Ensuring access to psychotropic medication in sub-Saharan Africa

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Abstract
In this review article, the issues related to provision of psychotropic drugs in services in sub-Saharan Africa are explored. Problems encountered in procurement of drugs, their safe prescription and practical supply systems are discussed, with possible solutions suggested. The evidence-base for the preferential use of first-generation drugs is presented, with the practical implications for cost-effective service delivery shown. Options for sourcing of quality drugs are outlined with practical examples. An argument is made for a wider range of medical personnel to be allowed to prescribe than is often currently the case. This is so as to allow for the scale up of community based psychiatric services which will otherwise fail to meet the needs of the majority of persons with mental illnesses, particularly in rural communities. Drug Revolving Funds are proposed as a means of managing supplies by local projects in a context of a lack of an alternative supply. Some suggestions are made for practical solutions to the problem of those cannot afford even cheaper medications.

Key Words: Africa; Medication Systems; Community Pharmacy Services; Legislation; Drug

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Introduction

One of the biggest challenges to providing services for the mentally ill using community services in sub-Saharan Africa, is that of ensuring a regular, adequate supply of appropriate, safe, and affordable medication. Drugs are an important component of the holistic range of treatment options for those suffering from mental illnesses and epilepsy. Without drugs, services would be very limited, and would not be able to provide an adequate and comprehensive response to need. This is particularly the case for those with severe and enduring disorders like schizophrenia, depression and epilepsy.

This review is based on experience of working in Nigeria, but aims to refer to evidence of practice in other parts of sub-Saharan Africa. Relevant articles were found by searching Medline and PsycINFO databases online using (and combining) the terms 'Africa', 'medication', 'nurse prescribing', and 'health systems'. Articles were then chosen by relevance to the subject of the review.

While many services in high-income countries now use newer drugs, there is strong evidence to show that in the treatment of psychosis and depression, older drugs are often at least as effective as the new, more expensive, varieties.[1] Due to the lack of a market, many newer drugs are not available in low and middle income countries, where it is not cost-effective for the pharmaceutical companies to licence them. Prozac, despite its huge success was not marketed in Nigeria until 2004, 20 years after it was originally launched in Europe, and at a very high price despite generic fluoxetine now being available. In addition to the issues related to prescribed medication in general, psychotropic drugs present particular challenges. Many of the drugs are the subject of greater levels of control due to their potential for abuse (eg benzodiazepines, benzhexol). Anecdotally, in Nigeria for example, even psychotropic drugs with no abuse potential are difficult to licence and market. Pharmacists in Nigeria will often not display psychotropic drugs for fear of police harassment even if they are appropriately licensed.

In this review of the issues, the aim is to explore some of the problems associated with providing medication in services in sub-Saharan Africa, and to suggest some possible solutions.

Quality of drugs

In Nigeria, it is estimated that roughly 50% of all drugs on sale are fake or sub-standard.[2] This is particularly high for certain products such as anti-malarial drugs and common over-the-counter products such as paracetamol. The National Agency for Food and Drug Administration and Control (NAFDAC) was founded in 2001 and has a high profile, matched by some success in prosecuting those involved in the trade. Despite this, the challenges involved in sourcing original, reliable drugs remain huge. China and India are the main exporters of drugs to Africa. While NAFDAC has had some success in monitoring drug manufacture in India, there have been complaints of a lack of co-

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operation from Chinese authorities.[3] The trade between Africa and China is increasing rapidly, but recent scandals involving poor quality of Chinese food and drugs have highlighted the difficulty in regulating these markets. Many countries in Africa share this problem of substandard drugs being widely distributed, even if not to the levels in Nigeria. The lack of availability of equipment and systems for testing drug quality makes monitoring difficult.

Costs of drugs

There is a huge disparity in costs of newer and older drugs. For example; Aripiprazole (a new-generation anti-psychotic drug, now first-line in the UK), costs $200 for one month's supply at the lowest dose compared to a cost of $1 for generic chlorpromazine.[4,5] This means that when cost-effectiveness studies are carried out, services based on the older drugs allow for much more attractive cost-per-Disability Adjusted Life Year (DALY) gain comparisons. A large study in Nigeria found that a community service using newer anti-psychotics cost 27 times as much per year as an identical service using older anti-psychotics per patient treated ($2,387 vs $88 in 2000).[6] Given that in most of Africa, direct out-of-pocket payment by patients is required for medical services, this can mean the difference between receiving care or not. In the few notable exception, for example the National Health Insurance Scheme in Ghana where psychotropic drugs are supposed to be free, availability is very limited.

Sourcing of drugs

There are a variety of routes for acquiring drugs. Government services will usually be able to access drugs through formal channels, or have a pharmacy department experienced in procurement. Smaller projects or hospitals may have to rely on less regular routes.

The easiest way to procure drugs is the private market, where the dealer does the hard work of sourcing the drugs. Drugs bought in this way may be expensive, and there is little opportunity to vet the original source. That said, it is reasonable to use the professional skills of pharmacy suppliers, with whom a long-term relationship of positive experience can form the basis of trust. At the other extreme, it is possible to import drugs directly from agencies in the West (where it is estimated that less than 1% of drugs are fake), particularly those specialising in supply to the developing world, for example International Dispensary Association, IDA.[7] This is a possibility for large orders, but in many cases, the expense (and sometimes corruption) involved in importing goods makes this difficult. Delays in customs can also mean that there is a risk of drugs expiring or being spoilt by poor storage conditions. Regulations covering import of drugs often demand that importers fulfil stringent criteria to prove the authenticity of the drugs they are importing – including ingredients. This process can be prohibitive.

A source that is helpful for some non-governmental projects are agencies that specifically supply mission hospitals and charitable organisations. The Christian Health Association of Nigeria (CHAN) pharmacy imports drugs, which are then distributed to large numbers of hospitals. Other countries, notably India, Kenya and South Africa, have similar agencies. Although they can be reluctant to deal in psychotropic drugs, as the market is relatively undeveloped, their experience and distribution network can be very valuable. Many large international NGOs have experience of importing their own drugs, often using an agreed standard list. Many do not include psychotropic drugs, reflecting a lack of priority given to mental health service provision that is finally being challenged. Their inclusion on these lists may need to be lobbied for as the number of projects providing mental health services increases. Again, national law regarding drug imports can be a problem in this case, and there are good reasons to use locally available drugs if the quality and price is acceptable.

For some projects, developing relationships with local psychiatric services (mainly hospitals) is also a useful way of sourcing drugs through their pharmacy departments.

Prescribing

Given the lack of suitably qualified medical staff (general and specialist doctors), many services providing community psychiatric services need to make arrangements for other health professionals (usually specialist nurses or clinical medical officers) to perform front-line clinical duties such as prescribing drugs.[8] In order for services to scale-up to achieve the capacity to reach a high proportion of those in need, they need to make use of a variety of cadres of staff.[9] In Community-Based Rehabilitation (CBR), for example, field-workers have most contact with clients and perform most of the social work/educational input as well as co-ordinating care. Specialists are called in for particular expertise, or referrals are made to hospitals for acute medical or surgical intervention.

It is important where drugs are involved that clear boundaries are drawn around the edges of professional competencies. Clients will often be able to contact the field-worker most easily. They then need to make an assessment as to whether a specialist such as a psychiatric nurse needs to be involved, but not be tempted to over-step their roles. The problems of unqualified staff being drawn into prescribing (due to emergencies or the financial gain that can result) is well recognised and must be addressed. Methods to deal with this include good training involving clear systems with boundaries, protocols for dealing with particular situations, ensuring good communication and access to advice, monitoring of the drug revolving fund and financial scrutiny. There is some RCT evidence that training programmes can have a positive, sustained impact on standards of nurse prescribing in the African context.[10]

Laws in different countries vary, but in many, the position is either unclear, or the reality of what actually happens is far from the legal standard. In South Africa, Ghana, and some parts of East Africa, nurses and other specific, non-doctor, medical professionals are able to prescribe legally. The legal sanction to prescribe is often limited to specific defined drugs, sometimes in specific circumstances or programmes.[11] In most of Africa though, nurses prescribe in a semi-official way, even when there is no legal provision for this. For example; in Nigeria, local pharmacists ('patent medicine dealers') prescribe far more drugs than medically qualified personnel – even drugs that are officially 'prescription only' medications. The problems with this lack of proper oversight of how medications are taken is well recognised in the case of communicable diseases, for instance in the case of the emergence of resistance strains of TB and HIV. In the case of psychotropic drugs, the unpleasant and potentially dangerous side-effects pose a risk of doing more harm than good.

This legal limbo creates difficulties. The situation that has evolved in many projects is that the psychiatric nurses

prescribe where they are part of a team in a programme with adequate training and supervision. There is understandable resistance to this idea, but it is a model that is becoming more widely accepted. It would be impossible to provide mental health (and epilepsy) care otherwise in many contexts, and is a barrier to progress than must be overcome with innovative solutions.[9] A system of regular supervision is essential to maintain the quality of prescribing, and allow a regular opportunity for professional development and consultation with more experienced colleagues in difficult cases.

Managing supply networks

In areas with no adequate drugs available, one way of ensuring the quality and price of drugs available to clients is for the service to take on the supply of the drugs themselves. The Drug Revolving Fund (DRF) is a method of maintaining a supply of essential drugs in a sustainable manner. The principle is simple, with drugs sold at almost cost-price to patients, and the income used to buy a new supply. In practice, however, DRFs are very difficult to maintain, and the leakage of resources from various points in the chain means that there have been more failures than successes when schemes have been rolled out on a large scale. The Bamako Initiative was an impressive attempt (by the WHO, UNICEF and the Organisation of African Unity) at provision of a standard list of drugs on national scales, but ultimately failed in its aim to provide sustainable drug supplies to even the poorest in society.[12]

Local DRF initiatives tied to an individual project can work well though. Small seed grants and basic management training are usually adequate to start a sustainable DRF to provide this essential resource in a project. A well-managed DRF should enable the vast majority of clients to afford drugs, even if needed for many years as is the case for chronic mental illness. A typical monthly cost for maintenance treatment in Nigeria projects might be $2-3 for epilepsy or schizophrenia. Families should be encouraged to help with this cost, and a focus on vocational rehabilitation can help a client to bear these costs more easily.

It is usually necessary, however to develop a policy for the most indigent clients who cannot afford even these low costs. There are various ways of doing this, but all of them need to be accountable so that the DRF does not become run down and unsustainable. Options include having a charitable 'poor fund', or varying costs on a means-tested basis. Drugs are often an income generating stream for service-providers, but it is important that these costs are not excessive. There is a strong argument in the case of psychotropic drugs (where illnesses are often chronic, and compliance is an issue) that profit margins should be lower than for some other drugs or acute services such as operations.

Conclusion

The provision of drugs is an essential component of a community-based psychiatric service where local supplies cannot be relied upon. A well-managed, affordable supply system is an asset to a service, and may be what attracts clients to that service. High standards of prescription can be achieved by other medical cadres in the context of a lack of available doctors. A service can then enable clients with mental illnesses to obtain relief from the worst of their symptoms so as to have the best chance of reintegrating back into society.

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Summary of main points

- Drugs are essential in a comprehensive community-based mental health service.
- Well established anti-psychotic, anti-depressant, and anti-epileptic drugs are appropriate for use in the low and middle-income country context. Some newer drugs (eg atypical antipsychotics, SSRIs) are now becoming available in generic forms, making their use more cost-effective.
- There is a risk of obtaining sub-standard products in some countries so care is needed in procurement.
- Lack of human resources means that non-doctor cadres such as nurses should prescribe in countries where the law provides for this. Good training and supervision are needed to maintain high standards if this is to be done.
- Good systems of organising procurement and distribution of drugs are necessary to make affordable drugs accessible to clients.

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