

Pharmacists' Involvement in Collaborative Practices in Anti-Retroviral Therapy Units of Five Governmental Hospitals in Addis Ababa

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ABSTRACT

Improved chronic diseases management calls for teams with inter-professional collaboration. The study aims to assess pharmacists' involvement in collaborative practice with physicians and nurses in anti-retroviral therapy units of five hospitals. Institution based cross-sectional survey with a sample size of 43 pharmacists, physicians and nurses, was conducted in May 2012. The response rate was 86.05% and involved 11 pharmacists, 6 physicians and 20 nurses. The role of the pharmacist was focused on dispensing and patient counseling. Consultation was given to other health professionals by 45.45% of the pharmacists but 54.54% of the pharmacists were not satisfied with their role. 72.72% of the pharmacist indicated collaboration on drug toxicities, side effects and on patient status with physicians and nurses; and rated their working communication and relation with physicians (72.72%) and nurses (81.81%) as 'very good'. 36.36% of the pharmacists believed that there was no equitable decision making on patient cases. 84.62% of the physicians and nurses rated their collaboration with ART pharmacists as 'good' and 'very good'. Overall, pharmacists' involvement in collaborative practice with nurses and physicians was found to be a little bit engaging with the patient as compared to the traditional role despite the gaps that exist.

INTRODUCTION

In modern health care, the best way to promote high quality patient care is thru adopting patient-centered approach with different providers across professions with wide range of skills, knowledge and best evidence based experience (Dolan, 2008; Newhouse, 2008). Accordingly, well functioning inter-disciplinary team can improve the quality of care, increase the range of services offered and lead to comprehensive care regardless of settings. Besides the patients, healthcare organizations also benefit from decreased costs and improved efficiency of healthcare providers in this practice (HPRN, 2008; FHT, 2005). In this regard, collaborative care recognizes gaps of single provider model to meet all the health care needs of an individual thus; it optimizes existing resources to improve patient access to care and patient's health outcomes (FHT, 2005; CMPA, 2007).

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Improved management of chronic diseases demands health care systems that include pharmacists as part of the health care team (Pottie et al., 2008). Pharmacist involvement in drug therapy has been successful, leading to improved patient care, safety and lowered medical costs. And more recently, Collaborative Drug Therapy Management (CDTM) by pharmacists is being implemented to maximize the patient's quality of life, reduce frequency of avoidable drug-related problems, and improve societal benefits of pharmaceuticals (Hammond et al., 2003).

High HIV/AIDS related mortality among young adults is ravaging countries in sub-Saharan Africa; despite two decade study on HIV/AIDS pandemic which led to development of Highly Active Anti-Retroviral Therapy (HAART) improving the prognosis (Yakam and Gruénais, 2009; CDC, 2009). HAART brought complexity with life threatening side effects and high risks of drug-drug interaction, which have made monitoring and close follow up necessary. Thus it has high impact on patient care and results high health care systems costs (Moyer et al., 1999; Seden et al., 2009). In Ethiopia the prevalence of HIV is estimated to be 3.5% among which 277,757 are in need of Anti-Retroviral Therapy (ART).

ART program was introduced in Ethiopia by 2003 with substantial expansion of access to ART and HIV counseling and testing in the country (FMOH, 2005; 2009). However, HIV prevention, intervention and management of chronic care patients are still lagging behind due to various external and internal challenges (Assefa *et al.*, 2009). Therefore as recommended by studies, reorganization of health resources and systems and re-evaluation of the role of health care professionals is being implemented (Dohrn, 2009).

Since the concept of collaborative health care in Ethiopia is recent and studies have not been conducted on collaborative practices involving pharmacists; this study is designed to assess the role of pharmacists, level of pharmacists' involvement in collaborative health care with physicians and nurses and identify the gaps in collaborative practice in ART units of five hospitals under Addis Ababa City Administration Health Bureau.

MATERIALS AND METHODS

Study area and period

Addis Ababa is the capital city of Ethiopia; it is the largest city in Ethiopia, with a population of 2,738,248. Addis Ababa has the status of both a city and a state. It is where the African Union and the United Nation Economic Commission for Africa are based. Addis Ababa is often referred to as "the political capital of Africa", due to its historical, diplomatic and political significance for the continent. The city is populated by people from different regions of Ethiopia (AACA, 2012).

Addis Ababa has 45 hospitals and 11 of them are public, of which 5 are managed under the health bureau of the city administration, five are managed by the federal ministry of health, and one under Addis Ababa University and the rest are run by private investors and non-profit organizations. Addis Ababa also has 573 private clinics and 50 health centers (FMOH, 2012). Among these health institutions, the 5 hospitals managed by the Addis Ababa City Administration Health Bureau, namely Yekatit-12, Minilik-II Referral, Gandhi Memorial, Zewditu Memorial and Ras-Desta Memorial hospitals were selected and the study was conducted in May 2012.

Study design

An institution based cross sectional study was conducted on ART units of five hospitals under the Addis Ababa city administration health bureau. Pharmacists' involvement in collaborative practice with nurses and physicians professionals was assessed using two sets of self-administered questionnaires.

Sample size and sampling technique

Purposive sampling method was used for selecting 5 hospitals in which the study was conducted. These were, Yekatit-12, Minilik-II Referral, Gandhi Memorial, Zewditu Memorial and Ras-Desta Memorial hospitals. The hospitals were selected for the study because they accommodate large HIV/AIDS patient population in Addis Ababa. All physicians, nurses and pharmacists

in the ART units involved in patient care were included in the study, while other health professionals and those working in other units were excluded from the study.

Data collection and management

Two sets of pre-tested self-administered questionnaires (for pharmacists and for nurses and physicians) were used to collect information on roles of the pharmacist, level and element of collaboration with other members of the health care team, perspectives of pharmacists, nurses and physicians. .

The data collection was coordinated and supervised, at the end of each day questioners were checked for omission and completeness. The collected data was, cleared, categorized, coded and it was entered into SPSS (Windows v 19.0; SPSS Inc, Chicago, IL). Descriptive statistics were generated to meet the objectives of the study.

Ethical consideration

Ethical clearance was obtained from the Addis Ababa City Administration Health Bureau which wrote a letter to the respective hospitals. The study was conducted after permission was granted from the heads of the institutions and verbal consent of participants was obtained prior to study initiation.

RESULTS

Participation Ratio

43 participants (pharmacists, physicians and nurses) were involved in the study, of which 11 pharmacists, 6 physicians and 20 nurses completed and returned the questionnaires, giving a total response rate of 86.05%.

Table 1: Socio-demographic characteristics of health professionals working in the ART units of five hospitals under Addis Ababa City Administration Health Bureau, May 2012 (n=37).

Characteristics	N (%)
Gender	
Male	11 (29.73)
Female	26 (70.27)
Age	
20-30	19 (51.35)
31-40	10 (27.03)
41-50	6 (16.22)
>50	2 (5.40)
Years of service	
0-3	9 (24.32)
>3	28 (75.68)
Profession	
Pharmacist	11 (29.73)
Physician	6 (16.22)
Nurse	20 (54.05)

Socio-demographic characteristics

Most of the participants were female (70.27%). Age of study participants ranged from a minimum of 22 years to a maximum of 57 years and majority of the participants (51.35%) were in the age group of 20-30, while individuals above 50 accounted for 5.40%. 81.81% of the pharmacists were in their

twenties and the mean age was 39.5 years. 75.68% of the participants served for more than 3 years in the ART service. Among the participants, 29.73%, 16.22% and 54.05% were pharmacists, physicians & nurses respectively (Table 1).

The pharmacists' perspective on their role

90.91% of the pharmacists were involved in dispensing and counseling patients; role of pharmacist like assessing patient's response to therapy, monitoring and modifying drug therapy, administering drugs and performing laboratory and related tests were not performed at the ART pharmacies of the five hospitals. Compared to the budget or special pharmacy, ART pharmacist had a wider role which included close follow up, counseling and education of patients in a confidential manner besides the usual practice of dispensing and providing monthly reports.

Despite this 54.54% of the pharmacists in the ART units were not satisfied with their professional role. Lack of initiative, tiring and redundant practice, lack of training programs, minimal involvement in patient cases, stock out medications, patient load, and nonadherence of patients to their medications and frustration of patients were mentioned as reasons for absence of satisfaction with their role.

Table 2: Working communication and relation of pharmacists with physician, nurse and HIV/AIDS patients in the ART units of five hospitals under Addis Ababa City Administration Health Bureau, May 2012 (n=11).

	Working communication and relation		
	Very good	Good	Poor
	N (%)	N (%)	N (%)
Physician	8 (72.72%)	2 (18.18%)	1 (9.10%)
Nurse	9 (81.81%)	2 (18.18%)	-
HIV patient	8 (72.72%)	3 (27.28%)	-

Pharmacists' perspective on collaboration

72.72% of the pharmacist indicated collaboration on scenarios such as: when patients stop their medications, toxicities and side effects, during discussions on patient status and how to improve service delivery and when it comes to choosing the right drug and dose. Furthermore 45.45% of the pharmacists stated that the other members of the ART service team sought for their consultation or collaboration when they encountered difficulties related with side effects, choosing better treatment regimen and changing treatment regimen.

Moreover the pharmacists rated their working communication and relation with physicians (72.72%), nurses (81.81%) and HIV/AIDS patients (72.72%) as 'very good', as shown in **Table 2**. On the other hand 36.36% of the pharmacists believed that there was no equitable decision making with regard to patient cases. Exaggerating minor medication recording mistakes by nurses and physicians, non-compliance to instructions by patients and not accepting changes in medication package and shape by patients were the problems forwarded by the pharmacists for the gaps in communication. Collaboration of pharmacists in ART service with other health professionals as compared to pharmacist in special or budget pharmacies was rated as

significantly better (45.45%) and better (27.27%) as depicted in Fig 1.

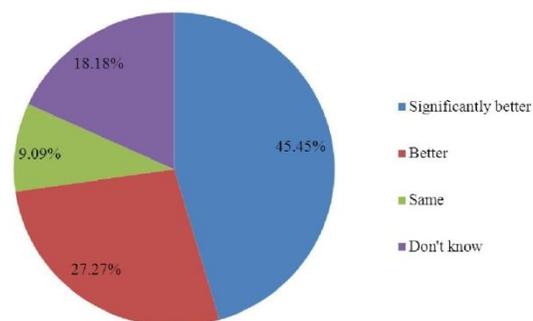


Fig. 1: Pharmacist collaboration with other health care professionals in the ART units of five hospitals under Addis Ababa City Administration Health Bureau compared to Budget or special pharmacy, May 2012 (n=11)

Physicians and nurses perspective on collaboration

According to physicians and nurses the role of the pharmacist in ART service was to dispense ART drugs, given adherence counseling, provide drug information, adjust drug dosing based on age and side effects, supply medicines and give their professional opinions to the physician and nurses. Based on the aforementioned roles 84.62% of the physicians and nurses felt that the pharmacists in ART service were fulfilling their role, while the rest felt the role was not fulfilled. Pointing out to gaps like poor compliance of patients to instructions and clarification on dosing of medications.

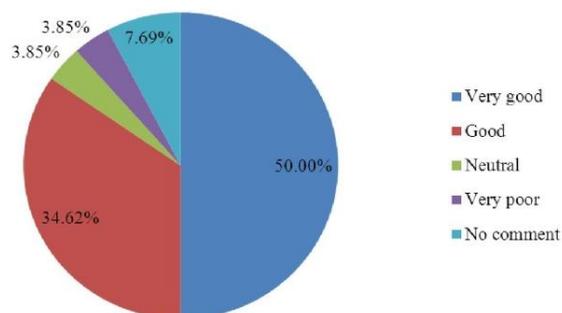


Fig. 2: Physician and Nurse Collaboration with the pharmacist in the ART units of five hospitals under Addis Ababa City Administration Health Bureau, May 2012 (n=26).

Collaboration with the pharmacist

76.92% of the physicians and nurses indicated collaboration with pharmacists on cases pertaining to new patients who need drug information, drug side effects, possible ADR, patient adherence to medications, type of medications in stock, problems related to drug and drug expiry and changes in package and shape of medications. Furthermore, incorrect prescription, side effects, dose and regimen change and poor adherence and compliance were cases for collaboration by 53.85% of the physicians and nurses. Accordingly 84.62% of the physicians rated their collaboration with ART pharmacists as 'good' and 'very good' as shown in Fig 2.

DISCUSSION

From the obtained facts most of the health professionals working in the ART units of the five hospitals were in the [20-30] age group. Which could have both positive and negative consequence; young professionals are easy to handle, fast to understand and open to new findings but may be immature and intolerant to difficulties in service settings. Experience is also a significant point to note as more experienced team members show more interest, strong team spirit, better communication skills and problem solving ability due to working together for a longer period of time.

According to a study on collaborative drug therapy management, pharmacists had responsibility of performing patient assessments; ordering drug therapy related laboratory tests; administering drugs; and selecting, initiating, monitoring, continuing, and adjusting drug regimens (Hammond *et al.*, 2003). Despite this involvement of pharmacists in such activities in this study was quite narrow. Dispensing and counseling patients were the major roles of the pharmacists in the ART units; and the role of the pharmacists was only few leaps away from the traditional role, there was no involvement on patient cases. Nowadays pharmacists work in collaboration with patients, physicians and other health care professionals to maximize medication management and produce positive health outcomes (Pearson, 2007). Implementation of the missing practices could develop and strengthen collaborative practice in the ART settings.

One finding of the study that is of a paramount challenge is the level of satisfaction of pharmacists with their role. 54.54% of the pharmacists who were working in the ART units of the five hospitals were not satisfied. The reasons mentioned for low satisfaction in role such as lack of initiative, tiring and redundant practice, lack of training programs, minimal involvement in patient cases, stock out medications, patient load, and nonadherence of patients to their medications and frustration of patients, which partially indicate gaps in collaborative practices within the ART units. But studies have confirmed that initiatives or activities that aim to strengthen links between inter-professional collaborative practices to have resulted a better job satisfaction in health care settings (HPRN, 2008). Further, effective working communication and relation, and equitable decision making are the key points in collaborative health care (FHT, 2005). The result on working communication and relation showed that the pharmacist have a slightly better communication with the nurses than the physicians. This may be due to lack of understanding with physicians about each other's role or who can provide for the best outcome for the patients. Concerning equitable decision making, the pharmacists stated that there was one sided decision making, which could be responsible for the lack of satisfaction in the role of pharmacists and hamper patients from getting the best possible care.

Overall, pharmacists' involvement in collaborative practice with nurses and physicians was a little bit more engaging with patients as compared to the traditional role. But the level of collaboration was insufficient to give premium care to patients due

to loop holes like lack of equitable decision making, low rate of professional role satisfaction, behavioral problems, miscommunication, and lack of specific job description of pharmacists' role. Since the hub of any health care service is saving life and improving quality of life, pharmacist's collaborative involvement in ART units needs to be escalated to a better level. Efforts for interventions at national level such as full role description for pharmacists and increasing awareness of other health professionals needs to be done, utilizing different trainings on collaborative practice and conditions for working in groups.

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