



GHAIN SUPPORT TO HIV-RELATED PHARMACEUTICAL SERVICES IN NIGERIA

END OF PROJECT MONOGRAPH

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INTRODUCTION

In late 2001, the Government of Nigeria (GON) commenced the national HIV/AIDS treatment program in 25 tertiary facilities and in 2002 initiated the Prevention of Mother to Child Transmission (PMTCT) program in 11 tertiary facilities.

Only a few of the estimated 3.5 million people living with HIV/AIDS in Nigeria had access to antiretroviral therapy (FMOH, 2003). They accessed treatment at private hospitals or procured their medication from community pharmacies that stocked them. However, the provision of pharmaceutical care, even at the tertiary facilities with its full complement of skilled and competent staff was still at a rudimentary stage. In most hospitals, pharmacists routinely had no access to patient clinical information other than the prescription sheet for the day and all prescriptions were filled through the window system of dispensing with no opportunity for audiovisual privacy nor attempt to track the patient's medication profile,



Figure 1 Pharmacy showing traditional window system

provide medication adherence counseling, screen or monitor for adherence or adverse drug reactions, early warning signs of treatment failure and drug resistance. Pharmacy practice remained focused on the traditional role of drug inventory management and supply for the maintenance of a drug revolving fund even though many were aware of the changing role of the clinical pharmacist globally and the emphasis on patient centered pharmaceutical care for chronic diseases like HIV (Patrick E, 2003).

Based on this background the pharmacy services component of the GHAIN project was proposed and led by Howard University through its Pharmacists and Continuing Education (HU-PACE) Centre. HU-PACE mandate in GHAIN was to strengthen pharmacy systems and services at health facilities and in the community by expanding pharmacists' capacity to provide pharmaceutical care for those infected with HIV/AIDS, STI, and TB; and their families and by ensuring quality of care in target states in Nigeria. GHAIN commenced comprehensive HIV services at secondary facilities in Nigeria in order to increase access to treatment. Baseline assessment indicated that most facilities had inadequate pharmacy personnel and did not have the skills and competencies to manage clients on HIV treatment. While a constant supply of drugs could be obtained with an effective supply

chain management system, optimum therapeutic outcomes for HIV clients initiated on therapy could only be assured by the responsible provision of patient focused pharmaceutical services.

In providing pharmaceutical care, pharmacy personnel needed to possess the requisite skills and information to provide patient counseling, dispensing, monitoring for adherence to treatment regimens, monitoring and preventing medication errors, preventing and managing adverse drug reactions, monitoring therapeutic effectiveness and investigating reasons for treatment failure if necessary (PCN, & WHO, 2006).



Figure 2 One-to-one interaction with the pharmacist

GHAIN'S PHARMACY BEST PRACTICE STRATEGY

The GHAIN approach led by HU-PACE was to build on initial work done in 2001 with the Pharmaceutical Society of Nigeria (during the Anglophone West Africa Pharmacists - AWAP project) and continuing this collaboration to:

- enhance the use of the pharmacy as a resource centre for prevention, treatment, care and support activities for HIV/AIDS
- advance the skills of pharmacists and pharmacy personnel in public and private sector to reduce incidence of HIV/AIDS
- mobilize public and private pharmacies to expand their involvement through improved referrals to HIV care and treatment sites, HIV prevention education, community education on OI, TB and ARV therapy, and adherence education for HIV infected clients

HU-PACE strategies for achieving its objectives involved sensitization and mobilization of key persons in the Pharmaceutical Society of Nigeria (PSN), the Pharmacists Council of Nigeria (PCN), the National Institute for Pharmaceutical Research and Development (NIPRD), the National Agency for Food and Drug Control (NAFDAC) and the Food & Drugs Division of Federal Ministry of Health through a launch of the pharmacy component of GHAIN.

Activities Description

A baseline assessment of the pharmacy systems and services was conducted across target states to identify site specific gaps. Some of the gaps included inadequate pharmacy personnel, and lack/inadequate skills and competencies to manage clients on HIV



Figure 3: Picture showing centralized didactic training (group case studies)

treatment in most facilities. The patient counseling and dispensing area had no audio-visual privacy for clients and the duration of interpersonal interaction between pharmacist and clients in most facilities were <3 minutes and mainly through a window. Evidence of patient-focused care, monitoring of drug therapy problems including adverse drug reactions, medication errors, medication adherence and the interventions were not existent in most facilities. The storage conditions for the drugs and the security of drug stores were poor in most facilities.

Measures taken to address these gaps included the provision of standards for infrastructural upgrade of the pharmacy environment such as the renovations of counselling rooms to guarantee audio-visual privacy; provision of standards for appropriate drug storage which included lockable cupboards, shelves and pallets, refrigerators, wall and fridge thermometers and functional air conditioning. Other measures included the development of a curriculum and modules for a training of pharmacists and lower cadre pharmacy personnel as needed; development and provision of required job aids and tools, and conduct of centralized didactic trainings prior to the activation of facilities for service provision.

A follow-up onsite skill enhancement to ensure application of knowledge and skills in service provision and accurate documentation was conducted at the inception of HIV comprehensive services through a hands-on training of the pharmacy staff on selected elements of pharmacy best practices using Pharmacy State Coordinators who are recognized leaders in the Nigerian pharmacy community. This role was later transitioned to State Directors of Pharmaceutical Services (DPS) who are responsible for maintaining the standards of pharmacy practice in Nigeria. Training modules developed for pharmacists included all



Figure 4: Consultant Pharmacist G. O. Obiaga providing onsite training on Pharmacy Best Practices to pharmacists in one of the sites in Abuja, Federal Capital Territory

components of HIV Pharmaceutical Care, Clinical Pharmacovigilance of ARV drugs, and Pharmacy Best Practices elements focusing on Dispensing, Patient Counselling, Refilling, Patient Adherence, Referral process, Education programs, Interaction with Other Health Team Members, Data Production and Collection and Control of Drugs. In addition, a level adjusted curriculum focusing on Drug Dispensing and Documentation for HIV/AIDS services was developed for lower cadre pharmacy and support personnel within primary, secondary and tertiary level of care. Tools developed for documentation of pharmaceutical care services and for drug inventory control included daily registers, monthly work books, and monthly summary forms, pharmacy appointment diaries, and patient status registers while job aids like dispensing trays, auxiliary medication labels with label key charts, key to grading adverse drug reactions, plain medication labels, pharmacy jackets, and pharmacists' tags were also provided.

Continuous quality improvement was ensured by Monitoring and Evaluation Pharmacists through routine monitoring using pharmacy practice log, service quality assessment and periodic data verification and collation in the pharmacy. In addition, GHAIN initiated

periodic performance review and feedback meetings of stakeholders led by State DPS, to jointly address quality related issues. Quality improvement measures were implemented throughout the life of the project and included retraining, as appropriate, to provide updates and share new concepts, providing support to initiate or strengthen existing Medicine and Therapeutic committees and ARVs Pharmacovigilance sub-committees within the hospitals.



Figure 5: Some resource materials and job aids provided for onsite use

HU-PACE approach for strengthening community pharmacies, being private sector entities, differed from hospital pharmacies. The activities included an initial sensitization of members of the Association of Community Pharmacists of Nigeria (ACPN) in target states, a joint baseline assessment with ACPN focal persons, selection of participating community pharmacies based on set criteria, and a 6-month skill certification process involving series of skill enhancement workshops for participating pharmacists. The workshops covered

HIV Pharmaceutical Care, Pharmacy Best Practices, HIV palliative care, management of opportunistic infections and referrals. There was periodic monitoring and mentoring by focal pharmacists. Each community pharmacist who went through the skill certification process was linked to GHAIN supported hospitals and other HIV service providers through a referral focal community pharmacist within their cluster and was supported with documentation tools and job aids to provide a continuum of care to HIV infected clients and their families within that community. Periodic peer review meetings led by the State DPS were used to address performance related issues.

To overcome the acute shortage of pharmacists at the project pharmacies amidst increasing patient load and associated documentation, GHAIN in 2007 conceptualised and set up the HU-PACE Pharmacists Volunteer Scheme (HPVS). The HPVS provides trained volunteer hospital and community pharmacists as added resource to support hospitals with high patient load to provide HIV related pharmaceutical services at their convenience while serving as a pool of skilled pharmacists who can provide HIV pharmaceutical care at their primary places of practice.

Sustainability strategies included the training of all state Directors of Pharmaceutical Services in Pharmaceutical care in HIV/AIDS and Pharmacy Best Practice elements and their involvement in the installation of pharmacy best practices, in joint supervisory visits

with project personnel and receipt of regular feedback from pharmacy services monthly report that included pharmaceutical care data generated from all supported facilities in their states. Consequently, some state government through the Directors of Pharmaceutical Services are requesting that the pharmaceutical care skills and competencies of pharmacy staff in both supported and non-supported health facilities be further enhanced to include other diseases like diabetes, hypertension and TB. The project also collaborated with the Pharmacist Council of Nigeria to incorporate project training modules into the curriculum for mandatory continuing professional development for pharmacists in Nigeria. In collaboration with NAFDAC and the National Drug Safety Advisory Committee, resource materials on Clinical Pharmacovigilance of ARV drugs have been developed and disseminated.

PROGRAM ACHIEVEMENTS

GHAIN through HU-PACE has trained and retrained 7563 of various categories of pharmacy personnel including pharmacists and pharmacy technicians over the life of the project (Table 1, Figures 3&4). HU-PACE has successfully installed the practice of pharmaceutical care for HIV infected clients accessing services within pharmacies in primary, secondary and tertiary health facilities with appropriate documentation of services provided (Figures 6 – 10). HU-PACE trained hospital pharmacists, volunteer pharmacists and pharmacy support personnel have provided clinical pharmaceutical services to 165,975 HIV infected clients (including 9,499 children) receiving antiretroviral treatment (ART) of which majority are currently retained on therapy. Pharmaceutical care has also been provided to 37,886 HIV infected pregnant women receiving ARV prophylaxis for PMTCT; 2,857 clients receiving occupational and non occupational post exposure ARV prophylaxis; 495,565 clients receiving drugs and other clinical care for management of opportunistic infections; and 159,401 clients receiving co-trimoxazole prophylaxis with the quality of pharmaceutical care provided to HIV clients improving through the years.

Increased access to high quality pharmacy based prevention, care and support services in community pharmacies that ensure a continuum of care for HIV infected clients and affected individuals has been achieved through expansion of community pharmacist's capacity and their engagement in the care and support of HIV infected clients and their families in their community and in primary health care centres (Figures 8 - 10). Collaboration with the PCN led to the inclusion of the GHAIN training modules for Mandatory Continuous Pharmacy Development in Nigeria which should improve sustainability of the intervention taken. Furthermore, routine adverse drug reaction screening for clients on ARV drugs and its reporting to NAFDAC has become institutionalised in many sites across the country. Some of the tools, job aids and other resource materials developed, produced and disseminated, include Best Practice Guide for Project Pharmacies in Health Facilities, Skills Certification Manual for Community Pharmacists on HIV/AIDS, STIs, and OIs, Participant's Manual for Pharmacovigilance for Antiretroviral Drugs Training for Health Care Professionals, Participant's Manual for Pharmaceutical Care in HIV/AIDS Training for Hospital Pharmacists, Medication Dispensing Process poster, Quick Reference Guide on Drugs for HIV/AIDS Management, IEC materials for HIV Prevention in community pharmacies and standard operating procedures (SOPS) for project pharmacies. Figures 6 - 10 are illustrations of Pharmaceutical Care Services provided and documented in both hospital and community pharmacies to people living with HIV /AIDS by pharmacists trained by the project.

HEALTH WORKFORCE CAPACITY DEVELOPMENT	NUMBER TRAINED
Pharmaceutical Care in HIV/AIDS Training for Hospital Pharmacists	488
Pharmaceutical Care in HIV/AIDS retraining for Hospital Pharmacists	182
Pharmaceutical Care in HIV/AIDS Training for Hospital Volunteer Pharmacists	117
Onsite Pharmacy Best Practice Training for Hospital Pharmacy Personnel	2697
Onsite Pharmacy Best Practice retraining for Hospital Pharmacy Personnel	2509
ARV Dispensing and Documentation for Hospital Pharmacy Lower Cadre Personnel	107
ART Clinical Pharmacovigilance Training for Hospital Healthcare Workers	169
Medication Adherence Counseling and SOP Training for staff in PMTCT stand alone sites	277
ARV Dispensing and Documentation Training for Pharmacy Technicians, CHEWS and CHOs in HAST PHCs	133
ARV Dispensing and Documentation retraining for Pharmacy Technicians, CHEWS and CHOs	82
Onsite Pharmacy Best Practice Training for PHCs' dispensary staff (Pharmacy Technicians, CHEWs and CHOs) in HAST PHCs (level-adjusted)	
Pharmaceutical Care in HIV/AIDS Trainings for Community Pharmacists in HAST LGAs	139
Community Pharmacists starting the Skills Certification Training on HIV/AIDS, OIs, STIs, Palliative Care and Referrals	194
Community Pharmacists completing the Skills Certification Training on HIV/AIDS, OIs, STIs, Palliative Care and Referrals	173
Community Pharmacists Retraining on HIV/AIDS, OIs, STIs, Palliative Care and Referrals	142
PMTCT Supervision Training for Community Pharmacists	12
Facility Logistics Training for Hospital Pharmacists	229

Table 1: Health Workforce Capacity Development by HU-PACE

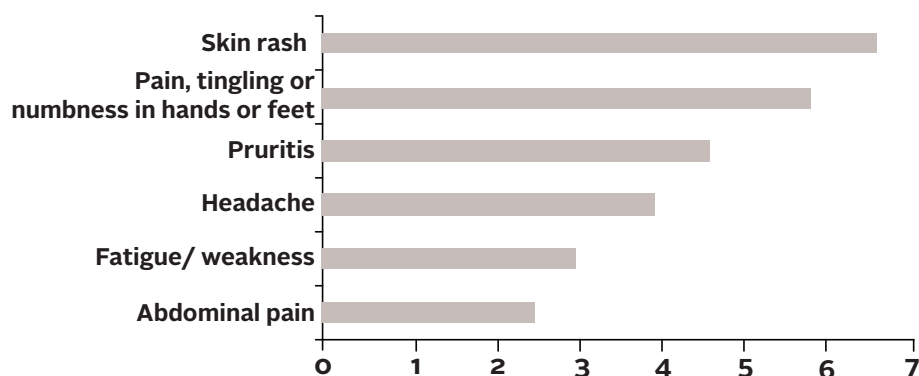


Figure 6: Common ADR documented by hospital pharmacist (March 2010 - April 2011) n = 4480

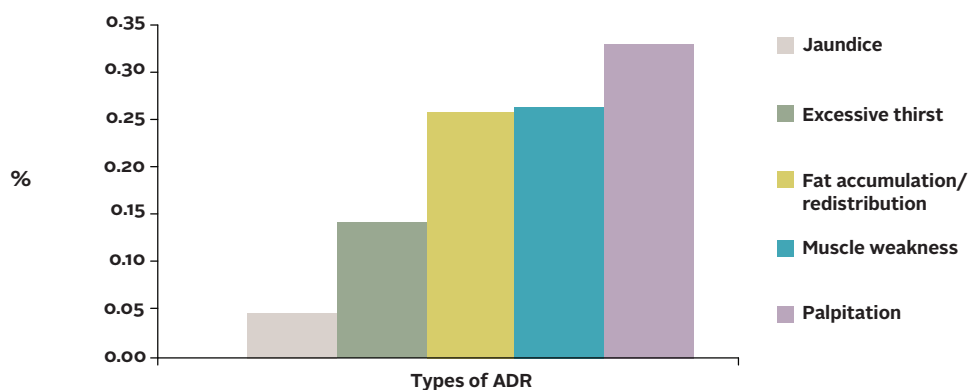


Figure 7: Less frequent ADR documented by hospital pharmacists (March 2010 - April 2011) n= 4480

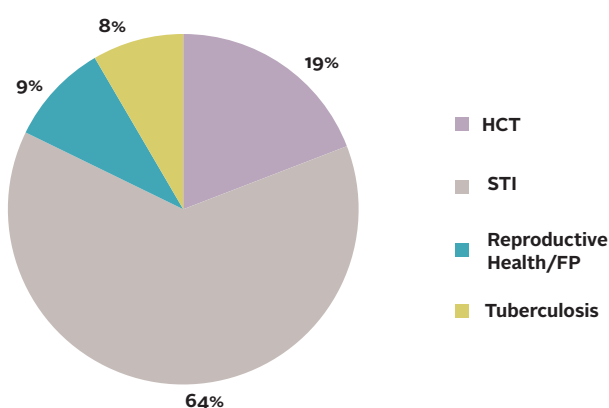


Figure 8: Some service referrals to GHAIN supported sites from community pharmacies (Jan 2008 - April 2011)

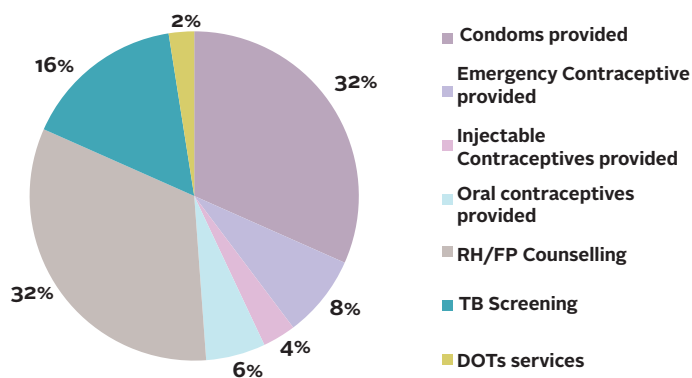


Figure 9: Frequency distribution of community based services (Jan 2008-April 2011)

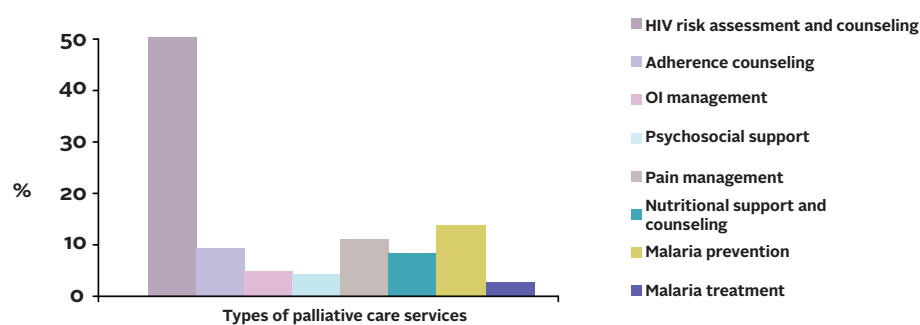


Figure 10: Frequency distribution of community based palliative care services (Jan 2008-April 2011)

DISCUSSION

GHAIN project expanded access to 165,975 HIV infected clients (including 9,499 children) receiving antiretroviral therapy (ART) in 124 comprehensive ART sites and 37,886 HIV infected pregnant women receiving ARV prophylaxis in 185 PMTCT facilities comprising primary, secondary and tertiary facilities spread over all states of Nigeria compared to a few facilities in the 2001 and 2002. HU-PACE has provided technical support to provide pharmaceutical care and services to thousands of HIV-infected ART clients and pregnant women. HU-PACE has also expanded the involvement of private sector pharmacists to provide HIV related services in public primary health care facilities and in the community.

The involvement of pharmacists and pharmacies in HIV related prevention, treatment care and support services to provide required patient centered pharmaceutical care services including the prevention and management of all drug therapy problems for successful HIV treatment outcome was non-existent before the GHAIN program. Previous public health programs in Nigeria did not and still do not see the role of pharmacists beyond the pharmaceutical management of drugs for accountability and the maintenance of an efficient supply chain and storage system for drugs and other commodities. However with the interventions of the GHAIN program this has become the norm with stakeholders requesting that the skills and competencies be further enhanced to include other diseases like diabetes, hypertension and TB. Strategies adopted by HU-PACE, based on previous work with the Pharmaceutical Society of Nigeria in addition to increased awareness of the emerging changes in clinical pharmacy practice contributed to the ready acceptance within the hospital personnel. The facility pharmacists at the supported sites are well trained and this is reflected in the quality of services provided to HIV clients. Beyond drug inventory control and accountability, the quality of pharmaceutical services have improved tremendously in all the hospitals supported by GHAIN with most pharmacists providing a more personalised medication related counselling service and health promotion information to clients during and in between clinic visits.

One of the recurrent challenges in the project implementation was the paucity of pharmacists in many secondary hospitals and the complete lack of pharmacy personnel including technicians in primary health centres. Mitigating these challenges through a pharmacist volunteer scheme, HPVS, was instrumental to the maintenance of the provision of pharmaceutical care at many primary, secondary and tertiary facilities. In Cross River State, a public private partnership evolved with community pharmacists providing

professional services at hospitals without resident pharmacists and at some primary health care centres based on an MOU under the State universal access program.

In addition, the facility upgrades that encouraged audiovisual privacy and facilitated confidentiality by phasing out of the Window Dispensing System for a more friendly counselling environment as well as the accessibility of patients treatment folders with full clinical information including laboratory parameters to the pharmacists in the out patient pharmacy, along with job aids, tools and other resources provided them the opportunity for patient medication monitoring and counselling to prevent potential drug related problems and improve patient therapeutic outcome in conjunction with other health care team members.

Other challenges faced was increased work load and associated documentation for trained pharmacists as more clients were enrolled on therapy, and frequent transfer of trained staff. This problem can only be resolved with GON through increased pre-service training, increased employment of appropriate personnel as well as the strategic posting of skilled and competent pharmacy personnel who can provide the required professional and qualitative services to HIV clients who are on therapy. The human resource issues can also be addressed through a decentralization of ART services at the facility from a designated point of service in the outpatient clinic to the general outpatient department in the hospital and the development of the skills and competencies of all relevant personnel in the facility. Decentralization of ARV refill to community pharmacies with a defined system of reimbursement will also contribute to the sustainability of services. As part of its sustainability strategies, the project trained all the state Directors of Pharmaceutical Services (DPS) in pharmaceutical care in HIV/AIDS and pharmacy best practice and has involved them in joint supervisory visits to the sites. A copy of pharmacy services monthly report from all the supported facilities in the state is sent to the DPS who leads the periodic peer review meetings and supervises the performance feedback of the entire state.

CONCLUSION

HU-PACE has contributed in diverse ways to achieving the GHAIN overall project goals of increasing access and demand for HIV/AIDS and TB services and interventions especially among PLHIV and increasing access to quality HIV/AIDS and TB services and interventions in Nigeria. HU-PACE has also created an enabling environment in the pharmacy sector for HIV/AIDS and TB services and interventions through continuous advocacy and strong collaborations with relevant stakeholders including support for building the national monitoring and evaluation systems through the pharmacy.

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