PERCEPTION OF OTHER HEALTH CARE PROFESSIONALS ON PHARMACISTS' ROLES IN OPTIMIZING PHARMACEUTICAL CARE FOR HIV/AIDS PATIENTS IN UNIVERSITY OF MAIDUGURI TEACHING HOSPITAL, NORTH-EASTERN NIGERIA

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Abstract

Pharmacists being professionals in the multi-disciplinary health care team, their roles/functions cannot be overemphasized in the HIV/AIDS patient care. The expected roles include but not limited to appropriate selection of drugs, patient education, monitoring and assessment of therapy outcomes. This study was carried out in University of Maiduguri Teaching Hospital (UMTH), the only University Teaching Hospital in North-Eastern Nigeria in 2010 with the objective of examining perception of other health care professionals of pharmacists' roles in optimizing pharmaceutical care (PC) for HIV/AIDS patients. A cross-sectional study of total population of Non-Pharmacist health care professionals (59), working with HIV/AIDS clinic consisting of 12 physicians, 10 nurses, 17 radiographers and 18 laboratory scientists in UMTH was carried out using questionnaire. Significant proportion of respondents percieved pharmacists' roles in optimizing PC for HIV/AIDs as reassuarance of the patient/counselling, re-emphasizing physician instructions, ensuring that all HIV/AIDS patients regularly return for drug refill, ensuring that ARV drugs are available and monitoring compliance with ARV therapy ($P \leq 0.05$). Majority also percieved pharmacists as being involved in therapeutic plan development, implementation, monitoring and evaluation ($p \leq 0.05$). Fifty nine percent of the respondents rely on pharmacists for current and up-to date drug literature ($P \leq 0.05$). The roles of pharmacists in improving the quality of life of HIV/AIDs patients and their participation in therapeutic plan development, implementation, monitoring and evaluation, including provision of up-to date drug literature to optimize pharmaceutical care for HIV/AIDs Patients was positively percieved by other members of the health care profession.

Keywords: Perception, Pharmacists' Roles, Pharmaceutical Care, HIV/AIDS

Introduction

The use of antiretroviral (ARV) drugs has posed a number of risks and challenges, particularly in resource-poor countries of Africa. The administration of antiretroviral drugs is often complicated by the possibility of serious side effects, and it requires a high level of adherence on a lifelong basis. The drugs are toxic if not used properly and resistance may develop which could compromise the entire treatment. With the increased widespread use of highly active antiretroviral therapy (HAART) in developing countries like Nigeria, physicians and other health care professionals need to be aware of the potential risks of these medications in order to weigh the benefit against the risks and decide how best to manage the disease (UNAIDS, 2006).

Other confronting challenges in the management of HIV/AIDS patients include; presence of other chronic diseases such as tuberculosis, diabetes mellitus, cardiovascular diseases and many others which would always require drug intervention. This means that the HIV/AIDS patient will be made to take more than one drug regimen (a condition in which drug interaction with possible adverse drug reaction is likely to set in).

Pharmaceutical care therefore, appears to be the concept which when properly and fully instituted for HIV/AIDS patients, will go a long way in improving the patient's quality of life. Pharmaceutical care is the responsible provision of drug therapy for the purpose of achieving definite outcomes that improve a patients' quality of life. These outcomes are cure of disease, elimination or reduction of a patient's symptoms, arresting or slowing of a disease process or preventing disease symptoms (Hepler and Strand, 1990).

It is informative that definitive efforts and roles have been reported for pharmacists in the management of HIV/AIDS (Zappa, 1999; Foley *et al*, 2003; Akai, 2004; ASCP, 2004). This has not been documented clearly in Nigeria where cursory observation reveals that pharmacists may be playing only marginal roles in provision of pharmaceutical care for HIV/AIDS patients.

Pharmaceutical Care is a necessary element of health care and should be integrated with other elements. The implication is that better outcome is attainable through pharmaceutical care for HIV/AIDS patients if inter professional relations in the hospital is given appropriate cognizance.

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It is in this light that the study seeks to examine perception of other health care professionals such as Medical Doctors (Physicians), Nurses, Laboratory scientists and Radiographers regarding the roles of pharmacists in the optimization of pharmaceutical care for HIV/AIDS patients in the UMTH in 2010.

Methods

The study was conducted in University of Maiduguri Teaching Hospital (UMTH), the only University Teaching Hospital in North Eastern Nigeria. The Hospital runs a medical out-patient department comprising of a general out-patient and specialist medical out-patient clinics. Highly Active Anti-Retroviral Therapy (HAART) Clinic is one of the specialist medical out-patient clinics and it is run every Tuesday.

A cross-sectional study, involving the use of self administered questionnaire among physicians, nurses, radiographers and laboratory scientists that were involved in HIV/AIDS patient management was conducted. All physicians, nurses, laboratory scientists and radiographers working with HAART Clinic in UMTH constituted sample size for this study (They were 59 in number). Purposeful sampling of total population of these health professionals (non-pharmacists) working with HAART Clinic in UMTH was adopted.

The roles of pharmacists identified from literature were framed into questions. The developed questionnaire was reviewed by a pharmaceutical care expert in academia for face validity of questions. It was also assessed for content validity in terms of content, scope, depth and appropriateness of each item of the questionnaire.

The questionnaire was pre-tested by administering to non-pharmacist health professionals (n=12) working with HAART Clinic in State Specialist Hospital, Maiduguri. Appropriate corrections were made based on analysis of the pre-tested questionnaire. It was also assessed for reliability using split halves method, with cronbach alpha value of 0.72.

The questionnaire was self-administered to non-pharmacist health care professionals working with HAART Clinic in UMTH to examine their perception of pharmacists' roles in optimizing pharmaceutical care for HIV/AIDS patients. It was structured to elicit information on pharmacists' relationship and collaboration with other health professionals, perceived roles as source of drug literature, drug supply, patient care, therapeutic care plan, implementation, monitoring and evaluation, improvement of patient quality of life and documentation.

The collected data were analysed using EPI- INFO software version 3.4.1, 2007. Data were presented as frequency distribution tables. Chi-Square Analysis was used to compare proportions and test hypothesis. P values ≤ 0.05 were considered significant.

This study is limited to perception of other health care professionals of pharmacists' roles in optimizing pharmaceutical care for HIV/AIDS patients in UMTH, the only University Teaching Hospital in North-Eastern Nigeria as at the time of this study. It was limited to their perception of the roles of pharmacists as identified from literature, framed into questions.

Results

Out of 59 questionnaires administered, 56 were recovered, giving a response rate of 94.9%. The results were presented in tables 1 to 3.

Fifty Two (92.9%) of the respondents percieved that pharmacists undertook counseling of HIV/AIDS patients on usage, side effects and interactions of ARV drugs while 4(7.1%) do not. There was a statistically significant difference in these proportions (χ^2=144.5; p=0.00; df=1). Thirty Three (59%) of the respondents percieved pharmacists as reliable for current and up-to-date drug literatures while 23(41%) do not. There was a statistically significant difference in these proportions (χ^2 =5.78, p=0.02, df= 1).

Forty Seven (84%) of the respondents percieved that pharmacists always ensure that all HIV/AIDS patient have all supplies, information and knowledge necessary for their ARV therapy while 9 (16%) do not. There was a statistically significant difference in these proportions (χ^2 =89.8, p=0.00, df= 1). Forty Nine (87%) of the respondents percieved pharmacists as having competence and knowledge concerning the disease process as well as therapeutic interventions using ARVs while 7(13%) of the respondentsts do not. There was a statistically significant difference in these proportions (χ^2 =106.6, p=0.00, df= 1).

Forty Six (93%) of the respondents percieved pharmacists as facilitating documentation of care for HIV/AIDS patients and evaluation of outcome while 10 (7%) do not percieve so. There was a statistically significant difference in these proportions (χ^2=144.5, p=0.00, df= 1). Fifty Two (92.9%) of the respondents percieved pharmacists as being involved in developing therapeutic plan for HIV/AIDS patients but the remaining 4(7.1%) do not percieve so. There was a statistically significant difference in these proportions (χ^2 = 144.5, p=0.00, df= 1). Fifty Three (95%) of the respondents percieved pharmacists as determining convenience, safety and appropriateness

of ARV therapy while the remaining 3(5%) do not percieve so. There was a statistically significant difference in these proportions (χ^2=158.4, p=0.00, df= 1).

Forty Five (80%) of the respondents percieved pharmacists as being involved in assessment, identification and resolution of drug therapy problems whereas the remaining 11(20%) do not. There was a statistically significant difference in these proportions (χ^2 =69.6, p=0.00, df= 1). Fifty Four (96%) of the respondents percieved pharmacists as being involved in monitoring adherence, efficacy and adverse drug reaction(ADR) to ARVs while 2(4%) of the respondents do not. There was a statistically significant difference in these proportions **(**(χ^2 =165.6, p=0.00, df= 1).

Fifty Four (96%) of the respondents percieve pharmacists as reassuring HIV/AIDS patients to improve quality of life while the remaining 2(4%) of do not. There was a statistically significant difference in these proportions **(**χ^2 =165.6, p=0.00, df= 1). Fifty Three (94%) of the respondents percieved pharmacist as helping HIV/AIDS patients acquire an improved quality of life by re-emphasizing physician instruction while the remaining 3(5.4%) do not. There was a statistically significant difference in these proportions **(**χ^2**=**151.4, p=0.00, df= 1).

Fifty (87.5%) of the respondents percieved pharmacists as helping the patients acquire an improved quality of life by ensuring that all HIV/AIDS patients regularly return for their medication refill/review but 6(10.7%) of the respondents do not percieve so. There was a statistically significant difference in these proportions (χ^2=112.5, p=0.00, df= 1).

Of all the respondents, 52 (92.9%) percieved pharmacists as helping the patients acquire an improved quality of life by ensuring that ARVs are available while 4(7.1%) do not. There was a statistically significant difference in these proportions (χ^2=144.5, p=0.00, df= 1). Majority, 52(82.1%) of the respondents percieved pharmacists as helping the patients acquire an improved quality of life by monitoring patients compliance to ARV therapy, only 4(17.9%) do not. There was a statistically significant difference in these proportions (χ^2=79.4, p=0.00, df= 1).

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Table 1: Perception of Pharmacists' roles in the area of Patient Counselling, Source of Drug Literature, Patient Supplies, Pharmacist Competence and Documentation of Care

Element	*Yes	*No
Patient Counselling	52(92.9%)	4(7.1%)
Source of Drug Literature	33 (59%)	23(41%)
Adequate Patient Supplies	47 (84%)	9 (16%)
Competence and Knowledge	49 (87%)	7 (13%)
Documented Care	46 (93%)	10 (7%)

*Other Health Care Professionals significantly differ in their perception of pharmacists' roles in Optimizing Pharmaceutical Care for HIV/AIDS Patients in the area of Patient Counselling, Source of Drug Literature, Patient Supplies, Pharmacist Competence and Documentation of Care.

Table 2: Perception of Pharmacists' roles in the area of Therepeutic Plan, Implementation, Monitoring and Evaluation

Element	**Yes	** No
Therapeutic Care Plan	52(92.9%)	4 (7.1%)
Access to Patient Data	50 (89.3%)	6(10.7%)
Involved in ARV regimen	52 (92.5%)	4 (7.1%)
ARV safety and therapeutic appropratenes	53 (95%)	3 (5%)
Patient Care	35 (62%)	21 (38%)
Drug Therapy Problems	45 (80%)	11 (20%)
Adherence, Efficacy and ADR	54 (96%)	2 (4%)

**Other Health Care Professionals significantly differ in their perception of pharmacists' roles in optimizing Pharmaceutical Care for HIV/AIDS Patients in the area of Therepeutic Plan, Implementation, Monitoring and Evaluation.

Discussion

The study revealed that significant proportion of respondents percieved pharmacists as reliable for current and up-to date drug literature in line with the practice requirement of pharmaceutical care as stated by USAID (2005), that pharmacists should provide patient specific drug information, accurate and comprehensive information about drug to both patients and health care professionals as appropriate.

Adenika (1998) also stated that a key contribution of the pharmacist is the sharing of drug information. This finding is of great importance which is commendable as it would up-hold the credibility of pharmacy profession.

Majority of the respondents in this study percieved pharmacists as playing key roles in HIV/AIDs patients counseling on usage, side effects and interaction of ARV drugs in line with Vanghan and Holmes (2002) who said that counseling by phamacists is an important aspect of HIV/AIDs patients management.

Perception of professional competence and adequate knowledge base of pharmacists concerning HIV/AIDS disease process and therapeutic interventions using ARV, by majority of the respondents supports the observation by Boorman and Cairns (2000) that pharmacists could facilitate improved prescribing and medicines management by working closely with other health care professionals. This was further buttressed by the perception of majority of respondents that pharmacist should be given access to all information such as medical history and laboratory findings of each patient and that pharmacists should be involved in the ARV regimen formulation.

The roles of pharmacists in the assessment, identification and resolving ARV drug therapy problems percieved in the present study agrees with the findings of ASCP (2004) that pharmacists can help patients with drug related problems.

Pharmacists' active roles in monitoring adherence, drug regimen efficacy and prevention of avoidable adverse drug reactions to ARV was positively percieved in this study. Paterson *et al* (1996) already emphasized that patient adherence should be closely monitored to optimize care for HIV/AIDs patients.

The findings in this study are significant as it highlights important roles percieved by other health care professionals as being played by pharmacists in improving the quality of life of HIV/AIDs patients, which is a core goal of pharmaceutical care. The roles percieved for pharmacists in optimizing pharmaceutical care for HIV/AIDs patients in the present study include reassuarance of the patients, re-emphasizing physician instructions, ensuring that all HIV/AIDS patients regularly return for drug refills, ensuring that ARVdrugs are available and monitoring compliance with ARV therapy. These roles enhances adherence to ARV drugs.

A high level of adherence is related to better outcomes (Nathaniel, 2009).

Effective and efficient documentation of care for HIV/AIDS patients and evaluation of outcome percieved by respondents to be key roles of pharmacists, corroborates reports of previous studies that effective documentation and assessment are definitive efforts and roles for pharmacists in the management of HIV/AIDS (Zappa, 1999; Foley *et a*l, 2003; Akai, 2004 and ASCP,. 2004). These findings are important because they have not been reported in Nigeria. Pharmacists's relationship with patients was percieved by majority of the respondents to be equally important as his/her relationship with other health care professionals. Castillo (2004) has since reported establishment of a committed relationship with the patient by the pharmacist as the first step in achieving optimal therapeutic outcome for the patient. Olivera and Esher (2002) opined that individual, collective and synergistic inputs from each member of the health care team are needed for maximum quality of services (health) delivery to the HIV/AIDS patients. UNAIDS (2006) reported on global AIDS epidemic also stated that the scourge can better be fought by a multidisciplinary health care team.

Conclusion

Significant proportion of other health professionals had positive perception towards pharmacists' roles in optimizing PC for HIV/AIDs in the following areas: reassuarance of the patient/counselling, re-emphasizing physician instructions, ensuring that all HIV/AIDS patients regularly return for drug refills, ensuring that ARVdrugs are available, monitoring compliance with ARV therapy and reliability for current and up-to date drug literature.

Recommendations

Pharmacists should strive to meet the expectations of their roles as percieved by other health care professionals in this study.

Table 3: Perception of Other Health Care Professionals of Pharmacists' roles in Optimizing Pharmaceutical Care for HIV/AIDS Patients in the area of improvement in Patients' Quality of Life

Element	***Yes	***No
Reassured the patients	54 (96%)	2(4%)
Re-emphasised physician instruction	53 (94.6)	3(5.4%)
Ensured HIV/AIDS patients return for their medication/refill	50(89.3%)	6(10.7%)
Ensured ARV are available	52(92.9%)	4(7.1%)
Improved monitoring of patients compliance to ARV	52(82.1%)	4(17.9%)

***Other Health Care Professionals significantly differ in their perception of pharmacists' roles in optimizing Pharmaceutical Care for HIV/AIDS Patients in the area of improvement in Patients' Quality of Life.

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