MEDICINE PRICES SPECIAL SUPPLEMENT

The hidden costs of essential medicines


L. Levison


R. Laing

➢ LIBBY LEVISON AND RICHARD LAING

An estimated one-third of the world's population lacks access to essential medicines due in part to their cost.[1] The cost of getting an essential medicine to a patient includes the manufacturer's price as well as all costs for transportation, storage, import tariffs and taxes, wholesale and retail markups, staff salaries, stock losses and procurement practices. These latter costs – *hidden costs* – can more than double the manufacturer's price.[2]

In order to reduce costs, participants in the health sector need to understand what the hidden cost components are and how they affect total cost. The hidden costs incurred in procuring essential medicines arise from two sources: government policies and procurement practices.

Hidden costs under government influence

Data were collected from publications and solicited through the on-line discussion forum E-Drug. The original query suggested several hidden costs to include, but encouraged respondents to list any

that applied in their situation. In total, there was sufficient detail on nine countries to include in the analysis.

The data are shown in Table 1. For the nine countries studied the hidden costs included: import tariffs; port charges; clearance fees; pre-shipment inspections; pharmacy board fee; importer's markups; value added tax (VAT); federal and state taxes; and wholesale and retail markups. While some of these rates are relatively low (for example, 1% for port charges), even 1% is significant on orders of US$5 million. And because the impact of hidden costs is compounded, each hidden cost has a "carry on" effect. On average, hidden costs increased cost by 68.6% in the surveyed countries. Blank cells in the table indicate that no data were reported (all reported zeros have been entered).

Comparing data among countries is illuminating. Despite an import tariff of 4%, Nepal has total hidden costs of 48%, due in part to no local taxes and low wholesale and retail markups. Armenia, on the other hand, has no import tariff but charges 20% VAT and allows wholesale and retail markups of 25%, resulting in total hidden costs of 87.5%.

All the hidden costs listed in Table 1 are government imposed or may be government regulated. Considering that ultimately a tariff increases the price of the essential medicine to the health system and to the patient,[3] one must ask why a government charges itself tariffs for public sector health goods. If the VAT alone were eliminated in Armenia, the hidden costs would decrease to 56.3%. On an order of US$1 million, this represents savings of US$312,000.

We know of other hidden costs for which data were too sparse to draw conclusions. Banking fees (fees to buy foreign exchange; the costs of letters of credit) of 1%–4% were reported (Sri Lanka, Kosovo and South Africa). Contingency fees added 10% in hidden costs in one sub-Saharan African country. These financial costs merit future attention.

Table 1
Examples of hidden costs on pharmaceutical procurement

	Sri Lanka[1]	Kenya[2]	Tanzania[2]	South Africa[3]	Brazil[4]	Armenia[5]	Kosovo[6]	Nepal[7]	Mauritius[8]	Average
Import tariff	0%	0%	10%		11.7%	0%	1%	4%	5%	
Port charges	4%	8%	1%				4%			
Clearance and freight		1%	2%					1.5%	5%	
Pre-shipment inspection		2.75%	1.2%							
Pharmacy board fee			2%							
Importer's margins	25%						15%	10%		
VAT				14%	18%	20%	0%			
Central govt tax										
State govt tax					6%					
Wholesaler	8.5%	15%	0%	21.2%	7%	25%	15%	10%	14%	
Retail	16.25%	20%	50%	50%	22%	25%	25%	16%	27%	
Total markup	63.97%	54.22%	74.3%	74.05%	82.38%	87.5%	73.64%	48.08%	59.26%	68.6%

1. Personal communication: U. Panditharatna, Mansel Ltd, Sir Lanka, by email, 11/2002. 2. Data from (Myhr 2000) see reference 9. 3. Data from (Gray & Matsebula 2000) see reference 10. 4. Data from (Cohen 2000) see reference 11. 5. Personal communication: S. Azatyan, Armenian Drug and Medical Technology Agency, 11/2002. 6. Personal communication: L. Azizi, Korporata Farmaceutike e Kosoves-KFK, by email, 11/2002. 7. Personal communication: E. Ranjit, Pharmacist, Kathmandu, Nepal, 11/2002. 8. Personal communication: G. Requin, Pharmaceutical Services Mauritius, by email, 11/2002.

Hidden costs of the procurement process

Many of the programming choices made in the procurement office affect cost. The implementation of product selection, quantification and tendering method, and programme overheads, also incur costs. Because of the small sample size we can only offer suggestions as to the impact of these hidden costs.

Product selection: By restricting procurement to medicines on the national essential medicines list and included in the standard treatment guidelines, and by removing therapeutic equivalents, procurement offices see lower manufacturer's prices from economies of scale. Inventory and stores management benefit from a reduction in the number of stock items to handle. Procuring generics rather than brand name products has similar advantages.

Tendering method: By restricting tenders to a limited number of prequalified suppliers, the procurement office works only with suppliers of high-quality products when selecting the lowest-priced goods. The tender award process is simplified, as there are fewer bids to evaluate, which brings savings in time and staffing.

Calculating these hidden costs is difficult. The Delhi Society for Promotion of Rational Use of Drugs (DSPRUD) Special Purchase Committee in Delhi, India, has been using a form of prequalification since 1995 and has achieved savings of approximately 30–35% for drug purchases from an essential drugs list and through restricted procurement.[4,5] Van der Veen and Fransen report that international purchasing agencies achieve lower prices for generic drugs than do ministries procuring with national procedures; they found that health ministries paid 3–6 times more for generic medications for sexually transmitted diseases.[6]

Operating costs: The cost of running the procurement office is part of the procurement budget. Staff salaries, office space, and supplies are indirect costs that vary with the size of the procurement programme. Two non-profit suppliers, Mission for Essential Drugs and Supplies (MEDS) in Kenya and Joint Medical Stores (JMS) in Uganda, report operating costs as a percentage of gross expenditure on pharmaceuticals. Their operating costs, 15.5% and 9.5%,[7] are indicative of these costs.

Carrying costs: There is a cost associated with keeping any stock in inventory. Adequate warehouse storage is needed, security must be provided, and inventory must be insured. In the field of supply management, a figure of 10–35% of the price of the inventory is allocated to carrying costs.

Stock loss: Inaccurate quantification can result in a surplus of medicines that expire; poor inventory control procedures (that do not enforce stock rotation) can also result in expiry. Expired or damaged medicines must be destroyed at an additional cost. Stock losses from theft also raise the hidden costs of the remaining inventory. Inventory lost to expiry, theft or damage result in hidden costs on the remaining stock.

More data needed

The data collected illustrate how hidden costs can more than double the price of essential medicines between manufacturer and patient. Understanding these hidden costs is the first step towards reducing costs and increasing access. However, reducing hidden costs cannot be done by the procurement office alone. It requires the establishment and implementation of pharmaceutical policies at governmental level, the improvement of procurement practices, and the cooperation of medical professionals throughout the health care system.

Not all hidden costs can or should be removed – for example, quality control of medicines. Assured quality should be the procurement division's first priority. Bhutan estimates that over a 10-year period, the cost of quality control (predominantly sample testing) was 0.39% of the total procurement value.[8] DSPRUD has spent 0.53% of its budget on quality assurance since the programme began in 1995 (including both Good Manufacturing Practice inspections of bidding manufacturers as well as sample testing).[5] Given the threat of sub-standard drugs, damage during shipping or packing mistakes, quality control is a highly cost-effective investment that all procurement offices should adopt.

The hidden cost data we have collected provide insights into various options for configuring national policies and procurement programmes to reduce the procurement costs of essential medicines. There is a role for both the government and the procurement division in the effort to reduce hidden costs. It is clear, however, that more data are needed – both on current hidden costs, and on strategies to reduce hidden costs. The new WHO/HAI pricing initiative will include a study on the component costs of medicine prices. Additional evidence from such projects will expand the available data on hidden costs and can be used to establish national policies and procurement procedures that reduce the cost of, and increase access to, essential medicines. ❑

The material in this article originally appeared as a web publication: Levison L. Policy and programming options for reducing the procurement costs of essential medicines in developing countries. Available at: http://dcc2.bumc.bu.edu/richardl/IH820/Resource_materials/Web_Resources/Levison-hiddencosts.pdf.

References

1. Who pays for health systems? In: World health report 2000. Geneva: World Health Organization; 2000. Available at: www.who.int/whr
2. Perez-Casas C, Herranz E, Ford N. Pricing of drugs and donations: options for sustainable equity pricing. *Trop.Med.Int.Health*, 2001; 6(11): 960–964.
3. Bale H. Consumption and trade in off-patented medicines. Commission on Macroeconomics and Health, Working Paper Series, Paper No. WG4:3, 2001. Available at: http://www.cmhealth.org/docs/wg4_paper3.pdf
4. Chaudhury RR. Rational use of drugs: change in policy changes lives. WHO Essential Drugs Monitor, 1999; 27: 2–4.
5. Chaudhury RR. Rational use of drugs – the Delhi experience. Talk given at Boston University, 20 June 2002.
6. Van der Veen F, Fransen L. Drugs for STD management in developing countries: choice, procurement, cost and financing. *Sex Transm.Infect.*,1998, vol. 74 Suppl 1, p. S166–S174.
7. Kawasaki E, Patton J. Drug supply systems of missionary organizations: identifying factors affecting expansion and efficiency: case studies from Uganda and Kenya. Geneva: World Health Organization; 2002.
8. Stapleton, M. Bhutan Essential Drugs Programme: A case history. Geneva: World Health Organization; 2000. WHO/EDM/DAP/2000.2.
9. Myhr K. Comparing prices of essential drugs between four countries in East Africa and with international prices. Geneva: Médecins Sans Frontières; 2000. Available at: http://www.accessmed-msf.org/prod/publications.asp?scntid=3920012349208&contenttype=PARA&. Accessed 9-15-2003.
10. Gray A, Matsebula T. Drug pricing. In: South African Health Review. Durban: Health Systems Trust; 2000; pp. 201–218. Available at: http//www.hst.org.za/sahr/2000/chapter9.htm.
11. Cohen J. Public policies in the pharmaceutical sector: a case study of Brazil. Washington, D.C.: The World Bank Latin America and the Caribbean Regional Office; 2000. LCSHD Paper Series, No. 54.