constituencies.

This study was conducted in Abeokuta South local government area of Ogun State from February 10, 2008 to April 15, 2008. All health workers in primary health care facilities who consented to take part in the study were recruited.

Sampling technique
A multistage cluster sampling technique was used to obtain a representative sample of all the primary health care workers in Ogun state.

Stage 1: The framework of all the local government in Ogun state was obtained from the National population commission. Abeokuta South local government area local government area was selected by balloting among all the 20 local government areas in Ogun state.

Stage 2: All health care workers in primary health care facilities in Abeokuta South local government area of Ogun State from February 10, 2008 to April 15, 2008 who consented to take part were enrolled in the study.

Sampling size determination
The sample size was calculated using Epi-Info version 6.0 statistical software. The result of a previous study [4] that showed 17% prevalence of home care delivery was used.

The sample size used for this study was calculated with the formula

\[ n = \frac{z^2pq}{d^2} \]

\[ n = 1.96^2 \times 0.17 \times 0.83 \]

\[ 0.05^2 = 217 \]

However a total of Three hundred and fifty participants [350] were recruited into the study.

Study instrument
The factors examined in the study include socio-demographic characteristics (age, sex, income, education, religion, marital status, occupation, place of residence) and the knowledge of components of HIV/AIDS related home based care and factors associated with the practice of home based care.

Single multiple response choice questions were asked to determine the practice of home based care.

The Questionnaire was pre-tested on health workers in the Reproductive health unit of the Ogun State Ministry of Health, and necessary adjustments were made. Trained data collectors explained the aim of the study, obtained informed consent, and interviewed each respondent privately. All information was obtained under anonymity and the data was collected by trained personnel on clinic days.

Ethical considerations
Ethical clearance: was obtained from the Ogun State Ministry of Health Ethics Board. Confidentiality on candidate’s information was maintained. Permission of the
State Ministry of Health, HIV/AIDS Control Division were obtained before the commencement of the study.

Data analysis
To describe patient socio-dermographic characteristics, we calculated proportions and medians. For categorical variables, we compared proportions using chi-square tests and, when appropriate, Fisher’s exact test. For continuous variables, we compared medians using the Wilcoxon Rank-Sum Test. Chi-square was used to determine association between categorical variables and a p value of less than 0.05 was considered significant. The relationships between socio-demographic characteristics of the health care workers and their practice of Home based care services were examined through bivariate analysis, by computing odds ratio at 95% confidence level and chi square and t-tests where appropriate. Data were presented in tabular form.

Results
Socio-dermographic characteristics of respondents
A total of 350 health care workers were recruited into the study. The age of the respondents ranged from 21 to 59 years, (mean 39.42 ± 7.15 years). Majority [64.9%] of the respondents were married and 30.9% were never married. Most of the respondents 286 [81.7%] were Christians, 17.4% Muslims and 3[0.9%] were traditional worshippers. Three quarters 75.7% of the respondents were females. More than half 218 [63.6%] of the respondents were from the nursing profession, 50 [14.6%] were community health workers, 6.9% were Medical doctors and 58 [14.9%] were from other paramedical professions such as Laboratory scientists, Pharmacists, Medical records etc. Majority [71.4%] have been working for between 11-20 yrs, 80 [22.5] for less than 10 yrs and 20 [5.7%] for more than 20 yrs while 285 [%] have been working in public health field since employment. The prevalence of practice of home based care among these health workers was 58 [16.6%] (Table 1).

Perception of the health care workers about home based care
Two hundred and fifty [70%] of the respondents had adequate knowledge of all the elements of HIV/AIDS related home based care. 60 [17.1%] believed that home based care is not essential or relevant to the management of HIV/AIDS in their environment. Only 67 [19.1%] of the respondents have ever received any form of training on home based care. Only those 58 [16.6%] that practice home based care believed that its practice is feasible while 150 [42.9%] believed that it is an expensive venture and 142 [40.1%] believed that it is a cumbersome practice. Majority [55/58] of the respondents that practice home based care have support group in their facility. Among those that practice home based care only 16 [5.7%] do home visit weekly, 4.6% monthly and 6.3% on a quarterly basis. Reasons given for non implementation of home based care are inadequate number of healthcare workers 45%, lack of political will 24.4%, lack of implementation by facility managers 14% and inadequate funds 16.6%.

Table 2 shows the perception and practice of home based care among the respondents.

Factors associated with the practice of HIV/AIDS related home based care
The practice of home based care was statistically significantly associated with perception of its relevance in the management of HIV/AIDS. Those who believe that it
that have support group were about 5 times more likely to report the practice of home based care when compared to those from facilities that do not have support group [OR = 4.80, C.I = 2.40-9.57]. There was however no statistically significant relationship between adequate knowledge of home based care and its practice [OR = 0.78, C.I = 0.39-1.54] Table 3 shows the influence of knowledge and perception of home based care on its practice.

**Table 3** Factors associated with practice of HBC services

| Knowledge of HBC | Total Practices HBC | Do not practice HBC | Unadjusted odds ratio |
|------------------|---------------------|---------------------|----------------------|
| Adequate         | 245 [70.0]          | 43                  | 202                  |
|                  |                     | 0.5                 | [0.5]                |
|                  | 105 [30.0]          | 15                  | 90                   |
|                  | 290 [100.0]         | 58                  | 292                  |
| Perception about HBC |                   |                     |                      |
| Relevant         | 60 [17.1]           | 44                  | 16                   |
|                  |                     | 168.3               | [0.001]              |
|                  | 290 [82.9]          | 14                  | 276                  |
| Training         |                     |                     |                      |
| Trained          | 67 [19.1]           | 12                  | 45                   |
|                  |                     | 1.0                 | [0.3]                |
|                  | 283 [80.9]          | 46                  | 247                  |
| Availability of support group in facility |            |                     |                      |
| Yes              | 55 [15.7]           | 22                  | 33                   |
|                  |                     | 25.8                | [0.001]              |
|                  | 295 [84.3]          | 36                  | 259                  |

**Discussion**

The study shows that the prevalence of practice of home based care among these public health workers was low [16.6%]. The fact that home based care practices among health care workers was low has been widely reported by several studies especially in low socioeconomic settlements [7,11-13]. The practice of home based care among the study population was significantly associated with perception of its relevance in the management of HIV/AIDS. The study shows the need for community-based interventions to promote improved home based care practices in urban and rural areas. Implementation of an effective program for promotion of home based care practices requires understanding of the community and household traditional care practices. Such information will enable the development of programs to promote culturally sensitive and acceptable changes in practices.

The effectiveness of home care services on recipients is still controversial. It has been difficult to assure the quality of care research [16], and consequently there is inconsistent evidence in support of the effectiveness of home care services.
services [17]. As a result, some studies have reported positive effects of home care services including reductions in functional decline [18-22], mortality rates [23-27], institutionalization rates [28-30] and costs of care [31]. Other studies, however, have reported that home care services are ineffective in reducing functional decline [20], mortality rates [17,19] and institutionalization rates [31,32] in community-dwelling elderly persons.

Only those that practice home based care believed that its practice is feasible while others believed that it is either an expensive venture or a cumbersome practice. This indicates that the practice of home based care is greatly influenced by cost. Several studies have reported similar findings [9,10] on issues pertaining to the development of home treatment services and on macro-level outcomes such as cost-effectiveness and admission rates, which have political, economic, and practical implications. However, there is a paucity of research regarding the structures and processes in actual operations over time, as well as a lack of research of service-user experiences and satisfaction on key areas of service provision [20,24,33]. Establishing performance indicators for assessing home based care is essential in identifying the effect of home care services and would contribute to standardization and improvement in the quality of home care services. This may be one strategy for addressing the shortage of resources and encouraging health care workers to practice quality home based care [1,3].

The study implies that neither the adequate knowledge of home based care nor its training significantly influenced its practice but those from the facilities that had support group were about 5 times more likely to practice home based care for people living with HIV/AIDS. This shows that practical Information about the reasons for home based care is more important than theoretical knowledge. This may indicate a need for health care planners to design appropriate health care services especially in management of chronic diseases. Several studies have reported similar findings [24-26]. More information is needed about the range and severity of problems encountered by primary care professionals and the barriers that prevent optimal care in order to identify the educational and training needs of primary care teams.

Our study has certain limitations. The study findings are limited in terms of overall generalization and impact since the study might also have been faced with recall bias and it is not all health workers in Abeokuta south local government area that was recruited into the study. Despite these limitations, we believe that our data provide useful information for the assessment and implementation of home based care services in Nigeria and will also inform policy decision in Nigeria and other low income countries.

**Conclusion**

The study concludes that the practice of home based care for people living with HIV/AIDS among the study population is low and it is greatly influenced by cost and perception of its effectiveness and relevance. The study recommends that the health care workers should be adequately trained on the practice of home based care and its implementation in order to enhance its practice.

**Competing interests**

The authors declare that they have no competing interests.

**Authors’ contributions**

AOE participated in the study design, conducted data collection and prepared the final manuscript. CEA conceived the study theme; participated in the study design and supervised data collection. CEA and AOK were involved in Data collection and analysis. All authors read and approved the final manuscript.

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**References**

1. Grant E, Murray SA, Grant A, Brown J: A good death in rural Africa? Listening to patients and their families talk about care needs at the end of life. J Pall Care 2003, 19:3159–3167.
2. Murray SA, Grant E, Kendall M: Dying from cancer in developed and developing countries: lessons from two qualitative interview studies of patients and their careers. BMJ 2003, 326:568. doi:10.1136/ bmj.326.7385.368.
3. Clark D, Wright M, Hunt J, Lynch T: Hospice and palliative care development in Africa: a multi-method review of services and experiences. J Pain Symptom Manage 2007, 33:698–710. doi:10.1016/j.
painsymman.2006.09.033.
4. UNAIDS: AIDS epidemic update 2007. Geneva: WHO; 2007.
5. Harding R, Stewart K, Marcon K, O’Neill JF, Higginson IJ: Current HIV/AIDS end-of-life care in Sub-Saharan Africa: a survey of models, services, challenges and priorities. BMC Publ Health 2003, 3:33. doi:10.1186/1471-2458-3-33. http://www.biomedcentral.com/1471-2458/3/33.
6. Mpanga Sebuyira L, Mwangi-Powell F, Pereira J, Spences C: The Cape Town Palliative Care Declaration: Home grown solutions for sub-Saharan Africa. J Palliat Care 2003, 6:341–343.
7. Ogunnuyi SO, Faleyin BI, Makinde ON, Adejuyigbe EA, Ogunnuyi FA, Owolabi AT: Delivery care services utilization in an urban population. Niger J Med 2000, 9(3):81–85.
8. Olowoniyi MT, Adegambi MA, Obasanjo-Bello I: Findings on the use of antenatal facilities in Ogun State, Nigeria. Niger Med Pract 2003, 45:68–71.
9. Dawoud A: Neonatology in developing countries: problems, practices and prospects. Ann Trop Pediatr 1998, 18:S73–S79.
10. Lamina MA, Sule-Odu AO, Jagun OE: Factors militating against delivery amongst patients booked in OOUTH, Sagamu. Niger J Med 2004, 13(1):52–55.
11. Ayoola AA, Orimudegan AF, Akinsola AK, Ogunsun K: A five-year review of childhood mortality at the UCH, Ibadan. W Afr J Med 2005, 24:20175–179.
12. Fakura FF, Ali TS, Dutcher JM, Rahbar M: Newborn care practices in low socioeconomic settlements of Karachi, Pakistan. Soc Sci Med 2005, 60:5:911–921.
13. Chowdhury ME, Ronsmans C, Kilewo J, et al: Equity in use of home-based or facility-based skilled obstetric care in rural Bangladesh: an observational study. Lancet 2006, 367:1057:327–332.
14. World Health Assembly Cancer Prevention and Control Resolution, Volume 55: WHA, 2005, 22.
15. Federal Ministry of Health: Department of Public Health National AIDS/STDs Control Program. Technical Report, National HIV/Syphilis sero-prevalence sentinel survey among pregnant women attending antenatal clinics. 2008.
16. Hanwood RH, Ebrahim S: Long-term institutional residents: does the environment affect outcomes? J R Coll Phys Lond 1992, 26(3):134–138.
17. Bouman A, van Rossum E, Evers S, Ambeniger T, Kempen G, Knipschild P: Effects on health care use and associated cost of a home visiting program for older people with poor health status: a randomized clinical trial in the Netherlands. J Gerontol A Biol Sci Med Sci 2008, 63(3):291–287.

18. Grillon LN, Hauck WW, Winter L, Dennis MP, Schult R: Effect of an in-home occupational and physical therapy intervention on reducing mortality in functionally vulnerable older people: preliminary findings. J Am Geriatr Soc 2006, 54(6):955–960. doi:10.1111/j.1532-5415.2006.00733.x.

19. Hughes SL, Conrad KJ, Manheim LM, Edelman PL: Impact of long-term home care on mortality, functional status, and unmet needs. Health Serv Res 1988, 23(2):269–294.

20. Stuck AE, Egger M, Hammer A, Minder CE, Beck JC: Home visits to prevent nursing home admission and functional decline in elderly people: systematic review and meta-regression analysis. JAMA 2002, 287(8):1022–1028. doi:10.1001/jama.287.8.1022.

21. Huss A, Stuck AE, Rubenstein LZ, Egger M, Clough-Gorr KM: Multidimensional preventive home visit programs for community-dwelling older adults: a systematic review and meta-analysis of randomized controlled trials. J Gerontol A Biol Sci Med Sci 2008, 63(3):298–307.

22. Beswick AD, Rees K, Dieppe P, Ayis S, Gooberman-Hill R, Horwood J, Ebrahim S: Complex interventions to improve physical function and maintain independent living in elderly people: a systematic review and meta-analysis. Lancet 2008, 371(9614):725–735. doi:10.1016/S0140-6736(08)60742-6.

23. Kono A, Kanagawa K, Ban M, Kitahama Y, Matubara E: Evaluation of a community-based preventive care program for elderly living at home. Nippon Koshu Eisei Zasshi 2002, 49(9):983–991.

24. Elkan R, Kendrick D, Dewey M, Hewitt M, Robinson J, Blair M, Williams D, Brummell K: Effectiveness of home based support for older people: systematic review and meta-analysis. BMJ 2001, 323(7315):719–725. doi:10.1136/bmj.323.7315.719.

25. Pathy MS, Bayer A, Harding K, Dibble A: Randomised trial of case finding and surveillance of elderly people at home. Lancet 1992, 340(8824):890–893. doi:10.1016/0140-6736(92)92924-W.

26. Melis RJ, van Eijken MI, van Rossum E, de Witte LP, Crebolder HF: Randomised study of a multidisciplinary program to intervene on geriatric syndromes in vulnerable older people who live at home (Dutch EASYcare Study). J Gerontol A Biol Sci Med Sci 2008, 63(3):283–290.

27. Kuzuya M, Masuda Y, Hirakawa Y, Iwata M, Enoki H, Hasegawa J, Iguchi A: Day care service use is associated with lower mortality in community-dwelling frail older people. J Am Geriatr Soc 2006, 54(8):1364–1371. doi:10.1111/j.1532-5415.2006.00860.x.

28. Vass M, Avlund K, Hendriksen C, Andersen CK, Keiding N: Preventive home visits to older people in Denmark: methodology of a randomized controlled study. Aging Clin Exp Res 2002, 14(8):509–515.

29. Landi F, Gambassi G, Pola R, Tabaccanti S, Cavinato T, Carbonin PU, Bernabei R: Impact of integrated home care services on hospital use. J Am Geriatr Soc 1999, 47(12):1430–1434.

30. Vass M, Avlund K, Hendriksen C: Randomized intervention trial on preventive home visits to older people: baseline and follow-up characteristics of participants and non-participants. Scand J Publ Health 2007, 32(4):410–417. doi:10.1080/14034940601160763.

31. Weissert WG, Lesnick T, Musliner M, Foley KR: Cost savings from home and community-based services: Arizona’s capitated Medicaid long-term care program. J Health Polit Policy Law 1997, 22(6):1329–1357.

32. van Haastregt JC, van Rossum E, van de Lisdonk EH, Wensing M, Rikkert MG: Multidimensional program to intervene on geriatric syndromes in nursing home admission and functional decline in elderly people: a systematic review and meta-analysis of randomized controlled trials. J Gerontol A Biol Sci Med Sci 2008, 63(3):298–307.

33. National Audit Office: Helping people through mental health crisis: The role of crisis resolution and home treatment services. London: The Stationery Office; 2007.