

“Better Medicines for Children Project”

Overview of Methods for Medicines Availability and Pricing Surveys

September 2009

Abbreviations used in this report

CMS	Central Medicines Store
EML	Essential Medicines List
EMLc	Essential Medicines List for Children
HAI	Health Action International
IMCI	Integrated Management of Childhood Illness
STG	Standard Treatment Guideline
WHO	World Health Organization

Executive summary

The availability and price of paediatric medicines will be surveyed in selected African countries and five Indian states as part of the Better Medicines for Children project. This report describes the key elements of the survey protocol, and includes a more detailed guide for survey preparation and implementation (Annex 1).

In the survey, data on the availability and patient price of a selection of paediatric medicines will be collected from medicine dispensing points in the following sectors (where applicable): public, private - retail pharmacies, private - licensed drug shops, informal (retail stores), NGO, mission, dispensing doctors and private clinics. Public sector procurement prices will also be collected. The methods proposed for the conduct of the availability and pricing surveys take account of regional differences between Africa and India.

Work in Africa will focus on availability and pricing surveys only and methods built around the model of data collection used successfully in paediatric medicines surveys conducted in 2007. Surveys will be conducted in three regions (urban, peri-urban, and rural) in each participating African country. There is extensive survey work already being undertaken in Africa and a risk of “survey fatigue”. Managing issues around the number, timing and scope of medicines surveys in Africa will be critical to the success of the Better Medicines for Children project.

Survey work in India will include availability and pricing surveys as well as price components analysis for selected paediatric medicines. The methodology for the price components survey is described in Annex 2. Methods used in survey work in India will more closely resemble the formal WHO/HAI methodology and will include 6 geographical or administrative areas in each state.

A list of 23 paediatric medicines and one device (spacer for use with metered dose inhalers) has been developed for inclusion in all surveys, as appropriate. In addition, it is recommended that the surveys include additional country-specific medicines. In the interests of containing the scope and size of the surveys, it is recommended that there be a maximum of 7 country-specific medicines so that the total number of medicines surveyed does not exceed 30.

The overarching principle for the selection of medicines for inclusion in the survey is that the medicines should be used to treat common conditions affecting children, maximising the chances that changes in availability and affordability of medicines will deliver measurable changes in childhood morbidity and mortality. Additional criteria for the selection of medicines included in the surveys should be explicit.

Background

The goal of the Better Medicines for Children project funded by the Bill and Melinda Gates Foundation is to improve access to essential medicines for children through addressing issues of availability, safety, efficacy and price. One of the four strategic objectives of the project is to promote access to essential medicines for children in priority countries by promoting their inclusion in national essential medicines lists, treatment guidelines and procurement schemes; working with drug regulatory authorities to expedite regulatory assessment of essential medicines for children; and developing measures to monitor and manage their prices.

A first step in promoting access is to assess the current situation concerning the availability and costs of essential medicines for children. Once the situation has been assessed, it will be possible to advocate for changes that will benefit children and their families and lead to measurable improvements in health outcomes. Surveys of the availability and price of key paediatric medicines will therefore be undertaken in selected African countries and five Indian states.

This report describes methods for conducting surveys of the availability and price of selected paediatric medicines in Africa and India, recognising that the needs and details required of pricing surveys in the two settings may be different. The methods also take into account the availability, prices, price components and monitoring surveys that have been already been undertaken or that are on-going in some of the target countries.

Methods for availability and pricing surveys

The methods for conducting the availability and price surveys as part of the Better Medicines for Children project are largely based on the standard method developed by WHO in collaboration with Health Action International (hereafter referred to as the WHO/HAI method), as well as on a survey of the availability and price of paediatric medicines undertaken in 14 African countries in 2007.

The proposed method is a facility-based survey in which trained data collectors visit a sample of medicine dispensing points and record data on the availability and patient price of selected paediatric medicines. A sample of medicine dispensing points will be selected from the following sectors, as applicable: public (e.g. primary health care centres), private - retail pharmacies, private - licensed drug shops, informal (retail stores), NGO, mission, dispensing doctors and private clinics. Data on government procurement prices will also be collected; these data will usually be collected at the central level (e.g. Central Medical Stores). Some countries may also choose to collect data on the selling price to public facilities, particularly in Africa where full price components surveys will not be undertaken.

Up to 30 paediatric medicines and one device (spacer for use with metered dose inhalers) will be surveyed: 23 core medicines that will be included in all surveys, and 7 medicines selected at the country level for their national importance. For each medicine in the survey, price data will be collected for two products: the highest-priced and lowest-priced products found at each medicine dispensing point.

In India data will also be collected on the add-on costs 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.

The key considerations which underpin the methods for conduct of the availability and pricing surveys are:

1. **Survey scope** - Because of the lower costs of data collection in India, medicine surveys will be conducted in accordance with the recommended WHO/HAI survey methodology - six geographical areas should be chosen for data collection in each of the participating Indian states. Survey work in India will also include a price components analysis for selected paediatric medicines.

Medicine surveys in Africa will be conducted in three geographical areas of each participating country – one urban, one peri-urban and one rural region. Due in part to the higher costs associated with data collection in Africa, surveys will be limited to medicine prices and availability and will not include a price components analysis. Previous full WHO/HAI surveys conducted in Africa will provide a platform for policy action on components of prices in that region.

2. **Existing activities** - Medicine price monitoring surveys are being undertaken in Kenya, Uganda and Tanzania; it is likely that these can be used as the basis for surveys of larger numbers of paediatric medicines. At present some of these monitoring surveys are conducted quarterly. For the purposes of this project, annual data collection would be sufficient. Currently monitoring activities are being conducted in four regions of the country; if the project budget permits, it may be possible to continue to monitor these four regions. The surveys will be expanded to include more facilities than included in 2007 surveys, therefore there will be a necessary trade-off between range of sectors included in the surveys, the number of regions that can be included, and the frequency of the surveys.

Given survey work conducted to date, and a number of projects underway or being planned, there is a substantial risk of survey “fatigue” and overload in African countries. As well, there are likely to be small pools of experienced data collectors able to contribute to projects. It will be important to the success of the Better Medicines for Children project to manage the number, timing and scope of medicines surveys conducted in Africa.

3. **Sectors to be surveyed** - As much of the supply of medicines to children will occur outside the public health sector, focusing only on the government sector would severely diminish the chances of any interventions impacting substantially on child morbidity and mortality rates. Surveys will therefore include other important sources of medicine supply in the country.

The availability and pricing surveys should include the following sectors as applicable: public health facilities, retail pharmacies, drug shops (licensed medicine suppliers), retail stores (fixed structure, licensed retail premises but without licence to supply medicines), NGO sector, mission sector, dispensing doctors and private clinics.

While supply from market vendors is of interest, those operating from temporary or mobile premises are unlikely to be able to be included in any interventions to improve access or more appropriate use of medicines in children, and therefore should not be included in the proposed surveys.

4. **Data collection procedures** - Trained data collectors will visit a sample of medicine dispensing points and record the availability and patient price of the target medicines. While methods used in survey work in India will more closely resemble the formal WHO/HAI methodology, data collection instruments used in the two settings will be the same. These will be based on those used in the WHO/HAI method and the paediatric surveys conducted in 2007. In addition, background information will be collected on topics such as the national drug regulatory status of each survey medicine and licensing arrangements for their supply through various sectors included in the surveys.

Identifying sectors to survey

It is recommended that the baseline survey include a sample of facilities in each administrative area as follows:

- Procurement data: ministry of health, Central Medical Stores, regional medical store (n=1),
- Public sector facilities: hospitals (outpatient service), primary health care centres (n=5),
- Retail pharmacies (n=5),
- Licensed drug shops (n=5),
- Retail shop (informal sector, n=5),
- Dispensing doctors and/or dispensing clinics (where applicable, n=5 per sector),
- NGO and/or Mission sector (where applicable, n=1 per sector).

If results from the baseline survey suggest that some outlets/sectors are not relevant, these will not be included in subsequent surveys.

Guidance on the identification of facilities for each sector and instructions on sample selection are provided in the Survey Guide (Annex 1).

Selection of medicines for inclusion in surveys

The list of paediatric medicines to be studied in each survey has two components: a list of 23 "core" recommended medicines to be surveyed in all participating countries and states, and a list of country-specific medicines that address country or regional differences in patterns of disease and medicines use. There should be a maximum of 7 country-specific medicines so that the total number of medicines surveyed does not exceed 30.

The list of core medicines for the surveys is the result of the consideration of a range of selection issues, namely:

1. IMCI guidelines have been taken into account in proposing the recommended list of tracer paediatric medicines. However, A broader range of diseases than that covered by the IMCI guidelines is appropriate.
2. Given other work being undertaken to understand medicine supply and access issues for HIV, medicines for HIV are not included in the tracer medicines survey. Countries may include one or more paediatric formulations of these medicines in the list of country-specific medicines.
3. Medicines that are not recommended or not preferred are included in the availability and pricing surveys. Widespread availability of these medicines could help identify targets for interventions to improve the rational use of medicines in children.
4. A number of the medicines proposed by countries participating in the African country 2007 surveys are included in the recommended list of survey medicines.
5. Subject to budget and logistic constraints, there should be a separate list of medicines relevant to hospital settings surveyed in the Better Medicines for Children project.
6. The most commonly used strength and pack size for the tracer medicines should be included in the survey. The data collection form should allow space for recording one (maximum two) alternative strengths and pack sizes to allow for between-country differences in the preparations of the medicines used.

Based on these recommendations the proposed list of 23 key tracer paediatric medicines is as shown in Table 1. Indicative strength and pack sizes are shown in the table; however the final selection of these will be based on country assessment of the most commonly used strengths and pack sizes.

Table 1 Proposed formulations and strength for key tracer paediatric medicines

Medicine	Formulation	Strength	Target pack size
1. Amoxicillin	Suspension	125mg/5ml	100ml
	Dispersible tablet	250mg dispersible tablet	21
2. Amoxicillin/clavulanic acid	Suspension	125mg+31.25mg/5ml	100ml
	Dispersible tablet	250mg + 125mg	21
3. Artemether + Lumefantrine	Dispersible tablet	20mg + 120mg	6 x 1
4. Beclometasone	Inhaler	100mcg/dose	1 inhaler (200 doses)
5. Benzylpenicillin	Injection	600mg = 1 million IU	1 vial
6. Carbamazepine	Suspension	100mg/5ml	100ml
	Chewable tablet	100mg	20
7. Ceftriaxone	Injection	500mg vial	1 vial
8. Chloramphenicol	Injection	1 gram vial	1 vial
9. Cotrimoxazole	Dispersible tablet	100mg + 20mg (also expressed as 400mg + 80mg)	15
10. Diazepam	Rectal solution	2.5mg/ml	0.5ml
11. Ferrous salt	Suspension	30mg Fe/5ml	200ml
12. Gentamycin	Injection	10mg/ml	2ml ampoule
13. Ibuprofen*	Tablet	200mg	24
14. Isoniazid	Scored tablet	50mg	56
15. Morphine	Oral solution	10mg/5ml	100ml
	Immediate release tablet	10 mg	56
16. Oral rehydration solution (ORS)	Sachet	To make 500ml	1 sachet
	Sachet	To make 1 litre	1 sachet
17. Paracetamol	Suspension	120mg/5ml OR 125mg/5ml	100ml
18. Phenobarbital	Injection	200mg/ml	1ml ampoule
	Oral liquid	3mg/ml (also expressed as 15mg/5ml)	100ml
19. Phenytoin	Suspension	25 or 30mg/5ml	500ml
	Chewable tablet	50mg	90
20. Procaine penicillin	Injection	1 gram = 1 million IU	1 vial
21. Salbutamol	Inhaler	100mcg/dose	1 inhaler (200 doses)
22. Vitamin A	Capsules	100,000IU	50
23. Zinc	Tablet (dispersible)	20mg	14
Spacer	Device	---	---

* this formulation of ibuprofen is not listed on EMLc (2009)

Data collection methods

Detailed instructions for data collection can be found in the Survey Guide in Annex 1. Additional tools and resources developed as part of the WHO/HAI method (e.g. training materials) are also relevant and should be consulted (<http://www.haiweb.org/medicineprices>). In general the methods will include:

- Development of appropriate data collection forms. These will be adapted from the WHO/HAI method and survey instruments used in the paediatric medicines surveys in 2007.
- In-country training sessions and pilot-testing of data collection instruments
- Identification of within-country project supervisor or survey manager, responsible for overseeing all data collection, data cleaning and data entry for that country
- Paired data collection where feasible, i.e. pairs of data collectors visit each facility selected for inclusion in the survey, each validating the work of the other.
- Data quality control at multiple stages.

This general framework will require adaptation for the different settings of the survey work in Africa and India.

Availability and pricing information

The availability of individual medicines is reported as the physical presence of at least one product (originator brand or generic equivalent) on the day of data collection. Pricing information will focus on the costs of medicines to the patient, and likewise will be adapted from the methods used in 2007. The 2007 survey forms requested information only on those medicines available on the day of the survey and the cost for the cheapest medicine of that type available. This meant considerable inconsistency in the extent of data collection on prices and limited price comparisons between the public and private sectors were possible. The revised approach for this project is to collect cost data on all medicines surveyed, regardless of the availability of the medicine on the day of the survey. In addition, where multiple products are available for the same medicine, cost data should include the lowest and highest prices that would be charged for the survey medicine in that facility.

None of these proposed modifications and simplifications to the full WHO/HAI survey methodology should significantly affect the ability of the surveys conducted in Africa to allow comparisons of availability and prices in outlets from different regions, in urban versus rural areas, in public facilities versus private versus informal sectors and to monitor improvements over time in access and affordability of paediatric medicines. The streamlined methods may enhance the feasibility, acceptability and cost-effectiveness of conducting

these surveys in Africa, and still provide policy relevant information for the Ministry of Health in each participating country.

In addition to pricing and availability data, medicine surveys will also collect information on the national regulatory status of the medicine as well as its inclusion in the national EML, EMLc and/or STGs. In addition, any restrictions on the availability for supply of the medicine in public and private sector facilities and within levels of public health facilities should be noted.

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Better Medicines for Children Project

Annex 1: Guide to planning and conducting a survey of paediatric medicine prices and availability (DRAFT)

Introduction

This guide describes the methodology for conducting surveys of the availability and price of selected paediatric medicines as part of the Better Medicines for Children Project. The methods are largely based on the standard method developed by WHO in collaboration with Health Action International (hereafter referred to as the WHO/HAI method), as well as on a survey of the availability and price of paediatric medicines undertaken in 14 African countries in 2007.

This guide will specifically address those activities to be carried out at the national or state level, namely:

Survey preparation:

- Recruiting and training survey personnel.
- Selecting the sample of medicine outlets.
- Finalizing the list of medicines to be surveyed.
- Developing the Medicine Price Data Collection form.

Data collection:

- Logistics for field visits
- Instructions for completing the Medicine Price Data Collection form.
- Data quality control

As data entry, cleaning and analysis will be conducted centrally for all surveys, these topics are not covered in the Guide.

Survey methods in African countries and Indian states are largely the same but do differ slightly in accordance with the differing needs and resource availabilities in each setting. Where methodologies differ between Africa and India, these are clearly identified. A key difference between the two settings is that price components surveys will be conducted in Indian States but not in African countries. Guidance for conducting a price components survey follows the WHO/HAI method, which is summarized in Annex 2.

Survey Preparation

Recruiting survey personnel

The survey will require the involvement of the following personnel:

- the within-country project supervisor or survey manager;
- area supervisors; and
- data collectors.

Survey manager

The survey manager plans and coordinates the survey at the central (national or state) level. This includes planning the survey's technical and logistical aspects, recruiting and training survey personnel, supervising data collection and data entry, and conducting data quality assurance. The survey manager should be a pharmacist with experience in conducting surveys and familiarity with the health-care system.

Area supervisors

Area supervisors are responsible for overseeing all aspects of data collection in the survey area(s) for which they are responsible. In a small country or in a survey that is conducted in a single region of a country, it may be possible for all field work to be undertaken by a single team. In larger-scale studies, however, it is advisable to designate a supervisor, preferably a pharmacist, in each of the geographical areas that will be surveyed.

Area supervisors should be experienced in data collection and be familiar with pharmaceutical terminology. They will also be instrumental in gaining access to facilities; if any area supervisor is unfamiliar with their designated area, a local contact may be needed to assist in identifying medicine outlets.

Data collectors

Data collectors are responsible for visiting medicine outlets and recording information on medicine prices and availability with a high degree of accuracy. However, data collectors should, wherever possible, have the following skills and capabilities:

- a basic understanding of pharmaceuticals, including different formulations (strengths, dose forms, etc.) and pack sizes, in order to be able to extract the required information from both health professionals and from written material such as packs and order lists.
- some understanding of the principles of sample surveys, ideally with some previous experience in conducting surveys;
- a minimum of post-secondary school education, though some pharmaceutical training and/or experience is preferred (e.g. pharmacists, pharmacy technicians, pharmacy students, nurses);
- an appreciation of the logistical requirements for carrying out field studies; and
- familiarity with the locality and local language/dialect.

Where possible, data collectors should work in pairs so that they can make systematic checks of entries into the Medicine Price Data Collection form. Each visit to a health facility or pharmacy is likely to require about one to two hours plus transport time. In practice, this means that a team of two data collectors can survey two to four facilities per day. Depending on the locations of the survey areas, travel conditions and number of medicine outlets to be surveyed, 6-12 data collectors (1 pair per survey area or per 2 survey areas) will be needed.

Training survey personnel

Thorough training of survey personnel is one of the most important ways of ensuring accurate data collection and good-quality data. A training workshop for survey personnel should therefore be held as part of survey preparation. The training workshop's overall objective is to provide area supervisors and data collectors with the knowledge and skills required to carry out the medicine prices and availability survey in an accurate and reliable manner.

Training should focus on teaching the participants:

- the survey's overall purpose;
- the consequences of poor-quality data;
- how to conduct medicine outlet visits and collect price and availability data;
- how to complete the Medicine Price Data Collection form;
- common data collection mistakes;
- problem-solving in the field.

The training workshop can be held over two or three days and should be attended by all survey personnel. It is essential that it include a data collection pilot test in which survey personnel visit public and private sector medicine outlets and collect data in the same way they would during actual fieldwork. This will not only provide survey personnel with practical experience in collecting data, but will also serve as a check of the appropriateness of the draft list of survey medicines.

The training workshop should be held as close as possible to the initiation of data collection – time lags between training and data collection should be avoided so that survey personnel have better recall of the data collection protocol.

A variety of resources and tools for conducting a training workshop medicine price and availability survey methods are available in the WHO/HAI survey manual and accompanying CD Rom (<http://www.haiweb.org/medicineprices>). These include a Trainer's Guide, sample presentation slides, sample handouts, and exercises. The adaptation and use of these materials is encouraged.

Selecting the sample of medicine outlets

Selection of survey areas or regions

Survey areas are administrative areas (e.g. districts, municipalities, counties) in the country where data will be collected. When deciding which administrative division to use, the following criteria should serve as a guide:

- Each survey area should cover a population of about 100 000 to 250 000 (in small countries a lower population coverage may be appropriate).
- All survey areas should be reachable within one day's travel from the country's main urban centre.
- Each survey area should contain the requisite number of health facilities (see below).

Note that in some cases, there may be a valid reason for excluding an area from the random sample, e.g. political instability or risk of cross-border trade/smuggling.

In African countries, three survey areas should be selected for data collection:

Choose the countries' *major urban centre* as one area.

Divide the administrative areas that can be reached within one day from the major urban centre into groups according to population density - urban, periurban and rural. If no rural areas can be reached within one days' travel from the main urban centre, the perimeter should be expanded until such areas are found.

Randomly select one survey area from the rural group and one survey area from the periurban group.

In Indian States, six survey areas should be selected for data collection:

Choose the state's *major urban centre* as one area.

Choose *an additional five survey areas* randomly from all the administrative areas that can be reached *within one day* from the major urban centre using the most appropriate means of transportation, usually car, bus or train.

- If your state has another important major urban centre (e.g. provincial or business capital), choose this as a survey area. Then choose *four more areas* randomly from all the administrative areas that can be reached within one day from the major urban centre.

In Indian States, the geographical distribution of population can also be considered in selecting survey areas to ensure that both urban and rural areas are surveyed. If there are large differences in the population densities of administrative areas:

- Divide the administrative areas that can be reached within one day from the major urban centre into groups according to population density (e.g. urban, rural, periurban).

- Randomly select survey areas from each group, allocating the number of survey areas to each group roughly according to the proportion of population it represents.

Selection of sectors to be surveyed

It is recommended that the baseline survey include a sample of facilities in each administrative area as follows:

1. Public sector procurement data: ministry of health, Central Medical Stores, regional medical store (n=1). These are prices that the government pays to procure medicines. Unlike other sectors where data are always collected at a sample of medicine outlets, procurement data are usually collected centrally from the ministry of health (from tender or other documents) or at central or regional medical stores. However, where there is decentralized procurement, data should be collected from public health facilities. In addition to public sector procurement prices, some countries may also choose to collect data on the selling price to public facilities, particularly in Africa where full price components surveys will not be undertaken.
2. Public sector facilities: hospitals (outpatient service), primary health care centres (n=5)
Patient prices can include government, municipality or other local authority health facilities, where patients receive medicines, such as hospitals, clinics and health centres. Note that for the hospitals included in the public sector sample, medicine price/availability data are collected for the outpatient/primary health care service. The structure of the health system, including the expected availability of medicines at each level of care, should be considered when developing the public sector sample.
3. Private sector - licensed retail pharmacies (n=5).
4. Private sector - licensed drug stores (n=5).
NOTE: The private sector does not include unlicensed drug stores, drug sellers in the informal sector, pharmacies in private clinics and hospitals or health facilities operated by private companies, such as mining companies.
5. Retail stores (informal sector) (n=5)
Retail stores are fixed structured, licensed retail premises but without a licence to supply medicines.
6. Health facilities run by NGOs, such as charitable organizations (where applicable) (n=1).
7. Health facilities run by religious organizations, such as church missions (where applicable) (n=1).

8. Dispensing doctors (where applicable) (n= 5).
9. Private clinics (where applicable) (n=5).

Identification of facilities for each sector

In each geographical area included in the survey (3 and 6 areas in African countries and Indian states, respectively), information on medicine dispensing points is required for the selection of the survey sample. Guidance on the identification of facilities for each sector is provided below.

Public sector, NGO sector and mission sector: Lists of public health facilities will be available from the Ministry of Health or regional offices. These sources will also be able to identify NGO or mission facilities, Central Medical Stores and regional medical stores.

Private sector (retail pharmacies, licensed drug shop): As these are licensed facilities, there should be a central register of these outlets. However, the local knowledge of the data collectors will be required to identify the facility closest to the public health facility included in the survey.

Retail shop (informal sector): As these outlets do not have a formal licence to sell medicines, it will be necessary to rely on the local knowledge of health facility staff and data collectors to provide advice on the location of these facilities. Previous HAI experience with data collection in the informal sector is that local nurses and data collectors can identify these outlets and with introduction of the research by locals, data collection is possible. A key issue is ensuring that the vendors do not think the data collection is related to the Ministry of Health.

Dispensing doctors: As these are licensed medical practitioners, names will be recorded in national registers of Medical (and Dental) Practitioners. Local health facility staff and data collectors will be able to provide advice on the location of these providers. Likewise, local personnel will be able to identify dispensing clinics if dispensing doctors cannot be identified as a separate sector for survey.

Sample Selection

Selecting the public sector sample:

Step 1: In each survey area, choose the main public hospital (generally district or regional hospital, though it could be a tertiary hospital). These hospitals will be part of the sample of medicine outlets that you will survey. Data are collected for each hospital's outpatient/primary health care services.

Step 2: For each survey area, create a complete list of all public health facilities that have pharmacies or dispensaries that are *within three hours' travel* from the main hospital selected in Step 1. Note that for hospitals, only those with outpatient/primary health care services should be included.

Step 3: Select four public sector outlets in each survey area.

For each survey area, randomly select four public sector medicine outlets from the lists you created in Step 2.

- If there is only one level of health facility on the list (e.g. only primary health care centres), choose four at random.
- If there are two or more levels on the list (e.g. primary health care centres and district hospitals):
 - Divide the list by level.
 - Randomly select an equal number of medicine outlets for each level (e.g. two district hospitals plus two health centres).
 - If there are fewer than two medicine outlets in any level, increase the number selected from the other level accordingly (e.g. one district hospital plus three health centres).

Selecting the sample for the following other sectors:

- Retail pharmacies (n=5),
- Licensed drug shops (n=5),
- Dispensing doctors (or dispensing clinics, n=5),
- Retail shop (informal sector, n=5).

In each survey area, for each of the sectors listed above, choose the medicine outlet that is *closest* to each public medicine outlet selected (including the main public hospital).

In any given sector, if there is no medicine outlet within 10 km of a remote public facility, another private outlet in the urban centre should be selected.

Selecting the sample for the NGO and Mission sectors (n=1 per sector):

For each of the NGO and Mission sector, randomly select one medicine outlet from those that can be reached *within three hours' travel* from the main public hospital in each survey area. If there is no NGO or Mission sector medicine outlet within three hours' travel from the main public hospital, another outlet in the urban centre should be selected.

Finalizing the list of medicines to be surveyed

The list of paediatric medicines to be studied in each survey has two components: a list of 23 "core" recommended medicines to be surveyed in all participating countries and states, and a list of country-specific medicines that address country or regional differences in patterns of disease and medicines use. There should be a maximum of 7 country-specific medicines so

that the total number of medicines surveyed does not exceed 30. All medicines to be studied should be registered in the country.

Each survey medicine has a specific dosage form and strength. As different dosages forms and/or strengths of the same medicine may have different prices, data must be collected on the same dosage form and strength in all medicine outlets so that results are comparable. That is, each must be considered as a separate survey medicine with a distinct set of price data.

Medicines on the core list have pre-determined dosage forms and strengths. These should be confirmed prior to the initiation of data collection. If a core medicine is not available as the listed strength but is available as an alternate strength, the strength of the core medicine should be changed. If the core medicine is available both as the listed strength and as another strength, the latter can be added as a separate medicine in the list of 7 country-specific medicines.

(Note that during data collection, when alternate paediatric strengths are available for any of the survey medicines, data on these should be added in the extra rows at the end of the data collection form.)

Each medicine has a target pack size for data collection. When a medicine is available in multiple pack sizes, data are collected on the recommended pack size or—if this is not available—on the next largest pack size. This standardizes results as much as possible, and counteracts price differences arising from economies of scale (i.e. lower unit price offered for larger pack sizes).

The list of 23 key tracer paediatric medicines is as shown in Table 1. Some indicative strength and pack sizes are shown in the table; however the final selection of these will be based on country assessment of the most commonly used strengths and pack sizes.

Table 1 Proposed formulations and strength for key tracer paediatric medicines

Medicine	Formulation	Strength	Target pack size
24. Amoxicillin	Suspension	125mg/5ml	100ml
	Dispersible tablet	250mg dispersible tablet	21
25. Amoxicillin/clavulanic acid	Suspension	125mg+31.25mg/5ml	100ml
	Dispersible tablet	250mg + 125mg	21
26. Artemether + Lumefantrine	Dispersible tablet	20mg + 120mg	6 x 1
27. Beclometasone	Inhaler	100mcg/dose	1 inhaler (200 doses)
28. Benzylpenicillin	Injection	600mg = 1 million IU	1 vial
29. Carbamazepine	Suspension	100mg/5ml	100ml

Medicine	Formulation	Strength	Target pack size
	Chewable tablet	100mg	20
30. Ceftriaxone	Injection	500mg vial	1 vial
31. Chloramphenicol	Injection	1 gram vial	1 vial
32. Cotrimoxazole	Dispersible tablet	100mg + 20mg (also expressed as 400mg + 80mg)	15
33. Diazepam	Rectal solution	2.5mg/ml	0.5ml
34. Ferrous salt	Suspension	30mg Fe/5ml	200ml
35. Gentamycin	Injection	10mg/ml	2ml ampoule
36. Ibuprofen*	Tablet	200mg	24
37. Isoniazid	Scored tablet	50mg	56
38. Morphine	Oral solution	10mg/5ml	100ml
	Immediate release tablet	10 mg	56
39. Oral rehydration solution (ORS)	Sachet	To make 500ml	1 sachet
	Sachet	To make 1 litre	1 sachet
40. Paracetamol	Suspension	120mg/5ml OR 125mg/5ml	100ml
41. Phenobarbital	Injection	200mg/ml	1ml ampoule
	Oral liquid	3mg/ml (also expressed as 15mg/5ml)	100ml
42. Phenytoin	Suspension	25 or 30mg/5ml	500ml
	Chewable tablet	50mg	90
43. Procaine penicillin	Injection	1 gram = 1 million IU	1 vial
44. Salbutamol	Inhaler	100mcg/dose	1 inhaler (200 doses)
45. Vitamin A	Capsules	100,000IU	50
46. Zinc	Tablet (dispersible)	20mg	14
Spacer	Device	---	---

* this formulation of ibuprofen is not listed on EMLc (2009)

Selection of country-specific medicines

Country-specific medicines should be selected to address country or regional differences in patterns of disease and medicines use. There should be a maximum of 7 country-specific medicines so that the total number of medicines surveyed does not exceed 30.

The following selection criteria should also be considered when developing the supplementary list of medicines to be surveyed:

- Burden of disease and national or local disease and treatment priorities
- Global and national treatment guidelines

- Expected availability in primary health care outlets - Since primary health care facilities form most of the public sector sample, the medicines selected for the supplementary list should be available at this level of care.
- The supplementary medicine list can include medicines on the national essential medicines list as well as those that are not, and should include both if price differences are suspected between the two categories.
- A broader range of diseases than that covered by the IMCI guidelines is appropriate.
- Medicines that are not recommended or not preferred. Widespread availability of these medicines could help identify targets for interventions to improve the rational use of medicines in children.

Instructions for finalizing the list of survey medicines

Review and complete the attached table of core medicines (Table 2):

1. If a core medicine is not available as the listed strength but is available as an alternate strength, change the strength of the core medicine.
2. Review the target pack size for each medicine and revise as necessary to reflect the most commonly-used pack size for each medicine found in the country.
3. Indicate the registration status of each medicine. If any medicine is not registered in your country, it should not be surveyed.
4. Indicate which of the core medicines are listed on the National Essential Medicines List.
5. Indicate which of the core medicines are included in national standard treatment guidelines, including Integrated Management of Childhood Illness (IMCI) guidelines.
6. Identify which levels of public health facilities are expected to stock each medicine. In the survey, medicine availability in the public sector is based on the level of care where each medicine is expected to be available. For example, data from primary health care centres will not be used to calculate the availability of a medicine which is only used in district hospitals.
 - For each medicine, indicate the level of care where the medicine is expected to be available. Your national EML may be broken down by level of care; if not, consult treatment guidelines for common conditions.
 - If levels of care are not relevant to your survey, enter “1” to select primary (1) for all medicines so that the availability analysis.
7. Indicate if there are any other restrictions on availability of medicine in either the public or the private sectors.

Complete the attached table of country-specific medicines (Table 3):

1. Enter the medicine name, strength, dosage form and target pack size
Name: The name is usually the International Non-proprietary Name (INN).
Strength: The strength of the medicine, usually expressed as the number of milligrams or grams of active ingredient per dosage form.

Dosage Form: The dosage form of the medicine for which the unit price is to be determined. The dosage form will most commonly be "cap/tab", "dispersible cap" or "chewable cap" for paediatric medicines administered as normal release capsules or tablets. Other dosage forms include "millilitre", "gram", "dose" (inhalers or nebulizers), "MR tab" (modified release tablets), "pessary" or "suppository".

Target Pack Size: Different pack sizes are used in many countries, and unit prices often vary by pack size. Field data collectors should try to find a pack size identical to or larger than the target pack size.

2. Indicate the registration status of each medicine.
3. Indicate which of the core medicines are listed on the National Essential Medicines List.
4. Indicate which of the core medicines are included in standard treatment guidelines.
5. Identify which levels of public health facilities are expected to stock each survey medicine.
6. Indicate if there are any other restrictions on availability of medicine in either the public or the private sectors.

Preparing the data collection form

Once the list of survey medicines has been finalized, the data collection form can be prepared. A draft data collection form has been prepared with information on the core list of 23 medicines. Any changes to the core list (e.g. alternate strengths, target pack sizes) should be reflected in the data collection form, and the country-specific medicines should be added so that the final list contains all survey medicines in alphabetical order. Note that extra space is provided at the end of the form for recording data on any alternate strengths encountered in the field.

For each medicine, the Medicine Price Data Collection form contains two rows: the first is for recording information on the highest-priced product found at each medicine outlet, and the second is for recording information on the lowest-priced product. The form contains 10 columns:

Medicine name, dosage form and strength (Column A)

Column A lists:

- ⊙ the medicine's International Non-proprietary Name (INN)
- ⊙ the medicine's dosage form
- ⊙ the medicine's strength

A medicine may be available in different dosage forms: tablet/capsule, dispersible tablet, chewable tablet, mixture/syrup, suspension, injection, cream/ointment and so on. Tablets and capsules are normally considered equivalent, unless they are chewable, dispersible, sustained release, etc. Scored tablets are not interchangeable with regular tablets. *Information should only be collected for the dosage form listed in Column A.*

Many medicines will be marketed in more than one strength. The Medicine Price Data Collection form lists the strength selected for inclusion in the survey; *this is the only strength on which information should be recorded*. If alternate strengths are found these should be recorded in the extra rows at the end of the form.

Available today (Column B)

For each medicine, data collectors should record availability as "yes" *only if they actually see a pack of the medicine*.

Medicine type (Column C)

This column is used to distinguish between the two product types collected in the survey: the highest-priced and lowest-priced products.

Brand or product name(s) (Column D)

While Column A contains the medicine's INN, Column C is for recording the names of individual products.

Manufacturer (Column E)

Column E is for recording the name of the manufacturer of each product found.

Target pack size (Column F)

For each medicine several pack sizes may be available, such as a pack of 30, 100, 250 or even 1000 tablets or capsules, and single vials or 10 vials for an injection. Mixtures may also be available in different volumes: e.g. 70 ml or 100 ml. The price per unit may vary between pack sizes, generally with larger pack sizes sold at a lower unit price.

In order to facilitate comparisons between products, sectors and countries, a "target pack size" has been selected for each medicine.

Pack size found (Column G)

The data collectors in the field should complete this column. If several pack sizes are available for the same product, data collectors should select the recommended pack size or the next larger pack size.

Price of pack found (Column H)

The data collectors in the field should complete this column by consulting the product label, price list or computer.

Unit price (Column I)

Unit price refers to the price per individual tablet, capsule, millilitre (for injections, liquids, etc.), gram (for creams, etc) or dose (for inhalers). This column is completed by dividing the price of the pack found by the pack size. Unit prices are generally calculated by area supervisors following data collection.

Comments (Column J)

Column J is used for recording any comments, such as the temporary unavailability of a medicine in a specific pharmacy. For suspensions, use this column to indicate whether medicines were found as a powder or an oral liquid.

Data collection

Conducting field visits

Before data collection starts, a schedule of visits to sample medicine outlets should be prepared for each survey area. The number of days required to collect the data can be estimated on the basis of the number of facilities to be visited in each geographical area, the distance between them and the mode of transport available. In general, two data collectors will require one to two hours plus travelling time for data collection in each facility.

Area supervisors should call or visit sample medicine outlets to seek their permission for data collection in their facility or medicine outlet. Outlets should not be informed about the specific medicines included in the survey. An appointment should be made for data collection on a date and at a time that is convenient for the manager of the medicine outlet, avoiding peak periods when he or she may be busy with patients.

Area supervisors should prepare sufficient copies of the Medicine Price Data Collection form for field visits. They should also arrange to copy and store completed data collection forms in plastic bags until fieldwork is completed, at which time they will be transferred to the survey manager. The area supervisors should always keep a copy of all data collection forms, in case those sent to the survey manager are lost or damaged. The survey manager should arrange for the safe storage of all completed forms in secure conditions for an indefinite period, in the event that data need to be checked at a later date. Forms should be stored in a location that is protected from moisture, direct sunlight, rodents and insects.

Data collectors will need to bring the following tools and information with them on each day of data collection:

- Their area supervisor's contact details, including a mobile phone number to call in case of difficulty in the field
- A schedule of visits to survey sites, including contact details of the sites to be visited
- A Medicine Price Data Collection form for each sample medicine outlet to be visited that day
- A calculator for calculating the unit price of medicines
- Pens (pencils should not be used to record data), a clipboard and other supplies
- A notebook to record any significant events or findings
- Field allowance for local expenses

Where feasible, each data collection team should also be equipped with a mobile phone and credit for use in contacting their area supervisor. Additional supplies that may be useful include an identity document with a photograph, a local map and extra calculator batteries.

Area supervisors should meet with their data collectors at the end of each day to check completed data collection forms, get feedback on the data collection process and resolve any problems. They should go out into the field regularly with the data collection teams to ensure that the agreed procedures are being followed.

After checking the completed Medicine Price Data Collection forms, the area supervisors should calculate the unit prices of the medicines that have been found, using the following procedure:

- For each product, divide the *Price of pack found* (Column H) by the *Pack size found* (Column G).
- Retain at least four digits after the decimal point.
- Enter the calculated unit prices in Column I of the Medicine Price Data Collection form and double-check the calculations.

Fieldwork for data collectors

On arrival at the health facility, pharmacy or other medicine outlet, data collectors should do the following:

- Introduce themselves and remind pharmacy staff of the survey's purpose as well as the scheduled data collection visit. Data collectors should also thank medicine outlet staff for their cooperation and, if necessary, remind them that the outlet's identity will be kept confidential.
- Complete the facility information on the first page of the Medicine Price Data Collection form.

Procedure for completing the Medicine Price Data Collection form

Data collectors should complete a separate Medicine Price Data Collection form for each medicine outlet. Information on prices and availability should be entered with the aid of the person in charge of the facility. The Medicine Price Data Collection form should not be left at a facility or pharmacy to be collected later, with the promise that it will be filled in. Medicines must be physically seen to confirm availability. Prices can be recorded from the product label, or from a price list or computer if this is how price information is stored.

FOR EACH MEDICINE LISTED:

STEP 1: Complete Column B: Available today

Complete this column by answering 'yes' or 'no' as to whether the medicine is found. Always ask to see a pack of the product and only record that it is available if you actually see it.

A medicine may be available in different dosage forms, such as tablets/capsules, mixture/suspension, injection or cream/ointment. In addition, a medicine may be available in different strengths, such as 10 mg or 20 mg. **If medicine in the specific dosage form**

AND strength listed is not found, the medicine should be recorded as 'unavailable' on the data collection form.

- Tablets and capsules are considered equivalent. However, scored tablets and regular tablets are not equivalent.
- Plain, coated and film-coated products are considered equivalent.
- Dispersible tablets and chewable tablets are considered equivalent, but are not considered equivalent to regular tablets. If a chewable tablet is found in place of a dispersible or vice versa, this should be noted in the Comments column (column J).
- Suspensions in powder form or oral liquid form are considered equivalent (their form should be recorded in the Comments column (column J)).
- Modified release formulations (e.g. slow release, retard) should be considered as separate products.

Products available in alternate paediatric strengths should be recorded in the extra lines at the end of the form. Data on alternate dosage forms should not be collected.

If a product is temporarily out of stock:

- Record medicine as 'unavailable'.
- Collect price data if it is available (e.g. from a price list).
- State that the product was out of stock in Column J: Comments.
- **Do not substitute an alternative product.**

STEP 2: Identify the highest-priced and lowest-priced products available at the medicine outlet

For each medicine, the highest-priced and lowest-priced products must be identified during the field visit. **The highest/lowest-priced product is the one with the highest/lowest unit price or price per pill, tablet, dose or ml.**

- If you only find one product, it is the lowest-priced product available at that outlet. In the row marked *Lowest-price product*, enter the product name and the manufacturer's name.
- If you find more than one product, you must identify the ones with the highest/lowest unit price (price per pill, tablet, ml, dose). When this is not immediately obvious (i.e. several products with varying pack sizes are available), calculate the unit prices of each product by dividing the price of the pack by the pack size, to identify the highest and lowest. Once the highest-priced and lowest-priced products are identified, enter the product name (Column D) and the manufacturer's name (Column E) for each in the appropriate row.

STEP 3: Complete the column: Pack size found (Column G)

Each medicine has a target pack size (Column F). When a medicine is available in multiple pack sizes, data are collected on the target pack size or, if this is not available, on the next largest pack size. For each medicine, enter the pack size actually found in the facility for:

- Row 1: the highest-priced product
- Row 2: the lowest-priced product

If a medicine is available in a bulk pack (e.g. jar or container) and the pharmacist re-packages smaller quantities for patients (e.g. in a bag, envelope or bottle), record the *patient* pack size and price.

STEP 4. Complete the column: Price of pack found (Column H)

Enter the price of the pack found, in the national currency, for:

- Row 1: Highest-priced product
- Row 2: Lowest-priced product

If part of the price is paid by insurance or other means, record the total price. For instance, if the pharmacy is reimbursed 80% and the patient pays 20%, you should record the full price (100%).

Do not record 'special discounts' (discounts available only to certain group of patients). However, you should record discounted prices if they apply to all patients. Add a note in the Comments section.

In the public sector, medicines are often distributed free of charge or for a fixed fee for either the medicine or the visit. In some cases, certain medicines are free or available for a fixed fee, while others are not. For example, this may occur if a certain medicine is paid for through donations or a special treatment programme. In these cases:

- record both the availability and prices of medicines that are not free or only available for a fixed fee; and
- record only the availability of free/fixed fee medicines and record this in the Comments section (Column J).

If medicines are available for free or for a fixed fee, their availability should still be recorded. If some, but not all, medicines are available for free or for a fixed fee, this must be recorded in the Comments column for each free/fixed fee medicine. Otherwise, it may appear that you have simply forgotten to enter the price.

STEP 5: Complete Comments column (Column J) as required

Column J can be used for explanatory comments or any additional information, such as:

- Form of suspensions found (powder or oral liquid)
- A dispersible tablet is found in place of a chewable tablet, or vice versa (dispersible tablets and chewable tablets are interchangeable).
- Product temporarily out of stock.
- Percentage discount offered.
- Medicine is free or available only for a fixed fee.

Before leaving the facility

Data collectors should check that the data collection form is legible, accurate and complete before leaving the facility and returning completed forms to the area supervisor. They should report any problems as soon as possible.

Data quality control

Why is data quality important?

- Solid data supports conclusions and recommendations
- Future policy decisions may rely on the evidence generated in the survey
- Critics and opponents will look for weaknesses in the survey methods and results
- To respect the values of integrity and transparency in the Better Medicines for Children project

Common data problems in medicine price and availability surveys include:

- Wrong prices collected in the field—wrong medicine, wrong strength (the most common mistake), or wrong dosage form
- Illegible or incomplete data collection forms or both
- Mistakes in entering the price (e.g. decimal in the wrong place, extra or missing zeroes)
- Ambiguous data, e.g. unclear pack size (e.g. "one bottle" rather than the number of millilitres, leading to incorrect calculation of unit price);
- A discount was applied to the recorded price, but was not applicable to all patients
- Recorded price was actually a flat dispensing fee rather than the true price
- Recorded price included additional fees, such as injection fees
- Errors in the calculation of unit prices

Data problems can be avoided by:

- Studying the guide and accompanying materials carefully at every step and following instructions
- Selecting capable and reliable personnel and ensuring they are well trained in the survey methodology
- Encouraging personnel to communicate openly about uncertainties in survey procedures and questionable data
- Double-checking data collection forms for accuracy and completeness after each data collection visit, at the end of each day of fieldwork and prior to data entry

Table 2: Proposed list of core medicines to be surveyed

Medicine	Formulation	Strength	Target pack size	Registered in country? YES/NO	Listed on National Essential Medicine List? YES/NO	Included in national standard treatment guidelines, including IMCI? YES/NO	Minimum level of care expected to stock the medicine (public sector)* 1, 2 or 3	Other restrictions on availability of medicine in public or private sector?
Amoxicillin	Suspension	125mg/5ml	100ml					
Amoxicillin	Dispersible tablet	250mg dispersible tablet	21					
Amoxicillin/clavulanic acid	Suspension	125mg+31.25mg/5ml	100ml					
Amoxicillin/clavulanic acid	Dispersible tablet	250mg + 125mg	21					
Artemether + Lumefantrine	Dispersible tablet	20mg + 120mg	6 x 1					
Beclometasone	Inhaler	100mcg/dose	1 inhaler (200 doses)					
Benzympenicillin	Injection	600mg = 1 million IU	1 vial					
Carbamazepine	Suspension	100mg/5ml	100ml					
Carbamazepine	Chewable tablet	100mg	20					
Ceftriaxone	Injection	500mg vial	1 vial					
Chloramphenicol	Injection	1 gram vial	1 vial					
Cotrimoxazole	Dispersible tablet	100mg + 20mg (also expressed as 400mg + 80mg)	15					

Medicine	Formulation	Strength	Target pack size	Registered in country? YES/NO	Listed on National Essential Medicine List? YES/NO	Included in national standard treatment guidelines, including IMCI? YES/NO	Minimum level of care expected to stock the medicine (public sector)* 1, 2 or 3	Other restrictions on availability of medicine in public or private sector?
Diazepam	Rectal solution	5mg/ml	0.5ml					
Ferrous salt	Suspension	30mg Fe/5ml	200ml					
Gentamycin	Injection	10mg/ml	2ml ampoule					
Ibuprofen	Tablet	200mg	24					
Isoniazid	Scored tablet	50mg	56					
Morphine	Oral solution	10mg/5ml	100ml					
Morphine	Immediate release tablet	10 mg	56					
Oral rehydration solution (ORS)	Sachet	To make 500ml	1 sachet					
Oral rehydration solution (ORS)	Sachet	To make 1 litre	1 sachet					
Paracetamol	Suspension	120mg/5ml OR 125mg/5ml	100ml					
Phenobarbital	Injection	200mg/ml	1ml ampoule					
Phenobarbital	Oral liquid	3mg/ml (also expressed as 15mg/5ml)	100ml					
Phenytoin	Suspension	25 or 30mg/5ml	500ml					

Medicine	Formulation	Strength	Target pack size	Registered in country? YES/NO	Listed on National Essential Medicine List? YES/NO	Included in national standard treatment guidelines, including IMCI? YES/NO	Minimum level of care expected to stock the medicine (public sector)* 1, 2 or 3	Other restrictions on availability of medicine in public or private sector?
Phenytoin	Chewable tablet	50mg	90					
Procaine penicillin	Injection	1 gram = 1 million IU	1 vial					
Salbutamol	Inhaler	100mcg/dose	1 inhaler (200 doses)					
Vitamin A	Capsules	100,000IU	50					
Zinc	Dispersible tablet	20mg	14					
Spacer	Device	---	---					

* Level 1: primary care, or first point of contact with the health system for access to essential health care (e.g. rural health posts, community health centres); Level 2: secondary care, or specialized ambulatory medical services and first line referral to outpatient and inpatient hospital care (e.g. district hospitals); Level 3: tertiary care, or medical and related services of high complexity (e.g. regional or central hospitals).

Table 3: Proposed list of country-specific medicines to be surveyed

Medicine	Formulation	Strength	Target pack size	Registered in country? YES/NO	Listed on National Essential Medicine List? YES/NO	Included in standard treatment guidelines? YES/NO	Minimum level of care expected to stock the medicine (public sector)* 1, 2 or 3	Other restrictions on availability of medicine in public or private sector?

Better Medicines for Children Project

Annex 2: Guide to planning and conducting a price components study (DRAFT)

Abbreviations and acronyms

CIF	Cost, Insurance And Freight
CMS	Central Medical Stores
EXW	Ex-Works
DDU	Delivered Duty Unpaid
FOB	Free on Board
GST	Goods and Service Tax
LoC	Letter of Credit
MRP	Maximum Retail Price
MSP	Manufacturer's Selling Price
NA	Not Available
NGO	Nongovernmental Organization
VAT	Value Added Tax
WHO	World Health Organization
NEML	National Essential Medicines List

1. Background

The price paid for a medicine comprises a number of *price components*, the manufacturer's selling price (MSP) being just one of them. As medicines move along the supply chain, from the manufacturer to the patient, additional costs are added to the MSP. These price components come from a variety of sources, such as freight costs, government-collected tariffs, and taxes and retail mark-ups collected by middlemen to meet their overheads. The following guide describes the methodology for conducting a price components study as per the methodology developed by WHO and Health Action International.

2. Overview of the price components survey methodology

The price components data collection methodology has two parts: a pharmaceutical policy investigation at the central level and research into actual price components along the medicine distribution chain.

Data collection begins at the central level where investigators gather information on national policies that affect pharmaceutical prices. Collecting these data will require interviewing staff in various ministries and health-care delivery systems to identify what mark-ups are allowed by law and any restrictions that are imposed on them (for example, a maximum mark-up).

The survey's second part comprises collecting the actual price components of selected medicines as they move along the supply chain. Since there are many possible distribution routes and intermediaries, the survey begins at the end of the supply chain and tracks each medicine backwards to the beginning. That is, researchers must begin at the end of the supply chain—at the dispensaries in the public sector or retail pharmacies in the private sector—and track the targeted medicine to the beginning of the supply chain—the manufacturers or importers.

Data are collected in at least the public and private sectors, as well as any 'other' sector used in the medicine prices survey, in two regions. Five to seven medicines are tracked from the time they are procured from the manufacturer until they reach the patient. Medicines are selected to reflect a range of categories (e.g. single- and multi-source products, imported and locally produced products) in which different price structures could be found. Where possible, data are collected for both the originator brand product and a generic equivalent for each medicine.

At the dispensaries or private retail pharmacies, investigators collect information on the procurement price and the dispensing price, and identify the wholesaler or public sector supplier for each medicine. They also note any mark-ups, taxes and dispensing fees. Once investigators have visited all dispensing points they aggregate the wholesaler information to identify which wholesalers should be interviewed. Next the investigators visit these wholesalers and public sector suppliers, and collect information on wholesale mark-ups,

local distribution costs and any taxes collected. At the wholesalers/public sector suppliers, investigators will identify the international supplier or local manufacturer. Investigators will visit as many of the supply chain stages as possible, and gather as much information on the price components as can be found. Data collection continues at each stage of the supply chain within the target country, ending with the importer (for imported medicines) and the manufacturer (for those medicines that are locally produced).

3. Overview of price components

Price components vary among countries, among sectors of the health-care system and among medicines. The following price components are commonly found in the medicine price chain:

- MSP
- Insurance and freight
- Port and inspection charges
- Pharmaceutical import duties
- Mark-ups by importers, wholesalers and retail distributors
- Value Added Tax (VAT)/Goods and Services Tax (GST)
- Dispensing fees.

To understand the impact of these component costs, the supply chain has been divided into five stages that medicines traverse as they move from manufacturer to patient (see Fig. 1):

Stage 1: MSP plus insurance and freight.

Stage 2: Landed price.

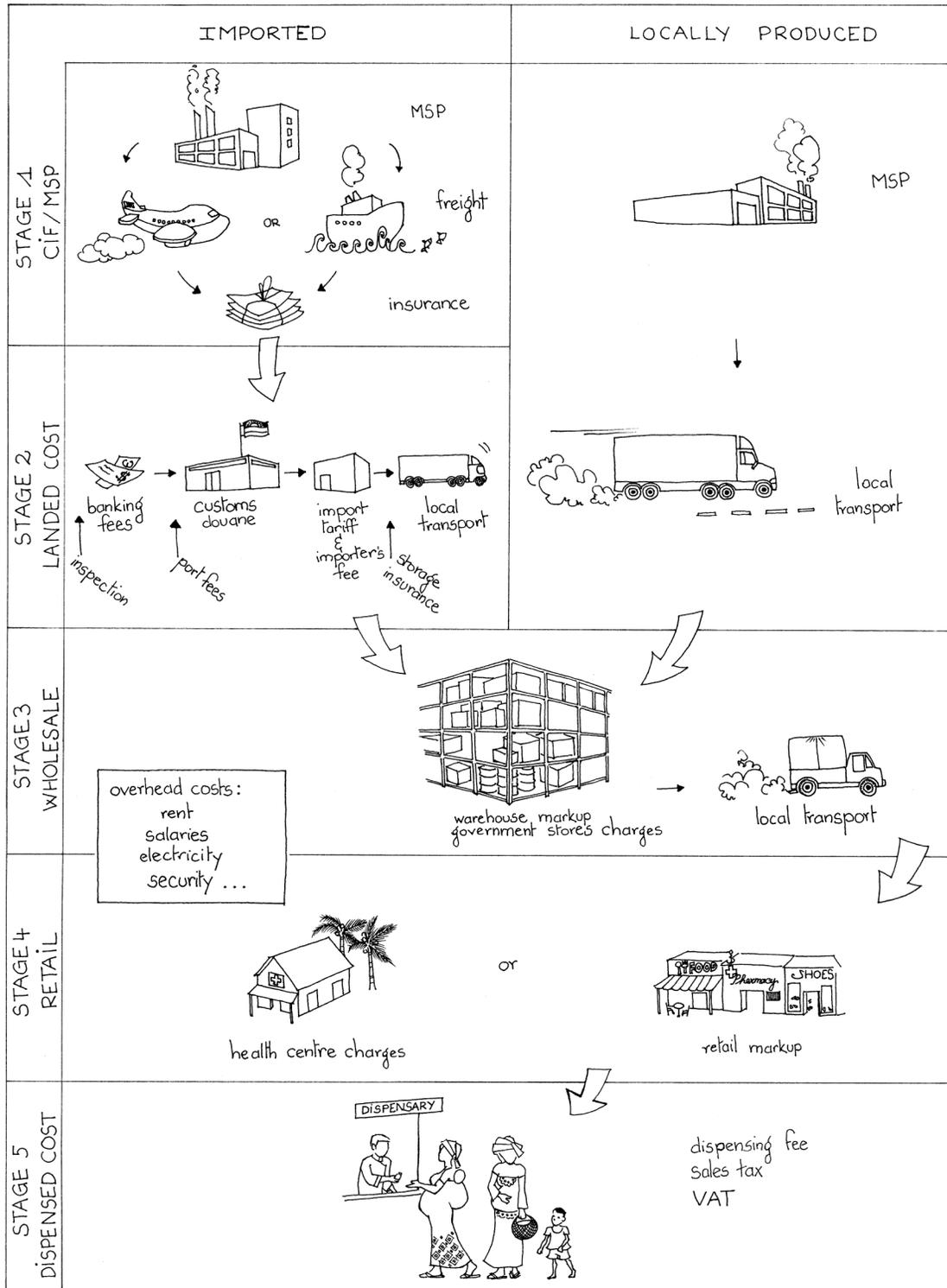
Stage 3: Wholesale selling price (private) or Central Medical Stores price (public).

Stage 4: Retail price (private) or dispensary price (public).

Stage 5: Dispensed price.

Using the five-stage approach allows for comparisons at the end of each stage among sectors and among countries.

Fig 1. The staged approach to price components



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Stage 1: Manufacturer's selling price + insurance and freight

The Stage 1 price comprises two prices: a medicine's base price (MSP) and insurance and freight charges. For an imported product, this is the MSP plus costs for insurance and freight to the importing country. For a locally produced medicine, the Stage 1 price is the MSP. Defining Stage 1 in this way allows for comparisons of prices between imported and locally produced equivalent medicines, and identifies the MSP.

Manufacturer's selling price (MSP)

The MSP is the price the manufacturer charges for the medicine.

Insurance and freight

Insurance and freight are the costs of insuring and shipping the products to the destination country. For locally manufactured products, these components do not apply.

Shipping costs are accounted for in different ways. The principal shipping terms are:

- EXW: EX-Works:** The selling price reflects the price at the purchase site. The buyer is responsible for all insurance and freight costs.
- FOB: Free on Board:** The seller is responsible for transport to the port of shipment (in the exporting country); the buyer is responsible for international shipping and insurance.
- CIF: Cost, Insurance, Freight:** The seller is responsible for freight to the destination port and includes this cost in the selling price; the buyer is responsible for insurance once goods are loaded on the carrier and all costs after arrival in port.
- DDU: Delivered Duty Unpaid:** The seller is responsible for insurance and freight to a named place of destination; the buyer assumes responsibility for insurance and transport, including import duties, once delivered.

It is important that investigators try to separate the MSP from insurance and freight, although it might not always be possible. Manufacturers sell the same product to different organizations for different prices: when the MSP is coupled with the shipping costs this is difficult to see. These price differences occur for many reasons, among them: some procurement offices have better negotiating skills; some have better access to market intelligence; and some are being penalized for a poor payment history. Separating the MSP and the insurance and freight will allow for more accurate international price comparisons.

MSP information can be a challenge to find (although countries have managed to do so), particularly in the private sector. However, this survey's aim is to identify it as accurately as possible. In the public and 'other' sectors, the investigator should check the awarded tender price. For imported products it is necessary to check if the tender price is EXW, FOB, CIF or DDU. In the private sector, the wholesaler(s), the customs office or the ministry of health will often be able to provide information on the import price (Stage 1 price), which they know for tariff purposes. For locally procured products, the MSP is the price that the wholesaler or the public or private procurement agency pays a local

manufacturer. Don't forget that there are two sides to every transaction: one side might be easier to approach than the other.

Stage 2: Landed price

The landed price includes all other price components that arise during medicine procurement and delivery to the procurement office. This includes banking fees for foreign currency purchases, inspection charges (either pre- or post-shipment), port fees (docking, storage, handling, insurance in port), customs clearing, import tariff and importer's mark-up. Any fees collected centrally are listed here, e.g. the Pharmacy Board fee. The landed price also includes local transport charges to the central warehouse, the importer or the wholesaler but does not include domestic storage and distribution costs after the medicines leave the purchasing warehouse.

Finance/banking fees

Procuring pharmaceuticals usually involves large tenders worth millions of dollars. Investigators should ask about the cost for letters of credit, the purchase of foreign exchange, special foreign currency bank accounts, commissions and special licenses for importation. Moreover, banks often require a currency deposit or a contingency fee to guarantee the availability of funds. Contingency fees only become price components when the contingency fee is collected, but bank handling or administrative fees are often collected. Investigators should consult with an international bank to identify these and other financial costs.

International inspection

Products crossing borders are inspected to verify quantity, quality, export market price, import customs value and import eligibility. Inspection can be carried out either prior to shipment or upon arrival in the receiving country. Fees for inspection are either based on a percentage of the order value or are a minimum flat fee (usually for small orders). The inspection fee is paid either by the importer/buyer or, in the case of pre-shipment inspections, can be included in the selling price. Pre-shipment inspection fees are often labelled 'SGS fees'. Investigators should check with the customs office and the ministry of trade to find these costs.

Import tariff or duty

If there is an import tariff, it may apply to all imported medicines or there might be a system to exempt certain products and purchasers. Investigators should check whether an import tariff is levied on the target medicines. In addition, check whether the same level of tax or duty applies to all products. Exemptions for different products, different sectors, and different delivery programmes should be reported. (Note that import tax or duty may also apply to imports of raw material for local production, but this is outside the scope of this study. You can mention this in the final report.) Investigators can check with any tax official about tariffs that apply to medicines.

Importer's mark-up

The importer purchases pharmaceuticals internationally and sells them domestically to various health systems. The importers will add a mark-up to cover their costs and profit.

Importers' costs include local storage (rent, utilities, staff), local transport, packaging and marketing. When listing the importer's mark-up, take care not to 'double count' costs recorded elsewhere (e.g. the import tariff). If the importer's mark-up is government-regulated in your country, please note that fact in your final report.

Port and clearing charges

Other charges may be collected to cover such costs as clearance, temporary storage, stamp duty, handling and insurance in port. Governments may charge for documentation, like data collection for statistical purposes. Investigators should interview importers to identify these costs.

Pharmacy board fee or national drug authority fee

A pharmacy board fee is a charge on medicines (percentage or fixed fee) collected in some countries that goes to the pharmacy board (council) or similar body, or the national drug regulatory authority. In some countries, this fee is applied to all medicines, while others apply it only to imported medicines or locally manufactured medicines. The pharmacy board fee should not be confused with the registration fee collected by the national drug regulatory authority to register a product for use in country. The pharmacy board fee is based on volume or number of purchases, while the registration fee is a one-time (or once a year) per item fee. Check with the pharmacy board, as well as the ministries of health or trade and the medical stores to find the pharmacy board fee. If the pharmacy board fee varies by category of medicine (i.e. essential or non-essential), these variations should be recorded in the final report.

Quality control testing

Medicines are often tested as each new batch arrives in the country (or at the procurement office) to ensure that they meet quality standards. The costs for running these tests, for collecting samples of each batch of medicine and of storing it for later comparison can be add-on costs.

Transport costs

Stage 2 transport costs represent the cost of moving goods from the port or airport (for imported medicines), from the importer (if applicable) or from the factory (for locally produced medicines) to the wholesaler's warehouse or central medical stores. Check with importers, wholesalers and central medical stores on these costs.

National taxes

Some countries collect national, state and/or local taxes on the procurement of medicines. These taxes are collected in addition to the General Sales Tax (GST) or Value Added Tax (VAT) paid by the final purchaser.

If there is a national tax levied on goods bought by the importer or supplier, list it in Stage 2. Check with the ministry of finance, importers, and medical stores. GST and VAT are handled specially, and are discussed in Stage 5 below.

Stage 3: Wholesale selling price or central medical store price

The wholesale selling price or Central Medical Stores price is based on the landed price, and includes either the wholesaler's additional expenses or the central warehouse's overhead costs, e.g. quality control, storage, handling, overhead expenses (such as salaries, security and rent) and profit margin as well as local transport to the retailer/health facility. Many of these might be included in the wholesale mark-up; it is important not to count them twice.

Wholesale mark-up

The wholesale mark-up is the percentage added by the wholesaler or Central Medical Stores to cover overhead costs. These costs encompass overhead expenses such as rent, security, electricity, staff salaries and loss. In some situations, it includes costs to transport medicines to retailers. In the private sector, the mark-up also includes a profit margin; in the public and mission sector, the margin can provide capital for future investment or cover unforeseen increases in costs (e.g. inflation or devaluation).

If the medicines move through more than one wholesaler on their way to the patient, multiple wholesale mark-ups might be levied. This tends to happen as medicines move from central, urban areas to more rural ones.

Regional or state taxes

Some countries collect state or regional taxes on medicine procurement. These taxes are collected in addition to the national taxes discussed above, and the GST or VAT the final purchaser paid.

If there is a regional tax levied on goods bought by the wholesaler or medical stores, list it here. Check with the ministry of taxation, wholesalers and medical stores. GST and VAT are handled specially, and are discussed in Stage 5 below.

Transport costs

Stage 3 transport costs include the cost of moving goods from the warehouse (wholesaler) to the point of delivery (retailer) or, in the public sector, from the central or regional medical stores to the hospital pharmacies/dispensaries or health post.

In the public sector and in some 'other' sectors (e.g. church mission sector), medicines are distributed from a central warehouse directly to health facilities or via regional and/or district storage facilities. Mark-ups can be charged by a regional store as well as the central store, so check this information.

Stage 4: Retail price (private sector) or dispensary price (public sector)

The retail (pharmacy) selling price is based on the wholesale selling price, and includes the retailer's/dispensary's additional expenses, e.g. storage, handling, overhead expenses and profit margin. Many of these expenses might be included in the retailer's mark-up; it is important not to count them twice.

Retail mark-up

The retail mark-up is the percentage that retailers (pharmacies) add to cover their costs, including their profit. These costs include those overhead costs that retailers incur in their practice, such as rent, staff salaries, repackaging, loss, as well as profit. Retail mark-ups are not limited to the private sector: the public and other sectors also use mark-ups to cover their costs.

Mark-ups can vary between products: imported and locally produced medicines often have different mark-ups. Pharmacies may also charge different mark-ups on originator brands and generically equivalent products. In some countries, for example, the mark-ups are higher on generic equivalents because, even with the mark-up, they are considered to be affordable.

Local or town taxes

Some municipalities collect local or town taxes on medicines. These taxes are collected in addition to the national and state taxes discussed above, and the GST or VAT the final purchaser paid.

If there is a local tax levied on goods the retailer or health post bought, list it here. Check with the ministry of taxation, retailers and public sector health posts to identify these taxes. Remember that GST and VAT are handled specially, and are discussed in Stage 5 below.

Stage 5: Dispensed price

The dispensed medicine price includes the Stage 4 price plus any dispensing fees and any sales taxes (VAT or GST), if applicable. Where there is no dispensing fee or sales tax applied, there are no Stage 5 costs and the price at the end of Stage 4 is the dispensed price. Furthermore, in many public sector programmes the patient does not pay; the cost at the end of Stage 5 is intended to reflect the cost at the point of delivery, whether to the health system, insurance group or patient.

Value Added Tax (VAT) and Goods and Services Tax (GST)

VAT and GST are levied on sales. These taxes vary from country to country, and also from state to state within a country. In many countries, medicines or certain sectors are exempted from VAT or GST; in other countries, VAT is collected at each stage of the supply chain. Each participant in the supply chain pays cost plus VAT, and then adds VAT to its selling price. The VAT is thus refunded to the participant so that the final purchaser is the only one who pays VAT. In these cases, VAT should only be recorded as a Stage 5 cost and should not be listed on each intermediate sale along the supply chain. Similarly, if the government reimburses VAT applied in the distribution chain's intermediate stages, it should not be counted. However, if VAT is applied in more than one stage of the distribution chain and this amount is not recovered in the selling price or reimbursed by government, then it should be counted in each appropriate stage. In some

countries, GST is charged on medicines. As with VAT, only the tax added to the final price should be recorded.

Dispensing fees

Pharmacies may be allowed to charge a dispensing fee per item dispensed or per prescription filled. The fee is intended to reflect the work involved in handling a prescription; it is not a doctor's fee for service. The dispensing fee can take various forms: a percentage mark-up, a fee per item or a fee per prescription. Dispensing fees can also vary for originator brand and generic formulations.

Dispensed medicine price

Investigators should record the final dispensed medicine price paid by the final purchaser. This could be the patient, the government or an insurance provider. For countries that use a maximum retail price (MRP), investigators should check if the patient pays the MRP or if a different price is charged and note this in the survey report.

In other cases, the government sets a maximum retail price, and it is left to the wholesaler and retailer to agree on their respective mark-ups.

Costs that are not included in price composition analysis

The following medicine price components should not be included in the price component analysis.

Registration fees

The national medicines (or drugs) regulatory authority may charge a fee when a product is registered in the country, plus a renewal fee for as long as the product is on the market. Since these fees are charged only when a market authorization is issued or as an annual fee, and are independent of the quantity of medicine sold, they should not be included here as a price component.

Patient fees for service

Information on the following charges should not be included in the price components survey:

- fees for services other than the cost of the medicine (and the dispensing fee) such as the doctor's consultation; and
- travel expenses for a patient to reach a dispensing site.

Co-payments

A co-payment is a payment an individual makes, usually at the time a medicine is obtained, to offset part of the medicine and/or dispensing cost. Since co-payments may not be universally applied (e.g. different fees may be charged for different classes of patients), and are usually not related to the value of the product being supplied, these charges are not included in the price components analysis.

Manufacturing price components

Price components exist in all supply chains, including those for the materials needed to manufacture essential medicines locally. For example, there are import tariffs and sales taxes on raw active pharmaceutical ingredients; the excipients and the machinery used in manufacturing; local distribution charges to transport supplies to the factory; and operating costs to cover rent, electricity and business taxes.

A note about discounts and rebates

Manufacturers and suppliers sometimes reward buyers with discounted prices¹ or rebates.² Discounts are also sometimes offered to patients, with pharmacies reducing the price of a medicine (e.g. for customer loyalty); offering the patient a non-medical product at a discount when a medicine is purchased; or offering other rewards and enticements.

Discounts and rebates are not uncommon, and can be prolific in some countries. Often they vary depending on the medicine or the patient. In many countries, it is extremely difficult to collect information on the discounts and rebates being offered, and in such cases these should be excluded from the price components survey. **However, if it is possible to collect information on discounts and/or rebates, then these should be included in the price components survey.** For example, in some countries discounts and rebates are standardized and information is more readily available on invoices.

4. Planning the price components survey

4.1 Planning where to conduct the study

Central data collection generally takes place in the main urban centre, though visits to key informants located in other areas may be required. Medicine tracking is conducted in two of the six survey areas where the general paediatric medicine price and availability survey was conducted, namely

- the main urban centre; and
- one additional survey area.

The additional survey area should be rural and should be located as far from the urban centre as possible. This will ensure that data are collected on the mark-ups by intermediary distributors and on local distribution and storage costs as medicines move out to the district and health centre levels.

¹ A discount can take several forms, including: 1) a price reduction given to customers at the date of sale; 2) bonus deals: additional units supplied to customers below list price; 3) sale of equipment at a reduced rate; 4) contributions to salaries or other incentives or services.

² A rebate is a payment made by the seller to the purchaser after the date of sale.

4.2 Selecting the medicines to be surveyed

Researchers should select five to seven paediatric medicines that will illuminate pricing policies in their country. Results of the paediatric medicine prices and availability survey should be used to select medicines with high prices, and/or variable pricing patterns. Target medicines should have high use/sales volumes and should be commonly found in all sectors surveyed. The medicines selected should also cover categories of medicines that will provide the full range of pricing structures. This should include both imported and locally produced medicines, where these exist. Other categories can include:

- single-source, multi-source and limited-source (e.g. ACTs) products;
- National Essential Medicines List (NEML) and non-NEML medicines;
- price-controlled and non-price controlled medicines;
- taxed and tax-exempt medicines;
- treatment of acute and chronic conditions; and
- various formulations (tablet, liquid, injection).

For each medicine, data should be collected on both the originator brand and a generic equivalent, where these exist. Some medicines may be so old that it is not possible to identify the originator brand; for these products data should only be collected on a generic product. The generic product should be the lowest-priced generic most commonly found during the paediatric medicine prices and availability survey.

4.3 Selecting dispensing sites (medicine outlets) to survey

In tracking medicines through the supply chain, data are collected for all sectors in the price survey.

In each region, at least one dispensing site is surveyed per sector. Survey sites are selected before data collection begins, from the facilities used in the paediatric medicine Prices survey. Selection of facilities should be based on the following criteria:

- All/most of the target medicines were available at the time of the medicine prices survey
- Medicine prices were found to be outside the normal range (e.g. outside interquartile range)
- Pharmacist (or facility staff) at the dispensing site were cooperative and would be likely to participate in additional data collection
- Convenience/feasibility—public and other sector facilities can be selected based on their proximity to a private sector outlet satisfying the above criteria.
- For rural facility: medium to long supply chain.

4.4 Planning data collection visits

To the extent possible, data collection appointments should be planned in advance. Researchers should allocate time to plan and schedule meetings with busy professionals before the survey begins. This applies to central level visits to collect information on national pharmaceutical policies, as well visits to dispensing points in the public, private and ‘other’ sectors to track target medicines through the supply chain.

5. Data collection

The following section provides guidance on the two types of data collection in the price components survey: central data collection on official policies related to price components, and tracking specific medicines through the supply chain to identify all price components. Table 1 provides a list of common price components and possible sources of information.

Table 1. Price components and possible sources of information

Tariff/tax	Possible sources of information
Stage 1	
Manufacturer's selling price (MSP)	Manufacturer's list prices (from wholesalers), public sector tenders, customs declaration forms, local manufacturers
Freight and insurance charges	Importers, customs declaration forms Ministry of Health tenders
Stage 2	
Finance/banking fees	Ministry of Finance, Central bank
International inspection	Medicines regulatory authority, Ministry of Trade
Port charges, clearance	Customs, importers, medical stores
Quality control testing	Ministry of Health, procurement office, drug testing laboratory
Import tariff or duty	Customs, Ministries of Health, Trade, Finance, medical stores, importers
Importer's mark-up	Importers, wholesalers, Ministry of Trade
Pharmacy council/Board fee	Pharmacy board/association/council, Ministries of Health, Trade, Finance, medical stores
'Other' fees	Ministries of Health, Trade, Finance, medical stores, importers, wholesalers
National taxes	Ministry of Finance
Stage 3	
Transportation costs	Importers, wholesalers Ministry of Health, medical stores
Wholesale mark-up, official (hypothetical)	Wholesalers, Ministry of Health, retailers, pharmacy board/association/council, medical stores, Ministry of Health
Wholesale mark-up, observed in the field	Wholesalers, retailers Medical stores
Quality control costs	Wholesalers, medical stores, drug testing laboratory
Regional taxes	Ministry of Finance
Stage 4	
RETAIL MARK-UP, OFFICIAL (HYPOTHETICAL)	Retailers, medicines regulatory authority, pharmacy board/association/council, Ministry of Health
Retail mark-up, observed in the field	Retailers /health facilities
Local or town taxes	Retailers, Ministry of Finance
Stage 5	
VAT/GST	Retailers, Ministry of Finance
Dispensing fees	Pharmacies, Ministries of Health or Trade, pharmacy association/board/council
Cost to patient	Retailers

5.1 Central data collection on national pharmaceutical policies

At the central level, information will be collected on government policies and regulations that affect price components. Researchers will visit ministries, the customs office, the central bank, the pharmacy board and others for this information. Annex 2.1 contains a list of key informants to interview as part of central data collection, the key objectives of the interview, and sample questions to ask. Uncovering several of these price components

will require good investigative skills, determination and numerous questions. The information gathered at the central level will be compared to the prices reported in the field to see which policies are implemented and whether they are enforced.

5.2 Collecting data along the supply chain

In the second phase, investigators will collect data along the public, private and ‘other’ supply chain in the main urban area as well as in one additional survey area used in the medicine prices survey. Participants will begin at the end of the supply chain, at the dispensing point for each sector, and track the targeted medicines backwards along the supply chain to their point of origin, recording the price components incurred. Participants will visit dispensing facilities, retailers, wholesalers, public sector purchasers, local manufacturers and importers in their investigations of the price components. Note that some of the data collected might contradict data collected at the central level. Inconsistencies can illuminate the system structure and system operation and should be recorded.

For each target medicine, track both the originator brand product³ and the lowest-priced generic product most commonly found during the medicine prices and availability survey. Note that in some countries with a large generic manufacturing capacity, it may be appropriate to collect data on ‘branded generics’ in addition to/in place of originator brands. If the lowest-priced generic product is not available at a given dispensing site, collect data on the generic product with the lowest price at that site.

In the private sector and some other sectors (e.g. dispensing doctors) it is necessary to start at the end of the distribution chain (the retail pharmacy) and work backwards to identify wholesalers and manufacturers. In the public and mission sectors, however, the distribution chain is known and data can therefore be collected in either direction. For example, it may be more efficient to visit the Central Medical Stores during central level data collection, even though public sector dispensing sites have not yet been visited.

Manufacturers or importers are likely to be supplying medicines to multiple wholesalers, and similarly wholesalers will be supplying multiple retailers. After you visit all the dispensing units in a survey area, compile a list of wholesalers and the products they handle. If there are regional wholesalers, visit them at this time. If there are central wholesalers, wait until data collection in both survey areas is complete, then compile a list of central wholesalers and the products they handle prior to conducting visits.

Wherever possible, try to obtain documentation of the prices you are quoted, e.g. through paper invoices or computer systems. Valuable information on the manufacturer and distributor is often given on the packaging and on package inserts. Secondary data, such as manufacturers’ web pages or other Internet sites, can also be a useful source of

³ Some medicines may be so old that it is not possible to identify the originator brand; for these products data should only be collected on a generic product.

information. Note that multiple names on packaging can be confusing e.g. when a product is imported but the labelling is done locally. Such cases will require clarification in order to differentiate between imported and locally manufactured products.

6. The Price Components Data Collection form

The Price Components Data Collection form in Annex 2.2 is used to collect data in the field. A separate form should be completed for each medicine, for each specific product type, sector and region being surveyed. Participants should photocopy or print the required number of copies of the price components data collection form. Because the medicines are tracked backwards along the supply chain, the Price Components Collection form is filled in from the bottom (Stage 5) to the top (Stage 1).

6.1 Elements of the Price Components Data Collection form

Type of charge

The Type of Charge column is for recording the various possible price components in each stage of the supply chain.

Charge status

The status of each charge is described according to two categories:

- Not found: NF: Price component is known to exist, but no data were found
- Value: V: Price component exists and data were found

Charge basis

Charge basis refers to whether the fee is a:

- **Percentage fee.** The price component is a fixed percentage on previous cumulative total. For example, an import tariff of 8% calculated on the total value of the order.
- **Fixed fee.** A fixed fee is charged regardless of the cumulative total price. Examples include a dispensing fee of US\$ 1 on each prescription or US\$ 200 for international inspection of an entire shipment.

Price to which charge is applied

This column is used for recording the price to which the charge is being applied. Usually, this will be the cumulative price at the time at which the charge is applied (i.e. the previous line). However, sometimes multiple charges are applied to the same price. For example, in Sri Lanka both the import tariff and the defence levy were applied to the Stage 1 procurement cost. While the order in which fixed fee charges are added does not affect the final price, the price to which a percentage charge is applied will affect the amount of the charge. Suppose there is a procurement with value US\$ 10 000, with an 8% import tariff and a 4% defence levy, then both the import tariff and the defence levy should be levied on the base of US\$ 10 000. The cumulative total should be US\$ 11 200. If these two charges are added sequentially, the defence levy will be applied to a higher price, resulting in an incorrect total (US\$ 11 432).

Amount of charge

The amount of charge is entered as a percentage (e.g. 8%) or as a fixed fee (e.g. US\$ 200).

Comments

The Comments column can be used for explanatory comments or any additional information, such as 'inconsistent with official rates'.

Source

Source refers to where the medicine was obtained. For example, at a private retailer the source usually refers to the wholesaler from which the medicine was purchased. This information is used to track medicines backwards through the supply chain.

Example of price components data collection form for Stage 3

Source: *GenLabs Ltd.*

	Type of charge	Charge status	Charge basis	Price to which charge is applied	Amount of charge	Comments
Stage 3: Wholesaler or medical store	Procure price	value	N/A	N/A	100.00	
	<i>Regional tax</i>	<i>V</i>	<i>%</i>	<i>Stage 3 procure price</i>	<i>3.0</i>	
	<i>Wholesale mark-up</i>	<i>V</i>	<i>%</i>	<i>Stage 3 procure price</i>	<i>10.0</i>	
	<i>Transport costs</i>	<i>V</i>	<i>Fixed</i>	<i>Cumulative sub-total</i>	<i>5.50</i>	<i>Not included in mark-up</i>

Example of price components data collection form for Stage 2

	Type of charge	Charge status	Charge basis	Price to which charge is applied	Amount of charge	Comments
Stage 2: Landed price	<i>Inspection</i>	<i>V</i>	<i>Fee</i>	<i>MSP +IF</i>	<i>\$200</i>	<i>Minimum charge on all shipments less than \$5000</i>
	<i>Port charges</i>	<i>NF</i>				
	<i>Importer's mark-up</i>	<i>V</i>	<i>%</i>	<i>Cumulative sub-total</i>	<i>3%</i>	
	<i>Pharmacy board</i>	<i>V</i>	<i>%</i>	<i>Cumulative Sub-total</i>	<i>1%</i>	

6.2 Instructions for completing the Price Components Data Collection form

Step 1. Prepare the data collection forms: fill in background information

1. Identify the data collector completing the form.
2. Fill in the region and sector (capital, rural; public, private, other).
3. Fill in the name and/or identifying code of the dispensing outlet.
4. Fill in the name of the target medicine, strength, dosage form, manufacturer and pack size. Describe the target medicine by checking the appropriate boxes and adding any additional information in the space provided (e.g. acute vs chronic condition, medicine for public health emergency).
5. Identify the type of data being collected. This is usually field data (i.e. medicines tracked through the distribution chain), but could also be hypothetical data (official rates obtained centrally).

Step 2. Visit dispensing points in the public, private and 'other' sectors

Visit each of the selected dispensing points in the public, private and 'other' sectors. The order of the visits does not matter. Dispensing points are visited to obtain the price at which they purchase and sell the target medicines; to identify Stage 4 and Stage 5 add-on costs; and to identify where the medicines were obtained (e.g. wholesaler, medical store), to allow for tracking backwards through the supply chain.

Stage 5 costs:

1. On page 2 of the Price Components Data Collection form, in first row of the table marked Stage 5: dispensed price, record the selling price as the total price of the medicine, whether it is being charged to the government, insurance companies or the patient.
2. In the Type of Charge column list Stage 5 charges (e.g. VAT/GST, dispensing fees) *in the order in which they are applied*. For each charge, indicate the

charge status (value or not found), charge basis (flat fee or per cent) and the amount of the charge. For percentage charges, indicate to which price the charge is applied (e.g. MSP, Stage 5 procure price).

3. If the patient pays a different price than the selling price, record this as the cost to patient. In the public and 'other' sectors this might be a fraction of the actual cost or might be zero. Include a description of this in your report.

Stage 4 costs:

1. Record the procurement price paid by the retailer or public dispensary. The Stage 4 procure price should be the same as the price subtotal at the end of Stage 3, however, data from different sources do not always match up.
2. Note the source (e.g. wholesaler, Central Medical Stores) of the target medicine, which is needed to track the medicine along the supply chain.
3. In the Type of Charge column list Stage 4 charges (e.g. retailer's mark-up, local or city taxes) *in the order in which they are applied*. For each charge, indicate the charge status (value or not found), charge basis (flat fee or per cent) and the amount of the charge. For percentage charges, indicate to which price the charge is applied.

Step 3: Visit public sector procurement office and wholesalers

Public purchasers and wholesalers are visited to obtain the price at which they purchase and sell the target medicines; to identify Stage 3 add-on costs; and to identify where the medicines were obtained (e.g. manufacturer) to allow for tracking backwards through the supply chain.

Make a list of the resellers (i.e. wholesalers or public purchasers) identified in Step 2. For each wholesaler, list the medicines that they sold or dispensed. Go to a maximum of five wholesalers (those that sell to most of the target facilities) and investigate the price components of the medicines that they sell. Complete the Stage 3 section of the price components data collection form for the drug sold by each reseller.

Stage 3 costs:

1. Record the procurement price paid by the wholesaler or public purchaser. The Stage 3 procure price should be the same as the price subtotal at the end of Stage 2, however, data from different sources do not always match up.
2. Note the source (e.g. manufacturer or importer) of the target medicine.
3. In the Type of Charge column, list Stage 3 charges (e.g. wholesaler's mark-up, regional taxes) *in the order in which they are applied*. For each charge, indicate the charge status (value or not found), charge basis (flat fee or per cent) and the amount of the charge. For percentage charges, indicate to which price the charge is applied.
4. Record the selling price of the medicine to the retailer or dispensing point. Note that this selling price may not match the retailer's reported purchase price.

Locally produced medicines:

Step 4: Visit local manufacturers

Where possible, schedule visits to the local manufacturers of the target medicines identified in Step 3 above. Local manufacturers are visited to obtain the manufacturer's selling price and information about wholesale and retail mark-ups, local transport charges, taxes and about the structure of the distribution system.

It may not be possible to secure visits with all local manufacturers, in which case it will be necessary to extrapolate data from selected manufacturers across target medicines. It might be useful to first visit a manufacturer that is not producing any of the target medicines to obtain general information on transport costs, mark-ups, etc. The sources of information used to estimate the MSP and Stage 1 and Stage 2 add-on costs should be clearly described in your report.

Stage 2 costs:

1. In the Type of Charge column list Stage 2 charges (e.g. transport, pharmacy association/board/council fee, national taxes) *in the order in which they are applied*. For each charge, indicate the charge status (value or not found), charge basis (flat fee or per cent) and the amount of the charge. For percentage charges, indicate to which price the charge is applied.

Stage 1 costs:

1. Enter the MSP for the pack size of the target medicine in the first row of the table. Leave the second row (INF) and third row (CIF) blank.

Imported medicines:

Step 5: Visit importers

For imported medicines, collect the price components associated with importing the target medicine as Stage 2 costs.

Stage 2 costs:

1. In the Type of Charge column, list Stage 2 charges (e.g. finance/banking fees, international inspection, port charges/clearance, import tariff, quality control testing, importer's mark-up, pharmacy board fee, national taxes) *in the order in which they are applied*. For each charge, indicate the charge status (value or not found), charge basis (flat fee or per cent) and the amount of the charge. For percentage charges, indicate to which price the charge is applied.
Note: Enter any costs of local transportation from the port of entry to the wholesaler that are paid for by the manufacturer.
2. Use the 'Other fee' category to record price components not listed here. Provide an explanation of these 'Other' charges in your report.
3. If you only have access to the price of medicines after they leave the importer or the manufacturer, you can enter this value directly in the final row.

Step 6: Collect data on international procurement and shipping

For imported medicines, collect the price components associated with procuring the target medicine and international shipping as Stage 1 costs.

Price components data collection form for Stage 1:

	Type of charge	Charge basis	Price to which charge is applied	Amount of charge	Comments
Stage 1	Manufacturers selling price	price			
	Insurance and freight				
	CIF				

Stage 1 costs:

Case 1: Separate Manufacturer's selling price and shipping costs:

Enter the MSP for the pack size of the target medicine in the first row of the table. For 'Insurance and Freight': note whether this is a fixed fee or a percentage, and enter the amount paid. Enter the shipping terms (e.g. CIF, FOB, EXW) in the Comments column. Leave the third row (CIF) blank.

Case 2: Combined Manufacturer's selling price and shipping costs:

Enter the price found for the medicine, including shipping in the bottom row (CIF). Leave the first two rows blank.

Dealing with inconsistent data

Inconsistencies in the collected data are common: two ministries will report different values for a mark-up, or the government-set fee will not match the fee used at the pharmacy. There is already evidence of this for wholesale and retail mark-ups: due to a lack of enforcement, the mark-up used in practice might not match the official rate. Furthermore, prices may differ between shipments or orders, particularly in countries with a volatile currency.

When inconsistent data are found, you should first verify the data, and if an inconsistency is confirmed, attempt to identify the reason(s) for the inconsistency. Any inconsistent data should be identified and discussed in the final report.

Annex 2.1: Price Components Interview Guide

Table A1 lists the key informants commonly interviewed during Price Components central data collection. For each informant, the principle objectives of the interview are listed. It is important to keep these objectives in mind during the interview to ensure that the necessary information is obtained. Also listed are sample questions to ask during each interview. Note that not all interviewees may apply to your country, and not all questions will be appropriate. Also note that some questions appear twice, namely once on each side of a transaction, in order to double check all data.

Table A1: Key informants for central data collection, interview objectives and sample questions

Informant	Objectives	Sample questions
Ministry of Health, Policy and Planning Branch	<p>Obj 1: Determine the size of the medicine budget, what costs it covers in addition to medicines, and the population served.</p> <p>Obj 2: Determine the various means by which patients obtain pharmaceuticals.</p> <p>Obj 3: Determine whether there are user fees/cost recovery systems in the public sector.</p> <p>Obj 4: Obtain an overview of the process and rules of public procurement.</p>	<ul style="list-style-type: none"> • Is there an essential medicines list? If yes, how many medicines are included? Does the list vary by level? Who develops it? How often is it reviewed? • What is the medicines budget? Are quality control testing, overhead and distribution costs covered in the medicine budget, or are these a separate budget line? • Are medicines free in the public sector? • Are there policies for the use of generic products in the public and private sectors (e.g. generic substitution)? • What are the taxes/tariffs applied to medicines in the public, private and other sectors? Are any sectors or medicines exempt? Where are exemptions documented? (Law number...) • Does the government regulate mark-ups in the public distribution chain? If yes, please indicate rates for central medical stores, regional stores, and public medicine outlets. • Does the government control medicine prices in the public, private and/or other sectors? If so, what are the regulations (e.g. maximum selling price)? Are prices enforced and by whom? • How is public procurement conducted? Is public procurement limited to registered essential medicines? • How is quality control testing conducted in the public sector? Do you have your own QC laboratory? What are the quality assurance requirements for local purchases? How much is spent on QC testing? Does this cost come out of the drug procurement budget? • How is distribution and storage managed in the public sector? How are costs

Informant	Objectives	Sample questions
		<p>budgeted?</p> <ul style="list-style-type: none"> • Is there a pharmacy board? Does the pharmacy board collect a fee on pharmaceuticals? Do fees differ between generic equivalents and originator brands, and/or between imported and locally produced products? • Is there a government regulated dispensing fee? If yes, please describe the fee and how it is applied.
<p>Procurement office - public and other sectors</p>	<p>Obj 1: Obtain an overview of the process and rules of public procurement. Obj 2: Identify how the administrative costs of procurement are covered (i.e. medicine budget or other government budget).</p>	<ul style="list-style-type: none"> • What are the steps in public sector procurement? Do hospitals purchase any medicines directly? • Is public sector procurement centralized, or decentralized to regional stores or individual health facilities? • What are the technical requirements for procurement? Are WHO prequalification and/or Good Manufacturing Practices certification part of the technical requirements for procured products? • What type of tendering process is used for public procurement? What is the procurement cycle? How are funds allocated, and how/when are funds made available? Are there ever delays in accessing funds? • How is the procurement price determined? • Do you procure all the medicines used in public sector facilities, or are some obtained from vertical programs, local purchase, or other? If yes, what percentage are you supplying? How do you select the medicines that you will procure? How do facilities obtain medicines that are not procured centrally? • What percentage of publicly procured medicines are locally produced? Is there a policy that provides preference to locally manufactured medicines? • Of the medicines procured, approximately what proportion are originator brands? • How often do stock outs occur in the central/regional medical stores? How are these handled? How much was spent on emergency orders last year? • What is this year's procurement budget? Does this cover additional costs such as medical stores overhead, transport to health facilities, quality control testing? • Who is responsible for distribution to public facilities? How are medicines transported and stored? • What finance charges and fees are imposed by the bank on the procurement of pharmaceuticals (e.g. letter of credit, purchase of foreign exchange, contingency fee)?

Informant	Objectives	Sample questions
Central/regional stores - public and other sectors ⁴	<p>Obj 1: Identify distribution routes for medicines in the public sector.</p> <p>Obj 2: Determine the overall availability of medicines, and assess whether the medicine budget matches population needs.</p>	<ul style="list-style-type: none"> • How are medicines delivered to Central Stores? How are they distributed to regional stores/health facilities? Is transport outsourced to a private company or handled by the central/regional stores? • Is transport paid from the medicine procurement budget or from another budget? • How often do you have stock-outs? How are stock-outs handled? • What are your overhead expenses? What are your handling charges? Who covers these costs? • Do you ever purchase medicines directly from the manufacturer? Who else do you purchase from? • Is there a pharmacy board? Does the pharmacy board collect a fee on pharmaceuticals? Do fees differ between generic and originator brands, and/or between imported and locally produced products? • Does the government regulate mark-ups in the public distribution chain? If yes, please indicate rates for central medical stores, regional stores, and public medicine outlets.
Government pricing authority (if one exists)	<p>Obj 1: Determine what, if any, regulations are in place to control medicine prices.</p> <p>Obj 2: Identify any differences in pricing structures, e.g. for generics vs. originator brands; imported vs. locally manufactured, public sector vs. private sector.</p>	<ul style="list-style-type: none"> • Are the final prices of some/all medicines controlled (e.g. maximum selling price)? How is information on a controlled price communicated (e.g. printed on box)? • If there are maximum selling prices, how are these determined? Is there a pricing formula? Is it the same for all medicines/sectors? Please explain the pricing formula (taxes, markups, etc). • Are there maximum wholesale and/or retail markups? If so, to which sectors do these apply (public, private, other sectors)? • Is there a Value Added Tax and/or General Sales Tax on pharmaceuticals? If yes, to which sectors (public, private and/or other sectors) does it apply? Are any medicines exempt from VAT/GST? Are any other taxes or tariffs levied on medicines? • Are there maximum profit margins for various participants in the supply chain? • Are rebates and/or discounts common? How do they work?
Drug regulatory authority / drug control agency	<p>Obj 1: Obtain an overview of the medicine registration process and how it impacts the</p>	<ul style="list-style-type: none"> • What fees (e.g. registration) are collected, and what are they used for? • Do registration fees differ between generic equivalents and originator brands? What is the relative cost to register a generic equivalent or an originator brand? [NOTE: For the

⁴ May be same informant as for procurement

Informant	Objectives	Sample questions
	<p>availability of generics in the market.</p> <p>Obj 2: Identify quality assurance testing protocols and enforcement methods.</p> <p>Obj 3: Identify any fees collected for quality control testing.</p>	<p>purposes of this survey, registration fees are not a price component</p> <ul style="list-style-type: none"> • What products are tested for quality? How many batches are tested? Do you have your own quality control lab, or is testing outsourced? How do you check that quality control protocols are followed? • Is quality control testing conducted for the public sector only, or for other sectors? • What is the cost of quality control testing (samples and testing)? How is this cost covered (medicine procurement budget or separate budget)? • What is the importer's markup? Does this include transport to wholesalers/central stores? Are there other middlemen involved in the importation/supply of medicines (e.g. a clearing and forwarding agent)? If so, what are their mark-ups? • If medicine prices are regulated, how are regulations enforced?
<p>Quality control (QC) laboratory used by public sector</p>	<p>Obj 1: To understand the process of quality testing in the public sector and its associated costs</p>	<ul style="list-style-type: none"> • How is quality testing conducted? What medicines are tested? What is the sampling protocol (e.g. every batch, random batches)? What happens when medicines do not meet quality standards? • What is the approximate budget for QC testing? Does this match the cost of testing? • How long does QC testing take? How are medicines stored/handled while testing is underway (e.g. quarantined at CMS until QC report is issued)?
<p>Importers, customs officers, Ministry of Trade NB: Importer need not specialize in medicines</p>	<p>Obj 1: Determine how medicines are imported.</p> <p>Obj 2: Collect data on the charges related to the importation of medicines.</p> <p>Obj 3: Identify the importer's markup.</p>	<ul style="list-style-type: none"> • What are the routes (e.g. air, land, sea) and major entry points (e.g. ports) by which medicines are imported? How is the logistics line divided (e.g. international freight vs local transport from border), and what is charged? • How long does it take to clear an import order? What fees are incurred while an order waits to clear (e.g. storage, insurance, wharfage)? Importer: Is it possible to pay more to get shipments to clear faster? • What are the fees for international inspection (pre-shipment inspection (e.g. SGS) and in-country inspection)? • What are the charges (e.g. port fee, port insurance, customs, stamp fee) incurred at the receiving port? • Is there an import tariff on pharmaceuticals? Are any medicines/sectors/programs exempted from the import tariff? • What finance charges and fees are imposed by the bank on the procurement of pharmaceuticals (e.g. letter of credit, purchase of foreign exchange, contingency fee)? • Does the government set a maximum importer's markup? If yes, what is the rate?

Informant	Objectives	Sample questions
		<ul style="list-style-type: none"> • Importer: what are charges for local transport: a) from the border to the import warehouse; b) from the import warehouse to the wholesaler/central stores? Who is responsible for these charges? <p>Ministry of Trade:</p> <ul style="list-style-type: none"> • What percentage of medicines on the market are imported?
Manufacturer's association	<p>Obj 1: Develop an understanding of the pricing structures of locally manufactured medicines</p> <p>Obj 2. Determine the distribution routes and associated costs for locally manufactured medicines</p> <p>Obj 3: Understand the cost differentials between imported and locally manufactured medicines</p>	<ul style="list-style-type: none"> • What percentage (by volume or by value) of medicines are locally manufactured? What proportion of these are consumed locally (vs. exported)? • Is there a policy of preferential purchasing for locally manufactured medicines? • Who are the major manufacturers of locally produced medicines? Are they stand alone manufacturers or subsidiaries of MNCs? • For locally manufactured medicines, where are production facilities located and how are medicines distributed across the country? • Does the government regulate medicine prices in the private sector? What are the regulations? How are they enforced? • How do manufacturers determine the prices of generic & originator brand medicines? • What is the pricing structure (e.g. taxes, mark-ups) for locally produced medicines? How does this differ from the pricing structure of imported medicines?
Transport companies	<p>Obj 1: Determine the costs and fees for local transport at each Stage of the supply chain.</p> <p>Obj 2: Compare the costs of the transport system in the public sector with those of the private sector.</p>	<ul style="list-style-type: none"> • What are the charges for the local transport of medicines: <ul style="list-style-type: none"> - from the border to the import warehouse - from the import warehouse to the wholesaler/central stores - from the wholesaler to the retailer • Who is responsible for these charges? • Are there any special requirements for the safe and timely delivery of medicines (e.g. refrigerated trucks, seasonal constraints)? • Are there any additional (unofficial) charges that contribute to the cost of transport (e.g. roadblocks)?
Tax consultant	<p>Obj 1: Understand the regulations for import tariffs.</p> <p>Obj 2: Identify if sales taxes exists and if so, how it is</p>	<ul style="list-style-type: none"> • May I photocopy chapter 30 (and 29 if applicable) of the International Harmonized Tariff Schedule? • Is there a Value Added Tax and/or General Sales Tax on pharmaceuticals? If yes, to which sectors (public, private and/or other sectors) does it apply? Are any medicines

Informant	Objectives	Sample questions
	<p>applied.</p> <p>Obj 3: Determine whether any other taxes or tariffs are levied on medicines.</p> <p>Obj 4: Determine whether any tax exemptions exist.</p>	<p>exempt from VAT/GST?</p> <ul style="list-style-type: none"> • How is VAT applied and reimbursed? Who is the ultimate payer? • Are any other taxes or tariffs levied on medicines (excise tax, city sales tax, defense levy)? Are any medicines, sectors or programs eligible for tax exemptions? • Can we work through an example of a medicine moving through the supply chain to see how and when various taxes are applied? • Are there any tax refunds or abatements?
Ministry of Finance, Central Bank	Obj 1: Understand how public sector procurement funding operates.	<ul style="list-style-type: none"> • How does the Ministry of Health central procurement office access funds for medicine procurement? What is the time frame for requesting/releasing funds? • What finance charges and fees are imposed by the bank on the procurement of pharmaceuticals (e.g. letter of credit, purchase of foreign exchange, contingency fee)?
Large bank in urban centre	Obj 1: Understand the banking system as it applies to foreign currency transactions for the importation of medicines.	<ul style="list-style-type: none"> • What are the fees involved in foreign currency transactions (e.g. letter of credit, telex charges, purchase of foreign exchange, foreign currency account)? • If there are contingency fees, what do these cover? • How are changes in exchange rate handled?
Pharmacists' association, individual pharmacists	<p>Obj 1: Confirm the charges and markups between the wholesale & retail levels of the supply chain.</p> <p>Obj 2: Identify any other government policies that impact private sector pharmacy practice.</p>	<ul style="list-style-type: none"> • Who pays for the cost of transporting medicines from the wholesale warehouse to the retail outlet? • How are wholesale and retail mark-ups determined? Are overhead and transport costs included in the wholesale/retail mark-ups? • Are wholesaler and/or retailer margins regulated in the private sector? If so, what are the rates? • Does the government control medicine prices in the private sector? If so, what are the regulations? How are they enforced? • Is there a government regulated dispensing fee? If yes, what is the fee and how it is applied? • Are discounts or rebates commonly offered to pharmacies? If so, are these being offered by the manufacturer, the wholesaler, or both? • Who can be a wholesaler or retailer? What training is required? What, if any, restrictions does the government impose?
Pharmacy board/ Pharmacists'	Obj 1: Determine the roles and responsibilities of the pharmacy	<ul style="list-style-type: none"> • What are the roles and responsibilities of the pharmacy board/pharmacists' council?

Informant	Objectives	Sample questions
council (office which accredits pharmacists & pharmacies)	board. Obj 2: Identify any fees the pharmacy board collects on medicines. Obj 3: Obtain the pharmacist's perspective on the respective margins and viability of various actors in the supply chain.	<ul style="list-style-type: none"> • Do you collect any fees? If so, from whom? How are the fees used? Do fees differ between generic equivalents and originator brands, and/or between imported and locally produced products? • How are wholesale and retail mark-ups determined? • Are wholesaler and/or retailer margins regulated in the private sector? If so, what are the regulations? Do government-set mark-ups match what is found in practice? • Does the government control medicine prices in the private sector? If so, what are the regulations? How are they enforced? • Are discounts or rebates commonly offered to pharmacies? If so, are these being offered by the manufacturer, the wholesaler, or both?
WHO	Obj 1: Obtain a general overview of pharmaceutical policy and practices. Obj 2: Compare pharmaceutical policies and practices with other countries in the region. Obj 3: Confirm central information collected at the Ministry of Health and elsewhere.	<ul style="list-style-type: none"> • What is the government's medicine budget? What percentage of the population buy their medicines through out of pocket expenditures? • What is the approximate contribution of each sector (public, private, other(s)) to the pharmaceutical market? • Are medicines free in the public sector? Does the public sector use a cost recovery system? • Are the final prices of some/all medicines controlled? Are wholesale and/or retail markups regulated? In what sectors do these price regulations apply (public, private, other sectors)? • Is there a sales tax on medicines? Are some medicines/sectors/programs exempt? • Are there policies for the use of generic products in the public and/or private sector (e.g. generic substitution)?

Annex 2.2:

Price components data collection form

Name of data collector:	<input type="text"/>
Region:	<input type="text"/>
Sector:	<input type="text"/>
Name/code of dispensing outlet:	<input type="text"/>
Product name, dosage, strength:	<input type="text"/>
Manufacturer:	<input type="text"/>
Pack size:	<input type="text"/>
Product type:	<input type="checkbox"/> originator brand <input type="checkbox"/> generic
Production:	<input type="checkbox"/> imported <input type="checkbox"/> locally produced
Type of data:	<input type="checkbox"/> field <input type="checkbox"/> hypothetical
Any additional information about target medicine:	<input type="text"/>

	Type of charge	Charge basis	Price to which charge is applied	Amount of charge	Comments
Stage 1	Manufacturers selling price	price			
	Insurance and freight				
	CIF				

Stage 2: Landed price	Type of charge	Charge status	Charge basis	Price to which charge is applied	Amount of charge	Comments

Source:

Stage 3: Wholesaler or medical store	Type of charge	Charge status	Charge basis	Price to which charge is applied	Amount of charge	Comments
	Procure price	value				

Source:

Stage 4: Retailer or dispensary	Type of charge	Charge status	Charge basis	Price to which charge is applied	Amount of charge	Comments
	Procure price	value				

Stage 5: Dispensed price	Type of charge	Charge status	Charge basis	Price to which charge is applied	Amount of charge	Comments
	Selling price	value				

Medicine Price Data Collection form

Use a separate form for each medicine outlet

Date: _____ Survey area: _____

Name of town/village/district: _____

Name of medicine outlet (optional): _____

Medicine outlet unique survey ID (mandatory): _____

Type of medicine outlet:

- Public sector facility - specify level of care: Primary care facility
 Secondary care facility
 Tertiary care facility
- Retail pharmacy
 Licensed drug shop
 Retail shop
 NGO sector medicine outlet
 Mission sector medicine outlet
 Dispensing doctor
 Private clinic
 Central/Regional Medical Store, Ministry of health, Specify:

Type of price:

- Procurement price Price the patient pays

Name of manager of the medicine outlet and person(s) who provided information (if different from manager):

Name of data collectors:

Verification

To be completed by the area supervisor at the end of the day, once data have been verified

Signed: _____

Date: _____

MEDICINE PRICE DATA COLLECTION FORM

A	B	C	D	E	F	G	H	I	J
Medicine name, dosage form, strength	Available today	Medicine type	Brand or product name(s)	Manufacturer	Target pack size	Pack size found	Price of pack found	Unit price (4 digits)	Comments (specify power or oral liquid for suspensions)
Amoxicillin 125mg/5ml suspension	<input type="checkbox"/> Yes	<i>Highest-priced</i>			100ml			/ml	
	<input type="checkbox"/> No	<i>Lowest-priced</i>			100ml			/ml	
Amoxicillin 250mg dispersible tablet	<input type="checkbox"/> Yes	<i>Highest-priced</i>			21			/tab	
	<input type="checkbox"/> No	<i>Lowest-priced</i>			21			/tab	
Amoxicillin/clavul anic acid 125mg+31.25mg/5 ml suspension	<input type="checkbox"/> Yes	<i>Highest-priced</i>			100ml			/ml	
	<input type="checkbox"/> No	<i>Lowest-priced</i>			100ml			/ml	
Amoxicillin/clavul anic acid 250mg + 125mg dispersible tablet	<input type="checkbox"/> Yes	<i>Highest-priced</i>			21			/tab	
	<input type="checkbox"/> No	<i>Lowest-priced</i>			21			/tab	
Artemether + Lumefantrine 20mg + 120mg dispersible tablet	<input type="checkbox"/> Yes	<i>Highest-priced</i>			6 x 1			/tab	
	<input type="checkbox"/> No	<i>Lowest-priced</i>			6 x 1			/tab	
Beclometasone 100mcg/dose inhaler	<input type="checkbox"/> Yes	<i>Highest-priced</i>			1 inhaler (200 doses)			/dose	
	<input type="checkbox"/> No	<i>Lowest-priced</i>			1 inhaler (200 doses)			/dose	
Benzylpenicillin 600mg = 1 million IU injection	<input type="checkbox"/> Yes	<i>Highest-priced</i>			1 vial			/vial	
	<input type="checkbox"/> No	<i>Lowest-priced</i>			1 vial			/vial	

A	B	C	D	E	F	G	H	I	J
Medicine name, dosage form, strength	Available today	Medicine type	Brand or product name(s)	Manufacturer	Target pack size	Pack size found	Price of pack found	Unit price (4 digits)	Comments
Carbamazepine 100mg/5ml suspension	<input type="checkbox"/> Yes	<i>Highest-priced</i>			100ml			/ml	
	<input type="checkbox"/> No	<i>Lowest-priced</i>			100ml			/ml	
Carbamazepine 100mg chewable tablet	<input type="checkbox"/> Yes	<i>Highest-priced</i>			20			/tab	
	<input type="checkbox"/> No	<i>Lowest-priced</i>			20			/tab	
Ceftriaxone 500mg vial for injection	<input type="checkbox"/> Yes	<i>Highest-priced</i>			1 vial			/vial	
	<input type="checkbox"/> No	<i>Lowest-priced</i>			1 vial			/vial	
Chloramphenicol 1g vial for injection	<input type="checkbox"/> Yes	<i>Highest-priced</i>			1g vial			/vial	
	<input type="checkbox"/> No	<i>Lowest-priced</i>			1g vial			/vial	
Cotrimoxazole 100mg + 20mg (OR 400mg + 80mg) dispersible tablet	<input type="checkbox"/> Yes	<i>Highest-priced</i>			15			/tab	
	<input type="checkbox"/> No	<i>Lowest-priced</i>			15			/tab	
Diazepam 5mg/ml rectal solution	<input type="checkbox"/> Yes	<i>Highest-priced</i>			0.5ml			/ml	
	<input type="checkbox"/> No	<i>Lowest-priced</i>			0.5ml			/ml	
Ferrous salt 30mg Fe/5ml suspension	<input type="checkbox"/> Yes	<i>Highest-priced</i>			200ml				
	<input type="checkbox"/> No	<i>Lowest-priced</i>			200ml				
Gentamycin 10mg/ml injection	<input type="checkbox"/> Yes	<i>Highest-priced</i>			2ml vial			/ml	
	<input type="checkbox"/> No	<i>Lowest-priced</i>			2ml vial			/ml	

A	B	C	D	E	F	G	H	I	J
Medicine name, dosage form, strength	Available today	Medicine type	Brand or product name(s)	Manufacturer	Target pack size	Pack size found	Price of pack found	Unit price (4 digits)	Comments
Ibuprofen 200mg tablet	<input type="checkbox"/> Yes	<i>Highest-priced</i>			24			/tab	
	<input type="checkbox"/> No	<i>Lowest-priced</i>			24			/tab	
Isoniazid 50mg scored tablet	<input type="checkbox"/> Yes	<i>Highest-priced</i>			56			/tab	
	<input type="checkbox"/> No	<i>Lowest-priced</i>			56			/tab	
Morphine 10mg/5ml oral solution	<input type="checkbox"/> Yes	<i>Highest-priced</i>			100ml			/ml	
	<input type="checkbox"/> No	<i>Lowest-priced</i>			100ml			/ml	
Morphine 10 mg tablet (immediate release)	<input type="checkbox"/> Yes	<i>Highest-priced</i>			56			/tab	
	<input type="checkbox"/> No	<i>Lowest-priced</i>			56			/tab	
Oral rehydration solution (ORS) to make 500ml	<input type="checkbox"/> Yes	<i>Highest-priced</i>			1 sachet			/sachet	
	<input type="checkbox"/> No	<i>Lowest-priced</i>			1 sachet			/sachet	
Oral rehydration solution (ORS) to make 1 litre	<input type="checkbox"/> Yes	<i>Highest-priced</i>			1 sachet			/sachet	
	<input type="checkbox"/> No	<i>Lowest-priced</i>			1 sachet			/sachet	
Paracetamol 120mg/5ml OR 125mg/5ml suspension	<input type="checkbox"/> Yes	<i>Highest-priced</i>			100ml			/ml	
	<input type="checkbox"/> No	<i>Lowest-priced</i>			100ml			/ml	
Phenobarbital 200mg/ml injection	<input type="checkbox"/> Yes	<i>Highest-priced</i>			1ml ampoule			/ml	
	<input type="checkbox"/> No	<i>Lowest-priced</i>			1ml ampoule			/ml	

A	B	C	D	E	F	G	H	I	J
Medicine name, dosage form, strength	Available today	Medicine type	Brand or product name(s)	Manufacturer	Target pack size	Pack size found	Price of pack found	Unit price (4 digits)	Comments
Phenobarbital 3mg/ml (OR 15mg/5ml) oral liquid	<input type="checkbox"/> Yes	<i>Highest-priced</i>			100ml			/ml	
	<input type="checkbox"/> No	<i>Lowest-priced</i>			100ml			/ml	
Phenytoin 25 mg/5ml or 30mg/5ml suspension	<input type="checkbox"/> Yes	<i>Highest-priced</i>			500ml				
	<input type="checkbox"/> No	<i>Lowest-priced</i>			500ml				
Procaine penicillin 1 gram = 1 million IU injection	<input type="checkbox"/> Yes	<i>Highest-priced</i>			1 vial			/vial	
	<input type="checkbox"/> No	<i>Lowest-priced</i>			1 vial			/vial	
Salbutamol 100mcg/dose inhaler	<input type="checkbox"/> Yes	<i>Highest-priced</i>			1 inhaler (200 doses)			/dose	
	<input type="checkbox"/> No	<i>Lowest-priced</i>			1 inhaler (200 doses)			/dose	
Vitamin A 100,000IU capsules	<input type="checkbox"/> Yes	<i>Highest-priced</i>			50			/cap	
	<input type="checkbox"/> No	<i>Lowest-priced</i>			50			/cap	
Zinc 20mg dispersible tablet	<input type="checkbox"/> Yes	<i>Highest-priced</i>			14			/tab	
	<input type="checkbox"/> No	<i>Lowest-priced</i>			14			/tab	

COUNTRY-SPECIFIC MEDICINES (to be integrated into core list so that final list contains alphabetical listing of survey medicines)

A	B	C	D	E	F	G	H	I	J
Medicine name, dosage form, strength	Available today	Medicine type	Brand or product name(s)	Manufacturer	Target pack size	Pack size found	Price of pack found	Unit price (4 digits)	Comments
	<input type="checkbox"/> Yes	<i>Highest-priced</i>							
	<input type="checkbox"/> No	<i>Lowest-priced</i>							
	<input type="checkbox"/> Yes	<i>Highest-priced</i>							
	<input type="checkbox"/> No	<i>Lowest-priced</i>							
	<input type="checkbox"/> Yes	<i>Highest-priced</i>							
	<input type="checkbox"/> No	<i>Lowest-priced</i>							
	<input type="checkbox"/> Yes	<i>Highest-priced</i>							
	<input type="checkbox"/> No	<i>Lowest-priced</i>							
	<input type="checkbox"/> Yes	<i>Highest-priced</i>							
	<input type="checkbox"/> No	<i>Lowest-priced</i>							
	<input type="checkbox"/> Yes	<i>Highest-priced</i>							
	<input type="checkbox"/> No	<i>Lowest-priced</i>							
	<input type="checkbox"/> Yes	<i>Highest-priced</i>							
	<input type="checkbox"/> No	<i>Lowest-priced</i>							
	<input type="checkbox"/> Yes	<i>Highest-priced</i>							
	<input type="checkbox"/> No	<i>Lowest-priced</i>							