

Medicine prices matter

Rapidly rising costs of health care and high medicine prices are a growing concern worldwide, especially in developing countries where patients often have to pay the full price of medicines. This brief report about medicine prices and availability in Jordan is one of a series of papers summarizing the results of national medicine price and availability surveys carried out around the globe using a standard survey methodology¹ developed by the World Health Organization (WHO) and Health Action International (HAI). It uses a group of 30 medicines, with pre-set dosage forms, strengths and pack sizes that are relevant to the global burden of disease, plus selected medicines of national importance.

Within Jordan:

- Medicine prices obtained through public procurement are acceptable for generics but some higher priced originator brands are being purchased.
- The availability of essential medicines in public sector health facilities is poor, limiting access to low cost medicines.
- Prices of medicines in private pharmacies are high and some treatments can be unaffordable to low income groups.
- Revision of pricing policies is needed and can lead to significant reductions in prices in the private sector.

Generally, across the WHO Eastern Mediterranean Region, a similar picture emerges: reasonably efficient public sector procurement; unreliable availability of essential medicines in the public sector; people having to pay for their own medicines in the private sector, often at high and frequently unaffordable prices; and the need for stronger government action to introduce or improve national medicines policies and effective pricing policies².

¹ WHO/HAI. Medicine prices: a new approach to measurement, Geneva, World Health Organization, 2003. Available from <http://haiweb.org/medicineprices/>

² Ball D., Mirza Z., Ewen M. Prices, availability and affordability of medicines in the World Health Organization Eastern Mediterranean Region: a synthesis report of medicine price surveys undertaken in selected World Health Organization Eastern Mediterranean Region countries (in press).

Jordan medicine prices and availability survey

Jordan has a population of approximately 5.5 million people (2005). It is a lower middle income country with per capita GDP of US\$ 1877 (2003). Jordan spent 9.4% of its GDP on health in 2003 with health expenditure per capita reaching US\$ 177. Private health expenditure accounts for 55% and public expenditure for 45% of total health expenditure. Approximately 70% of the population is covered by health insurance, provided by the Ministry of Health (21%), the Royal Medical Services (33%), refugee missions (18%), such as the United Nations Relief Works Agency which provides care for 400 000 Palestinian refugees, or private insurance (10%). But 30% of the population has no health insurance coverage at all.

Jordan has a growing local pharmaceutical industry with significant capacity to export medicines. The total annual pharmaceutical market value was US\$ 300 million in 2003. Although imported medicines dominate, local production contributes approximately 25% (by value) to the total pharmaceutical market. The National Drug Policy and the national essential drug list (available in the Jordan National Drug Formulary) were revised in 2001 and 2002, and the final draft of the Jordan rational drug list was reviewed in 2006.

A total of 29 medicines were surveyed in May 2004, 23 from the WHO/HAI core list and 6 supplementary medicines specific to Jordan. Prices and availability were recorded for the originator brand product (OB), the most sold generic equivalent (MSG) and the lowest priced generic equivalent (LPG). The survey was undertaken in 3 geographical areas, the northern, middle and southern parts of the country, for the public sector and private sector (see Table 1).

Table 1. Measurements in each sector

| Measurement | Public sector | Private sector |
|---------------------------|--|-----------------------|
| Affordability to patients | ✓ | ✓ |
| Procurement price | ✓ | – |
| Price to patients | ✓ | ✓ |
| Availability | ✓ | ✓ |
| No. of facilities visited | 18 public dispensaries, Ministry of Health | 20 private pharmacies |

Presentation of price information

The WHO/HAI survey methodology presents prices as median price ratios (MPR). The MPR is calculated by dividing the local price by an international reference price (converted to local currency). An MPR of 1 means the local price is equivalent to the reference price whereas an MPR of 2 means the local price is twice the reference price. The international reference prices used for this survey were taken from the 2003 Management Sciences for Health (MSH) International Drug Price Indicator Guide (median prices of high quality generics offered to developing countries by different suppliers). Use of reference prices facilitates international comparisons.

Interpretation of findings

Country specific factors such as pricing policies, market size, competition, national economic and other factors may influence prices. For the purposes of these surveys, in a low income developing country an MPR of less than or equal to 1 for both the public sector procurement price and the public sector patient price is considered to indicate acceptable (not excessive) prices.

Affordability

Affordability is calculated as the number of days the lowest paid unskilled government worker would have to work to pay for one treatment course for an acute condition or one month's treatment for a chronic condition. At the time of the survey, the lowest paid Jordanian government worker earned JD 3.0 (US\$ 4.22) per day. Overall, a low-paid government worker would generally need less than one day's wages to purchase standard treatments in public health facilities (Figure 1).

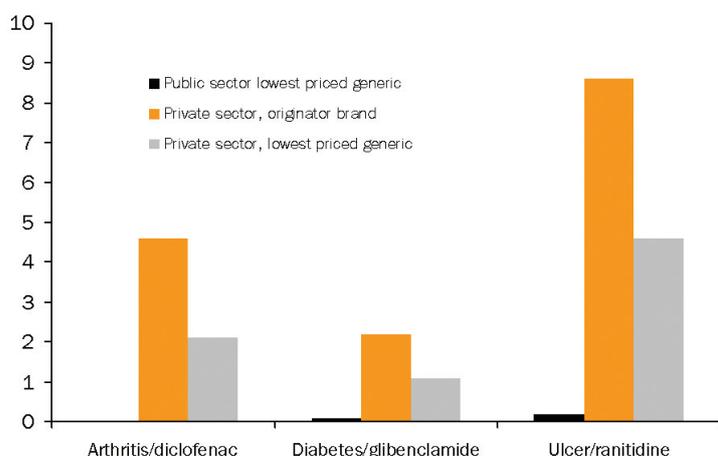


Figure 1. Affordability: number of days' wages for one month's treatment

The price of standard treatments varied widely when purchased in private retail pharmacies depending on the condition and the choice of originator brand or lowest priced generic. Among the most expensive treatments were:

- ulcer: one month ranitidine, 4.6–8.6 days' wages
- ulcer: one month omeprazole, 7.7–19.9 days' wages
- arthritis: one month diclofenac, 2.1–4.6 days' wages.

Although ulcer treatment with ranitidine or omeprazole costs less than half a day's wages when purchased in public health facilities, the availability of these medicines did not exceed 50%. Diclofenac was not found in any of the facilities surveyed. This shows the limited access to more affordable medicines in the public sector.

Public sector prices

Procurement prices were available for 28 medicines out of the 29 medicines surveyed, where 13 medicines were procured as the originator brand and 15 as generics. On average, lowest priced generic equivalents of surveyed medicines were purchased at about half of the international reference prices (median MPR of 0.57) and originator brands had a median MPR of 1.38 (Table 2). Overall these MPRs represent efficient and cost-effective procurement.

However, further savings could be made by purchasing generic equivalents instead of more expensive originator brands. For example, originator brands of amitriptyline (MPR 3.42) or phenytoin (MPR 6.53) could be procured in generic versions at much lower cost.

In public sector facilities, patient prices were similar to procurement prices for lowest priced generics. The median MPR for the 16 lowest priced generics found in 4 or more facilities was 0.85 (Table 3). Only 1 originator brand was found. There was little or no mark-up between procurement prices and public sector patient prices (median MPR 0.66 and 0.63 respectively, based on data for 9 lowest priced generic medicines).

Table 2. Number of times more expensive: public sector procurement prices compared to international reference prices

| | Originator brand | Lowest priced generic |
|-------------------------------------|-------------------|-----------------------|
| Median MPR (interquartile range) | 1.38 (0.7–2.3) | 0.57 (0.3–0.7) |
| Minimum | 0.27 | 0.13 |
| Maximum | 6.53 | 2.74 |
| No. of medicines | 13 | 15 |

Table 3. Number of times more expensive: patient prices in the public sector compared to international reference prices

| | Originator brand | Lowest priced generic |
|-------------------------------------|------------------|-----------------------|
| Median MPR (interquartile range) | 5.95 | 0.85 (0.6–1.2) |
| Minimum | | 0.24 |
| Maximum | | 2.64 |
| No. of medicines | 1 | 16 |

Table 4. Availability of survey medicines (n = 29) at government health facilities

| | Originator brand | Lowest priced generic |
|--|------------------|-----------------------|
| Median availability (interquartile range) | 0% | 27.8% (5.6–61.1%) |

Public sector availability

Although 25 of the 29 medicines were found in public dispensaries, the availability of only two exceeded 80%: cotrimoxazole suspension (83%) and methyl dopa (89%). Four other medicines, amoxicillin, ciprofloxacin, furosemide and glibenclamide, were present in at least 70% of the facilities. Four medicines needed to treat chronic diseases, diclofenac, fluphenazine, metformin and losartan, were not found in any of the dispensaries surveyed. Overall, the median availability was 27.8% for lowest priced generics in the public sector (Table 4).

Private sector prices and availability

Prices for medicines in private retail pharmacies in Jordan are high (Figure 2). Both generics and originator brands can be excessively expensive. For example, enalapril, used for the treatment of high blood pressure and usually available at a low price in most countries, was priced at 160 times the international reference price for the originator brand and 69 times for the lowest priced generic. Generic fluconazole, used to treat fungal infections, was the highest priced generic with an MPR of 70. The median retail price to patients for originator brands was about 17 times higher than the international reference price (minimum MPR 1.3 maximum MPR 160). For lowest priced generics, the median MPR was 10.5 and varied between 0.9 and 70 times the international reference price (Table 5).

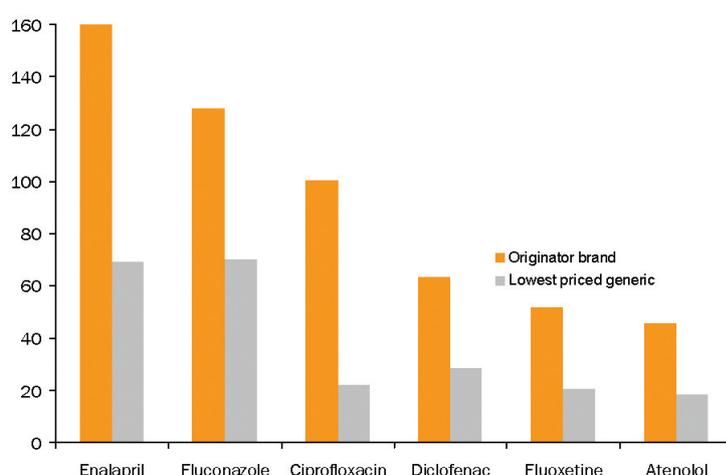


Figure 2. Examples of excessive prices as MPRs in private pharmacies, MPR > 10

Table 5. Number of times more expensive: patient prices in private retail pharmacies compared to international reference prices

| | Originator brand | Lowest priced generic |
|-------------------------------------|----------------------|-----------------------|
| Median MPR (interquartile range) | 17.05 (10.7–50.7) | 10.5 (5.7–18.4) |
| Minimum | 1.3 | 0.9 |
| Maximum | 160 | 70.1 |
| No. of medicines | 25 | 27 |

Brand premiums in the private sector

Where medicines were available as both originator brand and generic equivalent, the lowest priced generic cost on average about half of the price of the originator brands. The median brand premium was 44%.

Private sector availability

The median availability of surveyed medicines was higher in private retail pharmacies (Table 6) for generics (80%), than for originator brand products (60%). Phenytoin tablets and fluphenazine injections were present as originator brands only, while amitriptyline was found as generic only. The other 26 surveyed medicines were found as both originator brand and generic equivalents in the private pharmacies visited. Of these, low generic availability was noted only for beclometasone inhaler (35%) and hydrochlorothiazide tablets (40%).

Table 6. Availability of survey medicines in private retail pharmacies

| | Originator brand | Lowest priced generic |
|---|------------------|-----------------------|
| Median availability (interquartile range) | 60% (55%–75%) | 80% (60%–90%) |
| No. of medicines | 29 | 29 |

Compliance with pricing regulations

The small variation in the prices of the same medicine in different pharmacies and regions suggests that adherence to regulated prices is high in Jordan and/or private pharmacies tend to stock the same products.

Intersectoral comparisons

Private sector patient prices of lowest priced generic products, in cases when price data existed in both sectors, were nearly 12 times higher on average compared to procurement prices, and 11 times higher on average compared to public sector patient prices. This difference increased to 30 fold when comparing originator brand procurement prices to retail pharmacy prices.

Price components

Medicine prices in private retail pharmacies are set by the technical Pricing Committee of the Drug Department, at the Jordanian Food & Drug Administration (JFDA). The Pricing Committee is involved in determining the price of medicines distributed through community pharmacies but not in the pricing of medicines obtained through the tender arrangements.

Price components ('add-ons' in the supply chain) were not assessed in the field. Instead they were assessed for several medicines based on regulated mark-ups. Cumulative mark-ups were about 60%. Wholesale and retail mark-ups are standard for all medicines: drug stores (wholesalers) receive 15% on the cost at port of entry (landed cost) plus 4% for expenses, while a pharmacy receives 20% on the wholesale price plus 6% expenses. These are the only add-on costs applied to generics manufactured in Jordan. For imported medicines, other charges include an insurance fee (1%), bank fee (1%), transport and clearance fee (1.5%), added fee (0.2%), VAT (4%), and for some medicines (excluding antibiotics) an import fee of up to 5% is charged depending on the country of origin.

Conclusions

Affordability and access to medicines

- Many people, particularly those with no private insurance, have to pay out-of-pocket for medicines, often in the private sector because chronic shortages of essential medicines exist in the public sector health facilities.
- While standard treatments with surveyed medicines in the private sector generally cost around 2 to 3 days' wages, some medicines for chronic conditions were expensive and unaffordable for a low-paid unskilled government worker.

Public sector

- Public sector procurement of generic medicines in Jordan appears to be efficient as prices paid by the Ministry of Health were lower than international reference prices. However, originator brands were often purchased rather than generics. The benefits are transferred to patients because public sector patient prices were similar to procurement prices. But the very low availability of medicines in public health facilities plus some unaffordable prices in private retail pharmacies are major barriers to accessing essential treatments for the poorest and uninsured segments of society.

Private sector

- Overall medicine prices in Jordan are high in comparison with international reference prices, in spite of national price regulations. There is a large difference between prices of originator brands and generics; however, even some generic prices are very high.
- Availability was higher for generic medicines than for originator brands, although originator brands are probably still used more extensively as there are no incentives/legal frameworks to prescribe and sell generic equivalents. The present drug law does not allow for generic substitution or other changes to the prescription, in cases where the patient is insured, unless the prescribing doctor has formally agreed to it in writing.
- Mark-ups are moderately high and their cumulative application, given the often high manufacturer's price as a starting point, makes medicines unaffordable to many.

Jordan is in the process of amending the current methodology for setting the pricing criteria to determine prices of medicines. The findings of this study provide useful evidence to feed into the review of the pricing policy.

Recommendations

Improve private sector patient prices by amending the pricing criteria:

- Recently the list of countries with whom medicine prices in Jordan are compared has been reviewed and extended to include Belgium instead of Germany, although other countries such as Australia, New Zealand, Czech Republic, Croatia, Syrian Arab Republic and Egypt, should also be considered for price comparisons as they have been using medicine pricing systems that have effectively lowered prices. For each country a list of ex-manufacturer prices should be obtained and regularly updated.
- Reference pricing should be adopted. Under this approach, products that provide similar health outcomes should be priced at the same level for reimbursement purposes.
- For new innovative products, suppliers should be requested to provide additional data to demonstrate that their products provide additional benefits and the price sought represents value for money. Advice on the cost-effectiveness of these products should be obtained from countries that undertake cost-effectiveness evaluations, e.g. Australia.
- Pricing reviews should be conducted on a regular basis according to therapeutic group, so that all like products are considered together and are priced relative to one another.
- Amendment should be considered to the pricing criteria for second and subsequent generics. For example, these can have a ceiling price of at least 5% below the existing lowest generic price.
- In the registration process, a fast track procedure for the first generic should be introduced.
- A full, detailed price component study should be undertaken, using the WHO/HAI methodology, to measure all distribution costs (mark-ups, taxes, tariffs, fees and other supply chain costs) applied in the private and public sectors, for both locally produced and imported medicines. The elimination of taxes and other charges, and the reduction of mark-ups, can significantly contribute to reducing medicine prices.

Improve public procurement system

- Contracts should only be awarded for originator products when there is no reasonable alternative, or the price offered is the lowest.
- International tenders should be initiated.
- Where a tender is received for a product from a well recognized company that is not registered in Jordan, the tender should be accepted subject to registration and a fast track registration process should be introduced for such products.

- The purchasing power of available funds should be maximized via the newly established Joint Procurement Administration but purchasing of products through the Joint Procurement Administration should be restricted to those on the Rational Drug List.
- Incentives should be created and education provided on making procurement savings, especially now the Joint Procurement Administration is operational.

Improve availability of medicines in the public sector

- Distribution systems should be reviewed and strengthened to achieve better availability of essential medicines at primary health care level.
- Supply and demand should be monitored regularly to ensure accurate forecasting of future needs, and innovative financing mechanisms to improve funding of essential medicines in the public sector should be considered.
- Electromagnetic cards should be introduced to monitor medicine consumption of patients on a monthly basis and control the unnecessary dispensing of medicines. For example, medicines on a prescription should be dispensed to cover one month supply only and should not be re-dispensed until the second month for chronic treatments. The Health Insurance Directorate within the Ministry of Health has started working on this new approach.
- The Rational Drug List should be regularly updated to reflect evidence-based best practice, by the Rational Drug Use Unit within the JFDA.
- This Unit should introduce and develop a quality assured therapeutic substitution policy.

Improve affordability of medicines supplied through community pharmacy

- A generic substitution policy should be introduced to enable pharmacists to substitute between the originator brand and generics without reference to the prescriber, provided the patient agrees and the doctor has not vetoed such action.
- Development of an education strategy should be considered to advise prescribers, pharmacists and consumers about the merits of generic medicines.
- A list of all prescription products with current prices should be distributed to doctors and pharmacists on a 6 monthly basis. Such information should also be easily accessible to consumers.

Monitoring the impact of policy changes

- A system should be established to regularly monitor medicine prices, availability and affordability in the public and private sectors to ensure policy changes result in improved affordability and availability. The results should be published on the JFDA website.

Further information

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The full survey report and data can be found at <http://www.haiweb.org/medicineprices/surveys>