

Rational Drug Bulletin

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EDITORIAL

Surveying medicine situation in West Bengal Promoting rational drug use in Indonesia



Editorial Committee

The lead article in this issue highlights a study on medicine availability, pricing and affordability in West Bengal state of India, the home state for CDMU, carried out between Sep - Dec, 2004, with assistance from the World Health Organization (WHO) and Health Action International (HAI). It was conducted jointly by two NGOs - CDMU and Consumer Unity & Trust Society, Calcutta Resource Centre. The survey is perhaps the only one of its kind in recent times. The methodology utilized has already been field-tested in a number of countries and may be considered to be standardized, although it is still undergoing refinement (It is publicly available at <http://www.haiweb.org/medicineprices>). An important feature of this method, and one which ensures direct comparability between studies over different geographical areas, is a fixed core list of medicines. At the same time, the provision for addition of a supplementary list allows local morbidity patterns to be better represented. We utilized a basket of 32 indicator drugs (21 from the core list), all of which are essential medicines intended for common health problems.

The results have shown that, in West Bengal, which is one of the most densely populated states in India, medicines that are obtained from public hospitals free of cost by patients are procured economically, but the overall availability in the public sector is disheartening and needs immediate redress. Medicines are readily available from private retail counters but this comes at a price higher than international reference prices, with some brand premium for many items. Standard treatments are mostly affordable, provided that the earning member of a family draws minimum daily wages at rates specified by the government. Since large sections of the population would be earning much less, or would be unemployed, the true affordability picture remains incomplete and possibly would not be very bright.

The study did not cover all therapeutic categories or all sectors that distribute medicines to the people. Nevertheless, the results can serve as baseline for future studies and point to issues that need further investigation or rectification. Following recommendations can be made at this juncture:

1. Urgent steps are needed to assess the functioning of the public distribution system for medicines in West Bengal for rectification of shortcomings.

2. Enhancing the efficiency of Central Medical Stores public procurement mechanisms. This could include broadening the base of bulk purchasing and/or wider use of regional and national alternatives.
3. Developing and promoting the concept of state level essential medicines list, based on evidence-based selection, to be used in conjunction with national and/or hospital clinical guidelines. This will help to focus procurement and increase supply system efficiency.
4. Public education to increase awareness of the interchangeability of generic and brand products so as to improve affordability. This would need to be preceded by research into medical practitioner and consumer attitudes towards generic medicines so as to appropriately design educational interventions to address concerns.
5. Setting up a regular machinery for medicine availability and price monitoring to evaluate the effects of policies on medicine prices. The WHO/HAI survey methodology may be used but the survey should be widened to include private hospital medicine prices (to get a better picture of the private sector) and other sectors, such as NGOs.

In the second major article, our colleague, Dr. Purnamawati S. Pujiarto from Indonesia, presents the details of an elaborate community experiment to promote people's participation in their own healthcare, with rational use of medicines as a strong component of this novel initiative. Socioeconomic conditions in India are not much different than in Indonesia - both countries are developing economies struggling with a huge population burden, large sections of which are illiterate or poorly educated and easily susceptible to deliberate or unintended medical malpractice. Their experiment is also a novel example of harnessing old traditions and new technology, folk meetings and the internet for instance, to reach wider sections of the community. Interested readers may think seriously about replicating this experiment, at least components of it, in our socioeconomic context.

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Medicine availability, prices and affordability in West Bengal

Report of a survey supported by World Health Organisation and Health Action International

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Background

Availability and affordability are key components in equitable access to essential medicines. There is lack of data on these key components in West Bengal and this is a limiting factor for the development of any people-oriented medicine policy. To address this lacuna, two non-government organizations, Consumer Unity & Trust Society, Calcutta Resource Centre, (CUTS) and Community Development Medicinal Unit, West Bengal, (CDMU) jointly undertook a survey on availability and pricing of essential medicines in the state of West Bengal. The study was funded and technically supported by World Health Organization (WHO) and Health Action International (HAI).

Methods

The survey followed the WHO/HAI methodology on determination of medicine prices in comparison to the Management Sciences for Health (MSH) 2003 international reference prices (which is based on bulk generic procurement). Thirty two medicines (21 from the core list of the WHO/HAI methodology) were surveyed in 23 public facilities (down to the rural hospital level) and 35 private retail outlets spread over Kolkata and 6 other districts of West Bengal. The facilities were selected through convenience sampling. The data collection was undertaken during Sep - Dec, 2004 by 6 data collectors who had received training for this purpose. To some extent procurement price for the medicines found available at the public health facilities were obtained at the facility itself, but mostly this price had to be ascertained from the state government's Central Medical Stores listing. In private retail shops, prices that patients would pay were ascertained through questioning for 3 categories of each medicine – innovator brand (IB), most sold generic (MSG; generic product with the highest sales nationally) and lowest priced generic (LPG; generic product with the lowest price at each facility) equivalents. Affordability calculations were based on simple model treatments and the minimum daily wages of the lowest paid unskilled worker in government employment (Indian rupees 132/-) and his counterpart in the unorganized sector (INR 97/-) in West Bengal. A model treatment was considered 'affordable' if it cost less than 5 days' wages although, this is an arbitrary threshold.

Results

Public procurement of essential medicines in West Bengal is limited to generics and the procured medicines are

distributed free of cost at public health facilities. However, availability of medicines at public facilities during the period of the survey was poor – just 13 of the 32 medicines (40.6%) were encountered, with only amoxicillin 250 mg tablets/capsules showing over 90% availability. Only 4 of the 7 antibacterials were available. Albendazole was available, but aciclovir, fluconazole and sulfadoxine-pyrimethamine were missing. These are dismal trends for the treatment of bacterial and other infections at public hospitals. Isosorbide dinitrate, which is a very cheap emergency medicine for acute anginal attacks, was not available. The treatment of epilepsy would not be possible at public hospitals as neither phenytoin nor carbamazepine (or for that matter, other antiepileptics) were available. Diazepam tablets were missing. There was no inhalers for asthmatics and also no drug to calm acutely agitated psychiatric patients.

Availability was adequate in the private sector, with median availability of 40.0% for IB medicines, 70.0% for MSGs and 77.1% for LPGs. Medicines for all therapeutic categories in the survey were encountered in the private sector, although the innovator brands may be missing. On the other hand there is widespread availability of generic equivalents. In a few instances, such as with aciclovir, albendazole, diclofenac, glibenclamide and ibuprofen, the innovator brand had better availability than generic equivalents.

Regarding public procurement, a median price ratio (MPR) of 0.75 in comparison to the MSH 2003 reference price indicated efficient procurement in economic terms. In contrast, patients who purchased medicines from retail shops paid a much higher price, as indicated by median MPRs of 2.86 and 2.17 respectively, for IB and LPG products. The 75th percentile of MPRs for both product categories exceeded 5.0, suggesting that retail pricing is substantially high in comparison to international reference price. Pricing of a few products, like albendazole, diazepam and doxycycline, were prohibitively expensive. However, there were also some encouraging trends in the private sector. Eight of the 30 (26.7%) available MSG products and 8 of the 31 (25.8%) available LPG products, had MPR less than or close to 1, indicating that patients are likely to purchase these medicines at very reasonable prices. Interestingly, 4 of the 22 (18.2%) available innovator brands also showed this pattern, indicating that private patients in India do not have to pay a brand premium for all medicines.

From the affordability calculations based on minimum daily wages (Table 1), it was observed that since the prices obtained in public procurement were low, no patient would have had to pay more than one days' wage to obtain any of the model treatments, if these were offered at procurement price. Intravenous ceftriaxone treatment of meningitis was the only exception. The picture was different in the private sector, as treatment here was 4 to 6 times as costly as in the public sector. However, the variation here, between innovator brands and generic equivalents, or that between acute and chronic conditions, was not remarkable so far as the model treatments are concerned. Such simple

treatment regimens are also by and large affordable by the 'less than 5 days' wages' criterion. Once again, ceftriaxone treatment for meningitis was an exception, one course of which consumes more than 7 days wages for the lowest paid government worker and more than 10 days wages for his counterpart in the unorganized sector. The affordability assessment in this study has certain weaknesses. For instance, it excludes large sections of the population and does not take into consideration the effect of multiple illnesses in the family or illness affecting the earning member.

Table 1. Affordability of standard treatments in select conditions to the lowest paid unskilled worker in government employment (GW) and a worker in the unorganized sector (USW).

Disease condition and standard treatment			No. of day's wages required to purchase this treatment							
Condition	Drug	Dosing regimen	Public		Private - IB		Private - MSG		Private - LPG	
			GW	USW	GW	USW	GW	USW	GW	USW
ARI (adult)	Amoxicillin	500 mg thrice daily PO X 7 d	0.2	0.3	—	—	1.4	1.9	1.3	1.8
ARI (child)	Co-trimoxazole	5 mL twice daily PO X 7 d ¹	—	—	0.1	0.1	0.1	0.1	0.1	0.1
Dysentery, amebic	Metronidazole	400 mg thrice daily PO X 5 d	—	—	0.1	0.1	0.1	0.1	0.1	0.1
Meningitis, bacterial (adult)	Ceftriaxone	1 g daily IV X 14 d	2.0	2.7	—	—	7.9	10.8	7.7	10.4
Gonorrhoea	Ciprofloxacin	500 mg PO single dose	—	—	0.1	0.1	0.1	0.1	0.1	0.1
Diabetes mellitus	Glibenclamide	10 mg once daily PO X 30 d	—	—	0.3	0.4	0.3	0.4	0.3	0.4
Hypertension	Hydrochlorothiazide	25 mg once daily PO X 30 d	—	—	—	—	—	—	0.3	0.4
Hypertension	Atenolol	50 mg once daily PO X 30 d	< 0.1	< 0.1	0.5	0.7	0.5	0.6	0.5	0.6]
Osteoarthritis	Diclofenac sodium	50 mg thrice daily PO X 30 d	—	—	1.1	1.4	—	—	0.8	1.1
Depression	Amitriptyline	50 mg thrice daily PO X 30 d	0.1	0.2	1.3	1.7	0.9	1.2	0.9	1.2
Asthma (chronic)	Salbutamol	100 mcg / Inh prn (up to 2 puffs thrice daily) X 30 d ²	—	—	0.6	0.8	0.6	0.8	0.6	0.8
Peptic ulcer	Ranitidine	150 mg twice daily PO X 30 d	—	—	0.3	0.3	0.3	0.3	0.3	0.3
Peptic ulcer	Omeprazole	20 mg once daily PO X 30 d	0.2	0.2	—	1.3	—	1.3	—	1.1

Abbreviations: ARI = acute respiratory infection; d = days; g = gram; Inh = by inhalation from metered dose aerosol inhaler; IV = by intravenous route; mcg = microgram; mg = milligram; PO = by oral route; prn = on as needed basis

1. Each mL of co-trimoxazole suspension contains 40 mg sulfamethoxazole and 8 mg trimethoprim.
2. A 200 metered dose unit is considered to be required for one month treatment

Conclusions

The present survey on the availability, pricing and affordability of medicines in West Bengal has attempted to obtain reliable data on these aspects, limiting itself to a select basket of essential medicines. It has shown that medicines that are obtained from public hospitals free of cost by patients are procured economically, but the overall availability in the public sector is disheartening and needs immediate redress. Medicines are readily available from private retail counters but this comes at a price higher than inter-

national reference prices, with some brand premium for many items. Standard treatments are mostly affordable, provided that the earning member of a family draws minimum daily wages at rates specified by the government. There are some limitations, for example the study has not covered all therapeutic categories or all sectors that distribute medicines to the people, but these do not detract from the importance of the above results as a basis for action and as baseline for future studies.

Your medicine cabinet

At CDMU we occasionally receive queries as to what should be the composition of a simple home medicine kit. Keeping a medicine kit handy at home is definitely a good idea and can be a source of great utility and comfort in times of illness till medical attention is available. Well here are our suggestions:

A home medicine cabinet should be stocked with simple medicines and dressing items and should be kept at hand to treat minor ailments or injuries. Since medicinal items are perishable there is no need to stock large quantities. It is enough to keep supplies sufficient for 1 person for a couple of days. This would mean keeping the following items:

1. Roller bandages – 1, 3" and 1, 6" roller bandages.
2. Adhesive tape – 5 strips and 1 roll of self-adhesive dressing tape. Medicated strips are very convenient but tend to get unstuck when wet, unless of the 'washproof' variety.
3. Gauze pads.
4. Cotton wool - 1, 100 g or 200 g roll.
5. Clinical thermometer – 1.
6. Scissors, medium sized – 1.
7. Tweezers, medium sized – 1.
8. Calibrated measuring spoons or cups (e.g. 2.5 mL, 5 mL, 10 mL) – 1 set.
9. Analgesic-antipyretic to relieve pain or fever e.g. 1 strip of 10 Paracetamol 500 mg tablets (also 1 bottle of Paracetamol syrup 125 mg / 5 mL if there are children in the house) or 1 strip of 10 Ibuprofen 400 mg tablets (also 1 bottle of Ibuprofen suspension 100 mg / 5 mL if there are children in the house). If aspirin is chosen, do not give it to children because it has been linked to Reye's syndrome - a rare disorder that affects the brain and liver and in some instances, has been fatal.
10. Antacid to control acute hyperacidity or dyspepsia e.g. 1 strip of 10 or 15 chewable antacid tablets containing magnesium hydroxide and aluminum hydroxide.

11. Antibiotic ointment to reduce risk of infection e.g. 1 tube (20 g) of Framycetin sulfate 1% cream [Remember to wash all cuts, lacerations or abrasions thoroughly with soap and water before applying antibiotic ointment].
12. Antiemetic to control acute nausea and vomiting e.g. 1 strip of 10 Domperidone 10 mg tablets (also 1 bottle of Domperidone suspension 5 mg / 5 mL if there are children in the house).
13. Antihistamine to relieve allergy symptoms e.g. 1 strip of 10 Cetirizine 10 mg tablets.
14. Antiseptic liquid e.g. alcohol, chloroxylenol or cetrimide based antiseptic liquid – One small bottle.
15. Antispasmodic to relieve acute colicky abdominal pain e.g. 1 strip of 10 Dicyclomine 20 mg tablets (also 1 bottle of Dicyclomine suspension 10 mg / 5 mL if there are children in the house).
16. Oral rehydration salts as per WHO formula for acute diarrhea - 2 sachets (1 sachet to 1 L of water).

It is also important to take stock of your medicine cabinet at least once in 6 months:

- Take everything out of the cabinet.
- Check expiration dates. Throw out all outdated items and replenish with fresh stock.
- Discard old tubes of cream that have become hardened or cracked. Discard any liquids that appear cloudy or particulate.
- If medicines are not in original packs or containers and labeled clearly, throw them away. It is inappropriate to store medicines outside original packs. Some medicines come in tinted glass, for example, because exposure to light may cause them to deteriorate.

Finally, remember that every medicine is a potential poison. If there are children in the house, keep all medicines locked in a secure cabinet, well out of their reach.