

An Appraisal of Similarities and Differences between NHS HIV and Nigerian Pharmacist Management of Outpatients

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Abstract: The Nigerian government pledged to mitigate the number of people living with HIV/AIDS. Thus, clinical service has been augmented to meet this challenge; however, it has not been appropriately documented how hospital pharmacists contribute to patient Anti-Retroviral Therapy adherence.

The aim of this study was to learn from pharmacists what factors influenced their service provision and how services could be tailored to facilitate adherence.

In depth interviews were conducted and recorded by voice recorder with 10 HIV pharmacists at Maitama District Hospital in Abuja, and four HIV pharmacists working for the NHS in the UK for comparative purposes.

The pharmacists tried to provide the same type of service that was modelled on pharmaceutical care and were satisfied with the service they provided. They identified high compliance to Anti-Retroviral Therapy (ART). The Nigerian pharmacists spoke about obstacles as they had to ration ART since dispensing complete prescriptions over two months for each patient would amount to denying other patients of the ART. They lacked stable power supply, air conditioners and computer software at ART pharmacy unit. They expected the authorities to employ more pharmacists, update pharmacists training, assign them to permanent positions at ART pharmacy unit and wished for greater availability of ART.

Nigerian pharmacist roles and views on the management of HIV patients have been established and pharmacy management of HIV patients at UK NHS hospitals was explored.

Keywords: Pharmacy, Hospital, Patients, HIV/AIDS, Abuja.

I. INTRODUCTION

To combat the Nigerian HIV epidemic, the National Agency for the Control of AIDS (NACA) developed a national policy on HIV/AIDS in 2009, and was adopted by the Nigerian government, with the production of the National Strategic Plan [1]. This plan has set targets to not only curb, but feasibly reverse the spread of HIV infection and thus, resulted in an increase in the number of sites across the country providing ART programmes. Given that the success of ART relies on high levels of adherence [2] (> 90%–95%) then, it is necessary to understand hospital pharmacists perceptions and roles in the management of these patients for better adherence and the taking of medicines. Poor adherence to ART has been reported as causing virologic failure, (when ART fails to reduce a patient viral load to less than 200 copies/mL) [3, 4] drug resistance, frequent morbidity, increased health costs and ultimately, mortality [5].

In Nigeria, many cross-sectional studies have reported that stigma, poor financial status and non-availability of medicines contribute to poor levels of adherence [6-11]. Though, Onuoha et al [12] identified inadequate pharmacy human resources as a challenge to health care.

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According to Watermeyer and Penn [13], pharmacists are skilled to provide information, education and guidance on adherence to ART treatment regimens. Similarly, as described by Scott et al [14], pharmacists' roles have advanced from inpatient infectious diseases training clinical pharmacists to clinical pharmacists who received specialised training in the treatment of people living HIV/AIDS in the outpatient unit.

Effects of pharmacist contribution to HIV management include increase in clinic appointments being kept, improved quality of life [15], reduced ARV side effects [16] frequent hospital visits, more number of hospital days [17], reduced pill burden [18], and improved daily dosing frequency adherence [19]. Several research findings [16, 17, 19-21] showed pharmacist contribution was associated with significant viral load reductions and increased CD4 cells count.

To confirm the impact of pharmacist care on ART adherence in South Africa, a study by Govender et al [22] found that pharmacists' intervention had a positive impact on HIV infected patients' knowledge of the disease and ART usage and storage.

From the review of the literatures above, one can infer that there has not been any study carried out in Nigeria at the data collection period on pharmacies management of HIV patients. There is a paucity of information on how HIV patients in Nigeria receive services, how pharmacists contribute to the management of HIV patients and how this might affect their care [23-25].

II. BACKGROUND

In this study, a qualitative approach has been employed to explore pharmacist roles and perceptions that may affect patient adherence to ART and to specifically determine whether the healthcare system itself affects patient adherence; this latter aspect being of importance in the context of the Nigerian government's strategic plan to increase patient access to ART. The study employed qualitative data collection to explore how pharmacists perceived the clinical services available at a large government hospital.

Aim:

The intention of the study was to highlight roles and perception of pharmacists in the management of HIV, and to ascertain if service improvements could be made.

Ethics:

The study was approved by the Behavioural Science and Ethics Committee, University of Wolverhampton, UK and Federal Capital Territory Health Research Ethics Committee, Abuja, Nigeria.

Setting:

Maitama District Hospital (MDH) was chosen as the study site as it was one of the largest government-owned hospitals in the Maitama District in the capital city Abuja. Abuja itself was chosen on the basis that its population represents a cross section of all tribes living in Nigeria, and had a high number of patients living with HIV/AIDs [26]. For purposes of comparison, HIV/AIDS pharmacists at four NHS hospitals within the West Midlands, UK were also interviewed.

III. SAMPLING AND RECRUITMENT

This study used a purposive sampling technique to recruit hospital pharmacists who had attended to diagnosed HIV patients and a snowball technique was used to recruit UK pharmacists to the study. Pharmacists were approached by BA in the HIV pharmacy unit and through the telephone to arranged appointment. Prior to their participation in the study, all pharmacists were fully informed of the study and assurances made regarding anonymity and confidentiality. Participants had the opportunity to ask questions before giving written consent for participation in the study.

IV. DATA COLLECTION AND ANALYSIS

Data were collected through semi structured face-to-face interviews with ten Nigerian hospital pharmacists. Pharmacist's interviews took place in two tranches; the first ten Nigerian pharmacists between October and November 2009 and final four NHS between November 2010 and February 2011. Interviews were conducted in English, audio recorded and transcribed ad verbatim. All personal identifiers were removed and interview codes assigned to safeguard confidentiality.

Interview transcripts were analysed by a process of re-iterative thematic data analysis, according to the principles of grounded theory, to identify themes and concepts that could be used to characterise the interviewees' thoughts and views. These were validated for context and understanding by another member of the research team (RM). Interviews were continued until data saturation had been achieved.

Taking a gleam at the interviews for the NHS (four UK hospitals) and Nigerian pharmacists (one Nigerian hospital), some notable virtues are embedded.

V. RESULTS

1. Clinical Service Delivery:

Primarily, the pharmacists on either side of the Atlantic Ocean tried to provide the same type of service that was modelled on pharmaceutical care but routine feedback from patients on the service is gained by NHS pharmacists whereas in Nigeria, this was an aspiration.

"We counsel the patients because the whole essence of ARTs, antiretroviral therapy is to make sure that this patient is assessed and classified. So once the person is eligible for ARTs or ARV treatment, the patient is placed on it, we have to make sure the patient understands that these drugs as at today will have to be taken almost for life. Some people come and said okay what if I take this drug for one year, two years and my CD4 count comes up to 800, can I stop taking it? I heard my friend told me...we have to make them understand that there is no such thing as starting and stopping the ARVs. And these drugs are not like your normal drugs... in Nigeria people, say take one three times a day, take one in the morning whenever you remember, take one in the afternoon whenever you remember, and one in the night whenever you remember. ...but make them know that these are time dependent drugs, drugs that the administration is time dependent, mostly is 12 hourly or 24 hourly." (Male, Nigerian pharmacist 6)

"We have basic things we would with these patients that come through. Checking the drugs with patient, checking any other medicines that they are taking for interactions, checking that they are taking the right thing and err...you know. Checking that they are taking the right thing, checking that they are taking with food or without food may be necessary. Helping to advise management staff on side effects... things like that... There are other basic things that we will check with these patients that come through. As soon as they start treatment, they will all come and see the pharmacist first for a session, which is a very special clinic...start clinic. We will spend four hours going through with the patient, everything to do with antiretroviral and adherence and the different treatment options. Though you got a kind of daily clinic that run with....when patients come through to see the doctors, but then we also have our own clinics as well. Anyone that is starting treatment, we see them for four hours, it is very crucial that we put them through the right regime for them which touch on their life styles and the rest of them". (Female, NHS pharmacist 3)

2. Pharmacist Brainwaves:

From both sides of the Atlantic, there was a great feeling that they were providing a good service for their patients and both sets of pharmacists asserted that they care about what they did and derived satisfaction from seeing their patients get better.

"I think the service that we provide here... is very good. I haven't had the chance yet to go to other centres but when I met people from other centres and compare the service they offer to that we offer... the service that we offer, I think we do a lot more and we offer a lot more to our patients as well. So when I spoke to patients...I think the patients want... The key thing that stood out for them... I think is accessibility in terms of being able to get to clinic. So, for instance, if you are working from nine to five and the clinic isn't open until five, you, after returning from work can't get to clinic. We provide clinic on a Saturday morning and also on Wednesday evening, which is an extra clinic." (Male, NHS Pharmacist 2)

"The level of clinic services that are being provided to HIV patients in this hospital to my personal observation is satisfactory. The pharmacists deem it at all times to have one on one talk with the patients at all times. Apart from just handing over their drugs to them, they try to sit them down to make sure that...the pharmacists themselves ensure that these patients know the name of the medications they are taking, they know the routine, they know the dosage regime and at the same they counsel them very well on how to take the drugs. we discovered that the ratio of patients to pharmacists

are actually very high so because of that as we contain that factor we may not really have enough time to sit down with the patients to give them detail counselling and may be that part of their drugs. In the midst of that pressure, pharmacists still take time to sit their patients down and give them the necessary counselling and care". (Male, Nigerian pharmacist 2)

3. Arrangement of HIV/AIDS Clinic:

The way in which they interacted with other HCPs did vary, in that NHS pharmacists were 'closer to the doctors' and had a more integrated approach to overall healthcare of the patient rather than a separate temporary 'Silo' approach in Nigeria.

"One other thing that we have that I found out is unique with regard to HIV pharmacy service that we provide is that we are a very multidisciplinary, so that it won't just be a case that the patient sees me, and giving the prescription and I said I'm on my way. And fortunately, the bearing that I work with, I can refer a patient to a dietician, I can refer the patient to health adviser, a social worker and even clinical trial scheme. So when it comes to have you manage a typical patient... yea, a typical patient is usually quite easy for us to manage but there still other areas that we may need an input and I can direct them to get input in those areas. And likewise, other specialities can refer patients to me as well". (Male, NHS pharmacist 2)

"Here, the patients get a very good service, I think is a very integrated service that we provide, so is very much multi-disciplinary. Err...particularly in this hospital, so we very much work as a team. So, is being a patient's...is not just the doctor level service which I think is important, you know... the clinical nurse specialist, the dietician, the pharmacist, occupational therapist, the social worker as well, everyone is got their part to play in helping, you know, to successfully treat the patient. I think that is quite important ---- I think if you compare HIV services to the outpatient service and the amount of time the patient gets here within clinic compared to... you know, any other general outpatient setting. Obviously, we spend less time with the patient compared to the doctor because you might have three or four doctors in clinic but just one pharmacist." (Female, NHS, pharmacist 3)

"The working areas, there should be more space for working so that all the drugs you can just stretch your hands and get them. And the staff strength, so that they can employ more pharmacists, so that we will be able to spend quality time with the patients. As at last week, I think they finished around 7:00 pm and you know once you start getting tired, the quality of service you offered will be reduced because the enthusiasm will not be there again. You are just eager to let the patient go, so you won't have time to really talk to the patients and counsel him, we are supposed to be counselling the patients, not just give them drug, one morning one evening bye bye go, we have to counsel. So because of the staff strength, quality time is not been spent on the patients". (Female, Nigerian pharmacist 1)

"The most difficulty is staff. We don't have enough hands that is all, no enough hands and the patients are many ---- When you talk of space, it affects the hospitals generally, and is in all our hospitals, there is a space constraint, you just manage what we have, that is all." (Female, Nigerian pharmacist 5)

Pharmacists in the UK enjoyed greater resource to provide services such as medicines and greater number of clinic days.

"In terms of pharmacists' involvement, we currently have six clinics a week, potential seven clinics a week, Monday to Friday there is a clinic, Friday is a double clinic, morning and afternoon. There is adherence clinic on Wednesday afternoon and a clinic on Saturday morning. For instance if we highlight a patient who needs a lot of our time and we can't schedule to see during the routine clinic, we can get them in on a Wednesday afternoon if they turn up. So that is how it works, I will definitely have six clinics a week, potentially seven depending on what is done on a Wednesday. Scheduling is done via our appointment system. I can look to say that one is being on medication for a while I see him frequently, no problem. If the patients are only to see me, then we can give them a set time, ordinarily, a lot of our patients understand that we have clinics running. The approach that I have with my patients is that I'm honest with them and they know if I can't see them". (Male, NHS pharmacist 2)

"With our national antiretroviral treatment and with the numerous patients we have got to have suppressed viral loads, which are the aim.... of antiviral therapy. And because we have got a lot of quite different regime available, we can always find the regime. We do get some patients who present late, so we take the patient to the consultant..." (Male, NHS pharmacist 1)

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“Manpower...enough equipment to sort it...adequate space, also we need enough drugs, adequate availability of the drugs, it will even help them if we have...patients that are already stabilised, if we can provide for them three months course of therapy, it will now reduce... the time patient comes to the hospital. By the time, you give these patients one month course of therapy, another one month, they are already back again. So that is it, if there is enough drug to space them into three... three months” (Male, Nigerian pharmacist 4)

“Human resources and....we need better working environment...for instance when ARV program started here, we have fewer patients but it is really growing ahead...still growing do you understand. This place that has just four small rooms, a times we will have 160 patients out there, even if we have enough hands, we don't have enough platform to work on, so facilities are really needed... air conditioners... a times don't blow cold as well, facilities are going down, we need expansion as well”. (Male, Nigerian pharmacist 6)

4. Social Issues:

Stigmatisation surrounding the diagnosis of HIV was something expressed in both the UK and Nigeria and one which impacted on service delivery. In Nigeria, this was more acute and made worse by repeat visits to the hospital to access services leading to greater opportunity for others to guess the patients reasons for visiting the hospital. Although, disclosure of status was something that UK HIV patients feared, the social impact with regard to financial security was of less importance given the UK state benefit system as opposed to Nigeria where knowledge of HIV status could lead to job loss and financial insecurity, although, the Nigerian Senate passed HIV/AIDS anti-discrimination bill into law in the year 2014 [27].

The level of discrimination in Nigeria also appears to have a greater impact on HIV patients. It is not untypical for social exclusion from family, friends and the wider community – something rarely obvious in the UK.

“Because of this stigma that is attached to HIV, A lot of them do not still come out openly to take their drugs, they tend to take their drugs in secret, they...do not embrace their drugs the way em...they embrace other drugs, okay I want to buy artesunate and you give them, you buy your artesunate and take it, you discover that they hid these drugs, before they could even leave the premises you see them removing the drugs from their packs and throwing the packs away. So they always try to hide the drugs and by so doing they tend not to know the drugs. They don't know the names of the drugs they are taking and at the same time in the process of doing that you discover that they are mixing the drugs. if they are suppose to take once a day, they will end up taking it twice a day” (Male, Nigerian pharmacist 2).

“Most of the time, when, we are counselling them, they tell us their ordeal and you feel sorry for them. When you even give them the drugs, they are somewhat, ashamed to carry the drugs about, so you see them even before leaving the hospital premises. They remove the drugs, remove the label and everything so that people won't be able to identify what they are holding or when it is time for them to take, people will not know. Some will even open the drugs, poured it inside dispensing envelope just to keep the identity of the drugs because they believe the environment will stigmatise them” (Female, Nigerian Pharmacist 5)

“It also depends on the circumstances... depends on the lady or the circumstances, women that ...may be probably before they got married they did not... you know may be the duration of their marriage is not so long... these kinds of ladies...women might not necessarily want their husbands to know especially if they met their husbands not as virgins and all that probably that is one of the reasons. And again is a man's world, most of the times when a woman tells her husband that she has. She is positive, the man will now pushed it back to the woman that is she that brought it into the family and is not them, meanwhile they themselves will not even go for test to even find out if they are positive or not. A lot of them have been thrown out of their marriages and told to go back into their home town or divorced because of it that is why they are finding it difficult. For the men, very few anyway, but some have not disclosed yet” (Female, Nigerian pharmacist 7)

5. Obstacles:

Patients not attending scheduled appointments were seen in both Nigeria and the UK and in both settings, mechanisms were in place to try and ‘track’ these patients.

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“Abscondment... non-attendance of clinic by registered patients... not turning up for their appointments while staff wait patiently for them. Em...we do have papers to stroke with the files but we take care of the patients who are coming. We sort of made time available to speak with the patients as far as we can go. So I think...I do not see anything wrong with the service.” (Male, pharmacist 1)

“They visit them at home to find out especially the bad cases. To find out how they are feeling because... in case there is death or whatever that they couldn't come after sometimes, we don't see them in the clinic, to know whether the patient is still alive or not. And if she or he... why did she not come for her medication, and if it is transport money, they try and provide to transport the patient to the hospital”. (Female, Nigerian pharmacist 5)

The issue of ‘not enough time’ was again common to both settings; however, the context of this time was different. In Nigeria, it was the overwhelming numbers which made basic delivery of pharmaceutical care difficult whereas in the UK, it was more to do with not being able to provide additional services above and beyond what was expected and managing a high patient expectation. Whilst the expectation in Nigeria from the patient was low – being seen and getting enough free medicine appeared to be key.

“Is the time, you know we have between 12 to 20 patients per clinic, which means we only have 20 to 40 minutes per person. If the nurse is going to do the bloods, the biochemistry, high blood pressure, doctor is going to see them, they may want to see the health adviser, then they gonna see me. And sometimes, they have to wait for me because I'm with someone else and that may take longer than 10 or 15 minutes because there is issues or concerns. So the patient is kept waiting and when I go to them they have been waiting for an hour before they see me because they come for their appointment 10 minutes earlier....So the difficulty is managing time and the resources to do that. They can be impatient; you know...I have been waiting for 20 minutes for you just to clear my medications...I have no issues. Or yes, I have a lot of issues but I parked my car outside with a parking ticket for one hour.” (Male, pharmacist 4)

6. Expectations:

Nigerian pharmacists requirements for improvement were basic – more staff, better facilities and reliable power supply. Whilst NHS pharmacists in contrast were looking forward to provide further services to patients and create a higher profile role for themselves, e.g. prescribing.

Space number one, Inadequate staffing and from time to time, occasionally we have out of stock especially children em... medications related to ...for instance zidovudine syrup that we give to....as prophylactic for newly born to HIV positive mothers, that is our Prevention of Mother to child transmission (PMTCT) programme. Sometimes we have out of stock on those drugs. (Male, Nigerian pharmacist 3)

Manpower, enough equipment...enough equipment to sort it...enough spacing, adequate space, also we need enough drugs, adequate availability of the drugs, it will even help them if we have...patients that are already stabilised, if we can provide for them three three months course of therapy, it will now reduced the... time the patient comes to the hospital. By the time, you give these patients one month course of therapy, another one month, they are already back again. So that is it, if there is enough drug to space them into three months, except those of them who come down with complications, we normally tell them if they come down with complications, they should come to the hospital, most of them they don't joke with it, they always come”. (Male, Nigerian pharmacist 4)

VI. DISCUSSION

This study, as seen in other Nigerian and African studies, identified shortage of staff, poor working environment, stigma, and unavailability (lack of) of ART medicines contributed to pharmacists' workload as they attended to patients at ART pharmacy.

Dispensing sufficient ART was a major Nigerian pharmacists concern and appeared to stem from how the hospital coped with the high patient numbers seen on clinic days. This resulted in the pharmacy rationing ART to invariably one month's supply instead of the desired three months. This necessitated patients to return monthly to the pharmacy. These extra visits exerted more pressure on the pharmacists as well as the patients if they had not disclosed their status (which most had not), a fear that their status would become known, increasing patient anxiety regarding threat of job loss and resultant

financial uncertainty. Through shadowing of patients, it was observed that the management of ART supply and demand was disorganised; for example patients on clinic days were seen at the same time as returning patients who had come for re-supply of ART, with pharmacy staff having little idea of the number of patients attending on any given clinic day. This saw pharmacy staff defaulting to give a maximum of one month's supply to ensure that all patients received something. Whilst this ensured that patients could have a continuous, yet limited supply of ART, it did not optimise stock control. A way to combat this and ensure patients received the most appropriate quantity of ART, would be to communicate clinic patient lists to the pharmacy prior to the clinic so that demand and supply could be better managed. If this was adopted then it might be possible to reduce the number of return visits to the hospital for patients.

The patient journey on clinic day was long and subject to delay. These delays again required people to be at the hospital longer than intended, or agreed with by employers, and frustrated patients. Two 'pinch points' were identified through patient shadowing that could alleviate delay. Firstly, the system of appointment booking required all patients to report to the clinic at the same time. Given the numbers of patients seen on clinic days, then a staggered reporting time seems sensible. Second was the long waiting time at the pharmacy (the source of greatest delay) and was due to the flow of medical records from doctors. Current practice was to have medical records moved solely by administrative staff, but this only occurred when sufficient records required collecting. Obviously, this led to delay in patients receiving ART. If medical records were given to the patient, pharmacy staff would receive records sequentially and thus prevent the long waiting times for patients.

VII. CONCLUSION

Nigerian pharmacist roles and views on the management of HIV patients at MDH have been established. In addition, pharmacy management of HIV patients at UK NHS hospitals was explored. Although this study has been exploratory in nature, it has contributed substantial new knowledge into an under researched area such as contribution of pharmacy in the management of HIV and opened the door for further exciting research in this domain. Also, this is the first study to explore pharmacists' views on HIV management in Nigeria and then, compared those views to NHS pharmacists' views on HIV management. Consequently, some similarities and differences have been pointed out during the course of the interviews on both sides of the Atlantic.

Whilst most findings obtained in this study are consistent with the literature, certain factors such as; shortage of staff, ART shortage, delays, inadequate accommodation, few clinic days and stigma that impinge on the quality of clinical services provided for patients in Nigeria have been identified. The major themes identified through interviews that appeared to influence adherence include counselling, satisfactory services, high compliance, few staff, ART shortage and stigma. Consequently, suggestions on how pharmacy can contribute to improve the service provision for HIV patients at MDH have been made and implementations of these suggestions could improve the patients' experiences at MDH.

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Conflict of interest:

The authors declare that there is no conflict of interest.

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