CABRI Report on Public Health Budget Practices and Procedures in Africa

How African countries budget for health

CASE STUDY

Procurement of medicines and medical products: A comparative case study

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1 Introduction

Medicines and medical products typically account for 20–30% of global health spending (World Health Organization [WHO], 2010), and possibly more in low- and middle-income countries. Therefore, ensuring that drugs and medical products are procured in a cost-efficient way could save a lot of money for ministries of health and their governments. Conversely, poorly designed procurement systems can increase the costs of delivering health services or reduce the availability of appropriate medical products.

Figure 1 shows the multiple factors that affect access to medicines using a health systems perspective.

Medicine is a vital health resource that plays an integral role in the delivery of health services, which affects health outcomes. Procurement practices affect the extent to which market forces, innovation, transparency and donors' funding plans affect the price and availability of medicines. In this case study, the procurement practices of all respondent countries are briefly examined. The different procurement processes of shows the multiple factors that affect access to medicines using a health systems perspective.

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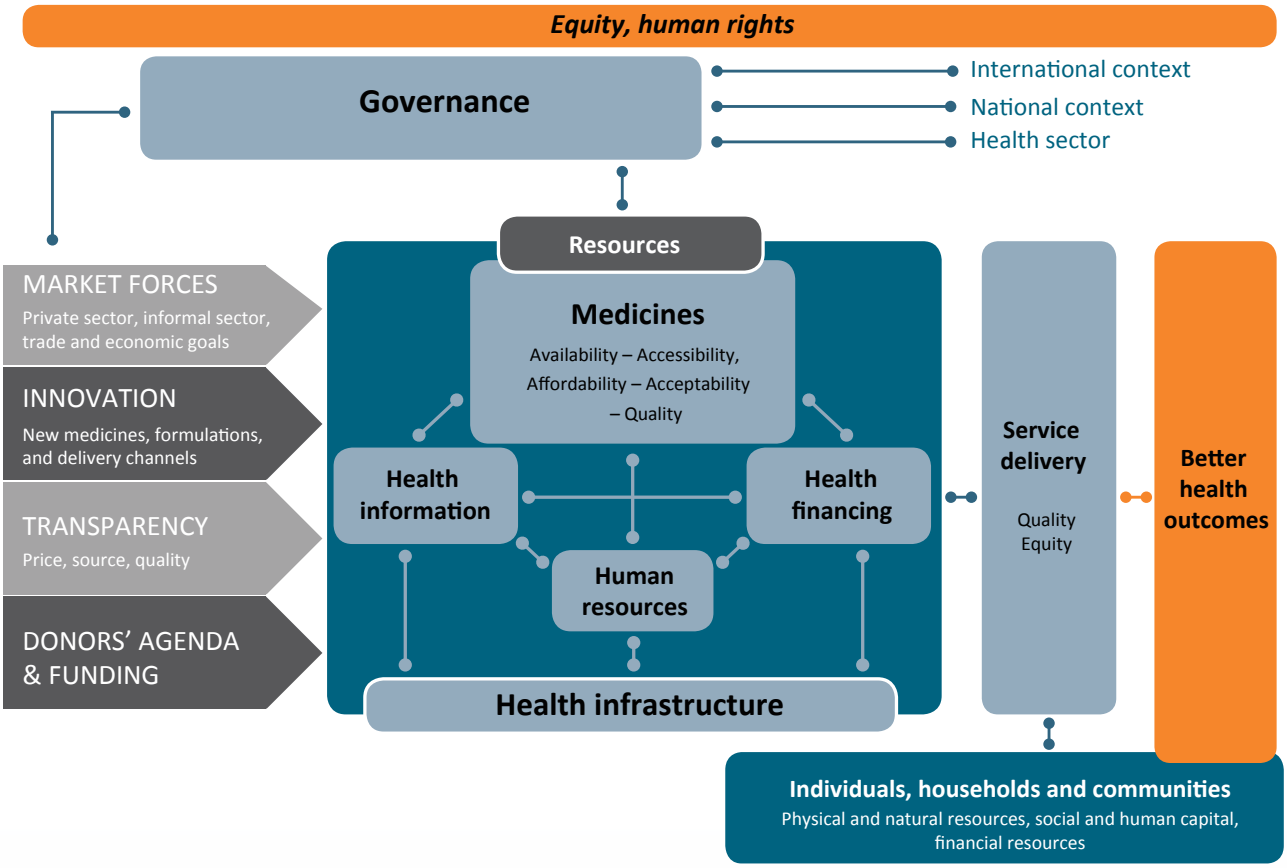
Governments generally need to balance up to four competing priorities relating to medicine procurement. These are shown in Figure 2.

These priorities may change. As recent global and regional disease outbreaks show, procurement systems need to be able to respond to large-scale epidemics such as Ebola and COVID-19. Responding to these requires the ability to provide large quantities of medicines and potentially also advanced medical equipment (such as respirators in the case of COVID-19) at very short notice and within a context of multiple disruptions. Recent epidemic events have extended the scope of what health procurement systems will need to be able to cope with going forward. It is likely that embracing newer technologies, negotiating obtainment regulations to deal with emerging challenges, and employing the necessary institutional infrastructure to facilitate pharmaceutical policy responses (Roemer-Mahler & Elbe, 2016) will be key.

Figure 1: Factors that affect access to medicines from a health systems perspective



Source: https://www.who.int/alliance-hpsr/resources

Figure 2: Balancing the different priorities in pharmaceutical procurement

Source: https://www.who.int/alliance-hpsr/resources

As recent global and regional disease outbreaks show, procurement systems need to be able to respond to large-scale epidemics such as Ebola and COVID-19

2 Roles in negotiating pharmaceutical prices

Table 1: Institutional roles in negotiating pharmaceutical prices shows the institutional structure of medicine procurement in 15 countries in Africa. Institutions taking a leading role have convening authority and discretion to make decisions. Those in a supporting role can provide assistance but do not make decisions. In seven of the 15 countries listed, the Ministry of Health takes the leading role, with support from other institutions. In Mauritius and Sierra Leone, the leading role is shared by the Ministry of Health and the Ministry of Finance, listed as CBA (central budget authority). In Côte d'Ivoire, the leading role is shared by the Ministry of Health and the Ministry of Commerce. In South Africa, the leading role is the responsibility of the Ministry of Health and the nine provincial Departments of Health. In Nigeria and The Gambia, the Ministries of Health play the leading roles, with no supporting institutions.

Central budget authorities have a supporting role in seven of 10 countries. The legislative branches have no role in five of the eight countries that responded to the question, as procuring drugs is an operational responsibility of the executive branch of government.

The implications of who plays a role in pricing are unclear, and are likely influenced by country-specific factors. However, given the multiple priorities that need to be balanced, and which affect the private sector, citizens and other stakeholders, it is likely that there is a need to collaborate and coordinate pricing decisions with a wider range of stakeholders.

Table 1: Institutional roles in negotiating pharmaceutical prices

	Leading role[1]	Supporting role	No role
Benin	Health	Legislature CBA	Social insurance agency
Cameroon	Health	CBA	Legislature
Chad	Health	CBA	Legislature Social insurance agency
Congo, Dem. Rep.	Health		Social insurance agency
Côte d'Ivoire	Health Commerce	CBA Social insurance agency	Legislature
Gambia, The	Health		
Guinea-Bissau	Health	Legislature Social insurance agency	
Lesotho	Health	Legislature CBA	
Liberia	No response	No response	No response
Mauritius	Health CBA	Legislature	Social insurance agency
Nigeria	Health		
Seychelles	Health		CBA Legislature Social insurance agency
Sierra Leone	Health CBA	Legislature Local Council Chief Administrators Civil society	
South Africa	Health Provincial Health	CBA	Legislature Social insurance agency
Uganda	Health	CBA	

Source: Budgeting for Health in Africa Survey 2019

1 In the table, CBA refers to the central budget authority (usually a Ministry of Finance or Treasury), and Health refers to Ministries of Health, even in cases where the Health Ministry performs other functions.

3 Procurement processes: Comparison

Table 2: Procurement processes for pharmaceuticals dispensed in and outside of hospitals

		Nigeria	Seychelles	South Africa
Pharmaceuticals dispensed in hospitals	Who is in charge of pharmaceutical procurement?	Individual hospitals	Central health procurement unit	Central health procurement unit
	How are pharmaceutical prices determined?	Tender process	Individual negotiations	Tender process
	Which institution is in charge of determining the prices?		Ministry of Health	
Pharmaceuticals dispensed outside of hospitals	Who is in charge of pharmaceutical procurement?		Central health procurement unit	Central health procurement unit
	How are pharmaceutical prices determined?		Individual negotiations	Tender process
	Which institution is in charge of determining the prices?		Ministry of Health	

Source: Budgeting for Health in Africa Survey 2019

As shown in Table 2, Nigeria, Seychelles and South Africa apply different approaches to procuring drugs. Nigeria allows individual hospitals to procure medicines. The other two countries use a more centralised approach.

Nigeria

In Nigeria, procurement occurs at three different levels. Procurement of medicines occurs through the Federal Medical Stores, a unit in the Department of Food and Drug Services, within the Federal Ministry of Health. In addition, states have their own State Medical Stores. Finally, all secondary and tertiary level facilities have their own pharmacies which procure all medicines except that to treat HIV/AIDS, malaria and tuberculosis. An essential medicine list is available, but standard treatment guidelines for several important conditions such as HIV/AIDS, malaria and tuberculosis are not covered on the list. This complicates procurement processes as states then procure a number of different medicines to treat the same conditions, when the use of standard medications across the whole system would result in a more efficient procurement programme (Nigerian Federal Ministry of Health, 2010a).

The procurement of important medication is either outsourced or performed by donors. For example, procurement of antiretrovirals is managed by the International Dispensary Association and implemented by Crown Agents. Tuberculosis medication is procured by the WHO and contraceptives by the United Nations Population Fund. The WHO found 22 partners that acquire drugs on behalf of Nigeria. If local officials are not involved in procurement processes, then no transfer of knowledge and capacity takes place. It could be difficult, costly and time-consuming for the government to establish its own procurement processes. There is no standard operating procedure for State Medical Stores and health facility pharmacies to acquire drugs. Medicines can be procured from any provider (Nigerian Federal Ministry of Health, 2010a). Partner organisations appear to ignore the essential medicines list, with only 11% of partner procurement based on Nigeria's official list (Nigerian Federal Ministry of Health, 2010b).

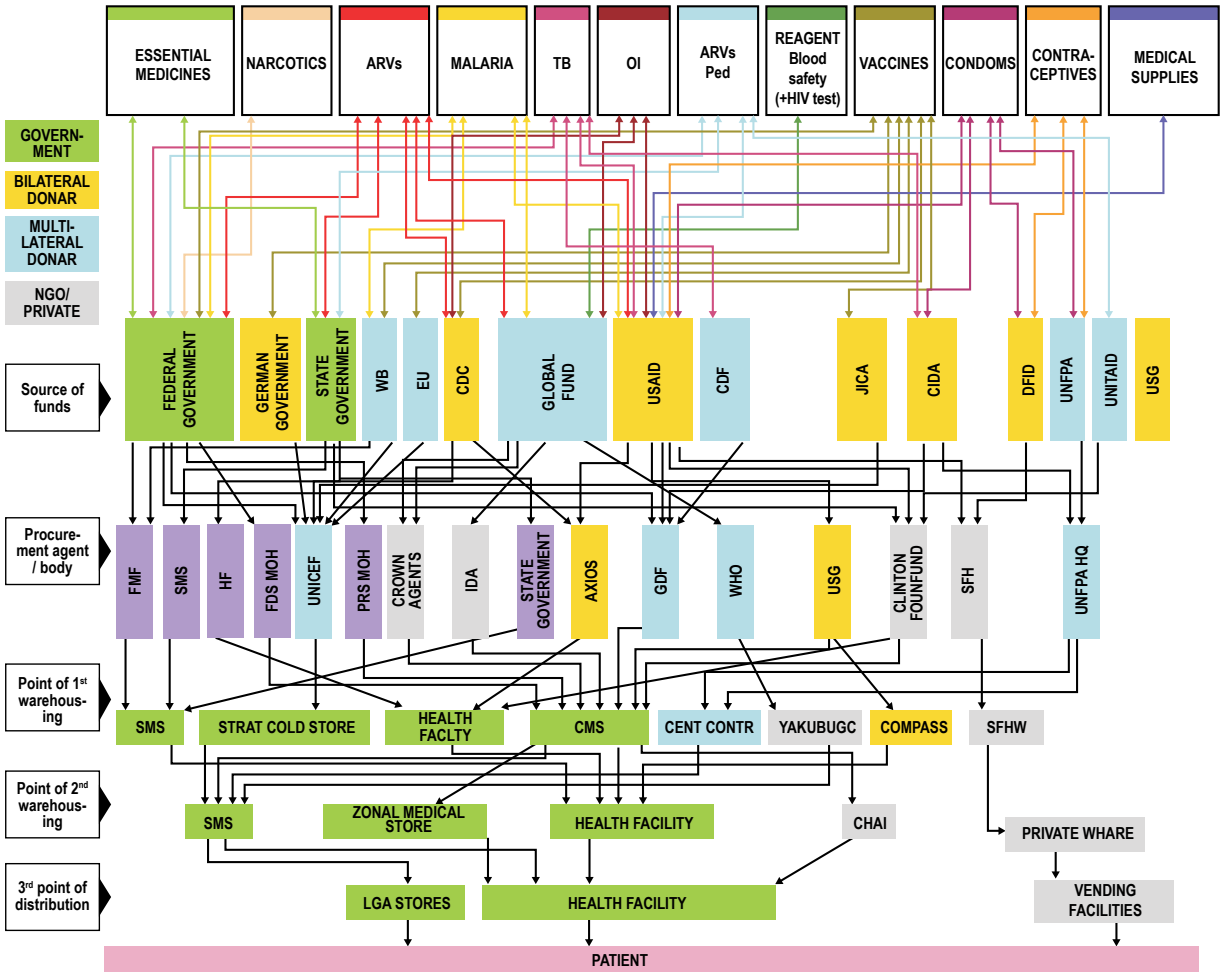
The result of distributed procurement is poor outcomes, despite the large quantity of drugs purchased. Prices range from 20% (one fifth) to 3 007% (30.7 times) of the global reference price, with an average of three times the global reference price. In addition, 30% of medicines acquired have a remaining shelf life below the 80% standard. In the worst cases, only 20% of the drugs' shelf life remained (Nigerian Federal Ministry of Health, 2010).

An assessment of Nigeria's procurement of pharmaceuticals concluded:

> *The study demonstrates that procurement and supply of medicines in Nigeria is uncoordinated, fragmented and unplanned. This results in duplication of efforts, wastage of resources and inability of the government to optimize the support of the partners in a way to best benefit the country.*

This situation may be attributed to inadequate political commitment in the medicines area and absence of a procurement supply management plan to articulate the needs of the country and to guide partners who wish to lend a helping hand to the government. Improvements to this situation will require a health systems approach to ensure that the government addresses all issues about the supply system in a coordinated, holistic and sustainable manner. (Nigerian Federal Ministry of Health, 2010b)

Figure 3: Medicines supply systems in Nigeria



Source: https://apps.who.int/medicinedocs/documents/s16889e/s16889e.pdf?ua=1

Seychelles

Seychelles sets prices through negotiation. The country procures drugs through the Central Medical Store (CMS), a department of the Ministry of Health. The CMS compiles a list of essential medicines. There are national standard treatment guidelines that define the correct processes to treat the most common ailments, which determine what drugs and supplies are on the essential medicines list and need to be procured. There are 450 drugs and vaccines on the essential list. The CMS forecasts the quantity of drugs required, acquires them, compiles inventory reports and manages their expiration. It ensures that the six hospitals and 17 primary healthcare facilities in the Seychelles have sufficient medication.

Seychelles runs a closed procurement system. Suppliers and drugs are chosen from a list pre-approved by the WHO. Medicines are then tested for quality by the Ministry of Health. Once the government is satisfied about the quality of the drugs, it enters into negotiations with the drug company concerned. Basically, this is a direct purchase on a centralised basis and Seychelles does not run any local or international tenders (Seychelles Ministry of Health, 2011).[2]

The WHO notes that direct procurement of medicines has the advantage of being quicker and cheaper to administer than tenders. It is also easier to deal directly with drug companies

2 Direct procurement is common practice for island nations, including Papua New Guinea, the Marshall Islands, the Northern Mariana Islands, Palau, the Cook Islands, Kiribati and Tokelau (WHO, 2002).

regarding concerns about the quality of medicines, whereas this is not always possible with tenders awarded to a middleman. The danger with direct procurement is that it could result in higher prices (WHO, 2002). It should be noted that tenders will only be effective in reducing prices if there is a sufficient number of bidders, and this may not always be the case for small nations. Seychelles chose to participate in the establishment of SADC Procurement Pool, which aims to procure medicines for the whole of SADC, instead of for each individual country. This could be an effective solution but it will only become clear as the Pool is implemented.

South Africa

South Africa uses tenders at both the national and provincial level. A centralised tender uses the monopsony advantage of the purchaser to obtain the lowest price possible, reduces the administrative burden, and achieves economies of scale and scope. South Africa has the world's largest number of HIV/AIDS patients taking antiretrovirals, which has allowed for large economies of scale to bring down prices and has led to improved treatment for more patients. (See Box 1: A successful drug tender.)

Wouters et al. (2019) found that tenders in South Africa led to certain drug prices falling by more than 40% over a 14-year period. Medicines in the public sector are cheaper than in the private sector, where no tendering process takes place. One concern with tendering is that it may result in a loss of capacity in the sector as the firms that lose tenders are forced to stop production. Wouters et al. (2019) found that this was not a concern for most classes of drugs, as the number of bidders remained high. The two exceptions were for anti-tuberculosis and contraceptive products, perhaps because these products need dedicated facilities to reduce cross-contamination. Consequently, if a bidder loses a tender, the company may have to exit the industry.

Dubois, Lefouili and Straub (2019) also found that centralised procurement has a positive impact on prices. Using data spanning seven countries (including South Africa) and 40 medicines, they found that central government tenders reduce prices by between 40 and 44%. The reduction is smaller if there are fewer drug suppliers.

Box 1: A successful drug tender

South Africa concluded a successful antiretroviral tender process in February 2019. The tender was notable for the low price that was achieved, as well as the rapid introduction of newly developed drugs. Dolutegravir was approved by the Food and Drug Administration in 2013 and now forms part of the triple-drug cocktail provided to those with HIV/AIDS by the South African government. Dolutegravir is renowned for its efficacy in suppressing HIV, its lack of side-effects and the fact that HIV does not become resistant to it.

The most recent tender was valued at R14 billion and winning bidders will supply medication for a three-year period. The price being paid for the new triple cocktail of dolutegravir, lamivudine and tenofovir was about one seventh of the price paid for the same drugs in the private sector.

Several factors combined to allow South Africa to supply such an advanced drug at san pay the patent owners a licence fee. The voluntary licence does not apply to wealthier markets such as the United States and the European Union.

Second, the government was assisted by a coalition of NGOs, including the Clinton Health Access Initiative and the Bill & Melinda Gates Foundation, which negotiated an agreement with generic drug manufacturers to manufacture the three-drug cocktail for $75 per person per year in return for a level of minimum sales, guaranteed by the Bill & Melinda Gates Foundation. This effectively put a ceiling on the price that other producers would be able to tender. The Kenyan government also played a role in this agreement.

Third, the South African government called on the help of various experts. In particular, a group of epidemiologists from the University of the Witwatersrand and Boston University modelled the cost and health implications of adopting the WHO standards on antiretrovirals. One reason the team of academics was able to have such a positive impact was due to the high level of technical skill held by individuals in both the Department of Health and the National Treasury.

The Minister of Health estimated in 2017 that South Africa would save R11 billion over six years due to the impact of generic manufacturers producing antiretrovirals in bulk.

4 Conclusions

The process that a country uses to buy drugs can have significant impacts on their price and quality. This case study examined three countries. For Seychelles, direct purchase of drugs guarantees their quality, but it leaves the country vulnerable to exploitation by international drug companies, especially if medicines are still under patent protection. Seychelles chose to join the SADC Procurement Pool as a solution. It remains to be seen what the Procurement Pool will be able to achieve as it is still being established.

Nigeria has been unable to use its large size to procure drugs cost-effectively. This could be an undesirable side-effect of the strongly centralised system of governance in Nigeria, combined with poor levels of governance. In addition, many partners (such as NGOs and the United Nations) buy drugs on Nigeria's behalf, diluting the benefits of monopsony and using their own guidelines to determine which medicines to procure. Based on the international evidence, Nigeria should be able to achieve lower prices on drugs than it currently does, by centralising procurement through a single buyer and limiting the types of drugs procured to those on the essential medicines list.

South Africa has been able to achieve lower medicine prices with the help of some NGO partners. The key insight is that government should centralise all purchases through one buyer and ensure that there are many suppliers. The intervention by the Bill & Melinda Gates Foundation in obtaining the antiretroviral drug dolutegravir was fundamental in that it enabled more suppliers to bid and put a ceiling on the final price, resulting in the procurement of dolutegravir for one seventh of the private rate. Other tenders have also resulted in lower prices. Problems still persist in other parts of the South African public sector – drug stockouts are still common – but the positive outcomes from centralised procurement can serve as a model for other large countries.

Centralised procurement can be effective if government is able to leverage the power of monopsony. It would be less effective for smaller procurements, such as drugs for less prevalent conditions. Centralised procurement could also backfire in that extracting deep discounts may force some drug companies out of the market, leading to less competition in future tenders. This could be a particular concern for procurement of anti-tuberculosis and contraceptive products due to the technical requirements of their manufacturing facilities.

Direct procurement of drugs, as seen in Seychelles, has the advantage of being a quicker and cheaper process to administer, but is unlikely to drive down drug prices as much as centralised procurement does in large countries.

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