

**Lancet article* on medicine prices, availability and affordability
Questions and Answers, January 2009**

*Cameron A, Ewen M, Ross-Degnan D, Ball D, Laing R. Medicine prices, availability, affordability in 36 developing and middle-income countries: secondary analysis. *Lancet* 17 Jan 2009; 373:240-249.

What are the key facts about medicine prices and availability reported in the article?

Large gaps exist in the availability of medicines in both the public and private sectors as well as a wide variation in prices, much beyond the international reference prices, which render essential medicines unaffordable to poor people.

An alarming percentage of medicines are unavailable, particularly in the public sector:

- Average availability across surveys was only 38% in the public-sector and 64% in the private sector.

Low public sector availability forces patients to pay higher prices from private-sector suppliers – and risk debt or poverty – or go without:

- In Africa, for example, the lowest-paid government worker needs to spend 2 days' salary each month to purchase diabetes treatment using a generic medicine. When the originator brand is used, costs escalate to over 8 days' wages.
- Private-sector patients paid 9-25 times international reference prices for lowest-priced generic products and over 20 times international reference prices for originator products.

High medicines prices are largely due to wholesaler, distributor and retailer mark-ups, and where they exist, government taxes and duties.

- For example, in the public sectors in Ethiopia and Mali, add-on costs in the supply chain can nearly double the price of medicines.
- In the private sector, wholesale mark-ups ranged from 2% to 380%, while retail mark-ups ranged from 10% to 552%.

What do governments need to do to improve the availability of affordable essential medicines?

While policies that promote access to medicines such as generic substitution are in place in many countries, additional national efforts are required to improve the availability and affordability of medicines. These measures include: controlling supply chain costs, including limiting wholesaler, distributor and retailer mark-ups and removing government duties and taxes where these exist; promoting the use of generic products; and improving medicines financing and distribution efficiency.

What is considered an affordable medicine?

A treatment which costs less than 1 day's wage for the lowest-paid government worker is generally considered affordable. However in many countries, a substantial proportion of the population earn less than the lowest government wage causing impoverishment through out-of-pocket purchases or leading patients to go without treatment.

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Why is there a lack of availability in the public sector?

Low availability in the public sector may be due to a combination of factors, such as inadequate funding, lack of incentives for maintaining stocks, inability to forecast accurately, inefficient distribution systems, or leakage of medicines for private resale.

Why is there such a variation in medicine prices?

Final medicine prices are determined by a ranged of factors, including not only the manufacturer's selling price but also the various add-on costs that get applied as the medicine moves through the supply chain.

Could medicine prices reported as part of WHO/HAI surveys be influenced by differences in quality across products?

To ensure products are of assured quality, only medicines that are registered in a country are surveyed. In addition, medicines obtained through informal channels, such as drug sellers in markets, are not surveyed.

Where can I access country-specific medicine pricing, availability and affordability information?

Survey reports and data are available from the Health Action International Website: www.haiweb.org/medicineprices

How does access to medicines fit within the Millennium Development Goals (MDGs)?

In Goal 8 of the MDG framework (Develop a global partnership for development), Member States have made concrete commitments to strengthening the global partnership for development in the area of essential medicines as well as for official development assistance, trade, external debt and technology. MDG 8 includes various targets, including Target 8.E: In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries.

What is the role of global partnerships (MDG 8) in improving the availability of affordable essential medicines?

Access to essential medicines can be improved through stronger partnership among governments, pharmaceutical companies and civil society, including consumers, working together to ensure universal access to essential medicines. For example, UNITAID, a partnership that includes national governments and international organizations, uses the proceeds of a solidarity tax on airline tickets to purchase drugs and diagnostics for HIV/AIDS, malaria and tuberculosis.

What was WHO's role in the development of the article?

Two members of the WHO department of Essential Medicines and Pharmaceutical Policies are co-authors of the article.

WHO and Health Action International have been coordinating the *Project on Medicine Prices* since 2001. Under the auspices of the project, a standard survey methodology for measuring medicine prices and availability was developed. WHO and HAI provide technical, and in some cases financial, support for surveys to be carried out using this standard methodology, and publish the survey data on a publicly available website. The data from forty-five of these surveys were used in the development of this analysis.

What data sources were used to develop the paper?

Data on medicine availability, price and affordability were taken from 45 surveys of medicine prices and availability conducted using a standard methodology developed by WHO and Health Action International.

Who conducts the surveys of medicine prices and availability upon which this analysis is based?

Surveys are conducted at the national, and in some cases sub-national, level by ministries of health, universities and NGOs. WHO and HAI provide technical support for the surveys but do not carry them out directly.

How are WHO/HAI surveys of medicine prices conducted?

Data are collected on the availability and price of a selection of important medicines from a sample of medicine outlets in the public, private and other sectors (e.g. NGOs) in six regions of a country or in the case of large countries, of a state or province. Data on medicine prices, but not availability, are also collected for government procurement; these data are usually collected at the central level (e.g. government procurement office). Sampling is done in a systematic way to ensure that the findings are representative of the country or state/province in which the survey is being conducted.

The survey also includes collecting information on the add-on costs (e.g. wholesaler, distributor and retailer mark-ups, and government taxes and duties) that contribute to the final price of medicines. This involves beginning with the final (patient) price of selected medicines and tracking these prices back through the distribution chain.

How were the study medicines selected?

In this study, only medicines included in at least 80% of surveys were included to increase the comparability of results across countries.

Core survey medicines recommended for inclusion in all surveys, provided they are registered in a country, are selected using the following criteria:

- Global/regional burden of disease/prevalence patterns: used to treat common acute and chronic conditions that cause significant morbidity and mortality, including cardiovascular diseases, diabetes, asthma, respiratory tract infections and mental illness.

- Evidence-based: recommended, usually as first-line courses of treatment, in global, regional and national treatment guidelines. However, medicines on core lists should not be considered as a recommendation for inclusion in national treatment guidelines.
- Availability: available in standard formulations and widely used in many countries/regions, as demonstrated by the medicine prices surveys conducted to date and by IMS Health national databases.
- Importance: the majority are included in the WHO Model List of Essential Medicines (WHOEML).¹

What does a median price ratio (MPR) represent?

The MPR is an expression of how much greater or less the local medicine price is than the international reference price, e.g. an MPR of 2 would mean that the local medicine price is twice that of the international reference price.

What are international reference prices?

In this survey, medicine prices are expressed as ratios relative to a standard set of reference prices to facilitate national and international comparisons. Median prices listed in MSH's *International Drug Price Indicator Guide* have been selected as the most useful standard since they are updated frequently, are always available and are relatively stable over time. These prices are recent procurement prices offered by both not-for-profit and for-profit suppliers to developing countries for multi-source products.

How were the data adjustments conducted?

Patient prices were standardized to the same MSH reference price year, adjusted for inflation/deflation and adjusted for the local currency's buying power (PPP). The latter step is needed since the cost of living varies between rich and poor countries; the costs of running the retail pharmacy (including pharmacist's salary, local taxes, rental and overheads) and the currency's buying power will affect medicine prices. Therefore, the prices of the latter will vary considerably between countries according to the strength of their local currency.

Public procurement prices were standardized to the same MSH reference price year and adjust for inflation/deflation. PPP adjustments were not conducted as most medicines are available from multiple suppliers within a global marketplace just as for many other non-health commodities, i.e. rich and poor countries should be able to purchase multisource products at around the same price.

Why is India reported separately from other low income countries?

Due to the large number of surveys (7) carried out in India, as well as the unique nature of the pharmaceutical market, namely the large generic manufacturing base in the country, Indian results were reported separately.

¹ <http://www.who.int/medicines/publications/essentialmedicines/en/>

What are the limitations of the data used to develop the paper?

- Differences in quality across products, and differences in patent status between countries, are not accounted for.
- Prices and availability are determined for the specific medicines in the study, and does not account for alternate dosage forms of these products or therapeutic alternatives.
- Public sector data may be limited by the fact that survey medicines may not correspond to national EMLs (where these exist), and some public sector facilities may not be expected to stock all of the survey medicines.
- The reliability of median price ratios as a metric for comparison depends on the number of supplier prices used to determine the median MSH international reference price (IRP) for each medicine. When few supplier prices are available or when the buyer price is used as a proxy, MPR results can be skewed by a particularly high/low IRP.
- The daily wage of the lowest-paid government worker, used to estimate treatment affordability, does not account for other non-discretionary expenditures (e.g. food, housing), seasonal fluctuations in income, the number of dependants who live on this wage, and the full costs of treatment.

To what extent do survey results reflect the overall situation with respect to medicine prices and availability in a country?

From WHO/HAI's experience in dozens of surveys to date, the recommended inclusion of 50 medicines has been found more than adequate to illustrate pharmaceutical pricing problems that may be present in a country (such as unaffordable prices, excessive total mark-ups over manufacturing price, low availability) as well as positive features and opportunities (such as relatively affordable generics or sound procurement practices).

However, this study reports the results of a subset of 15 commonly-surveyed medicines. Further, median price ratios and availability may differ quite a lot from one medicine to another. As such, caution should be exerted in using these results to make generalizations about a country's medicine situation.

What do WHO/HAI surveys tell us about medicine availability?

Availability data only refer to the day of data collection at each facility and may not reflect average availability of medicines over time. Several factors can affect availability results – for example, the timing of the survey, or the decisions of the survey managers about which medicines to survey. As such, availability results should be interpreted with some caution and, ideally, an understanding of the context.

How does this paper and its findings relate to the MDG Gap Task Force report on MDG 8?

The MDG Gap Task Force report summarizes available data on the nine indicators which have been proposed by WHO for measuring access to medicines, which include price and availability of essential medicines. The report uses the same raw data as used in the Lancet article. However, the MDG analysis is based on all medicines surveyed in each

country, while the Lancet manuscript analyses only a subset of 15 common medicines found in at least 80% of surveys. Further, the Lancet manuscript adjusts medicine prices for inflation/deflation and, in the case of patient prices, for purchasing power parity. The MDG analysis reports unadjusted country data.