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# 6

## Data collection in the field

This chapter describes procedures for data collection in the field, i.e. at medicine outlets. Public procurement price data are generally gathered centrally at a government central medical store from a series of procurement orders or from tender documents held by the ministry of health (see Chapter 3). However, if procurement prices are being collected at individual public health facilities, the data collection procedures described in this chapter should be followed.

Each day of data collection involves the following activities:

When?	What?	Who?
Before going out to collect data each day:	Check that data collection teams have all the materials necessary for field visits and confirm transport arrangements	Area supervisors/Data collectors
	Call each facility to be visited and confirm appointment	Area supervisors
On arrival at the facility:	Introduce survey team and remind staff of visit's purpose	Data collectors
	Verify and complete the outlet information on first page of the Medicine Price Data Collection form	Data collectors
	Collect and record data on medicine prices and availability	Data collectors
	Check all data entered into the Medicine Price Data Collection form before leaving facility	Data collectors
At the end of each day:	Conduct meeting between area supervisors and their data collectors, and discuss any difficulties	Area supervisors/Data collectors
	Review each Medicine Price Data Collection form and clarify missing/unreliable information	Area supervisors/Data collectors
	Calculate the unit prices of the medicines found	Area supervisors
	Sign all checked data collection forms, copy and store in plastic bags	Area supervisors

Each step of data collection is described below according to the personnel responsible, namely area supervisors and data collectors.

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### 6.1 FIELDWORK: AREA SUPERVISORS

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Area supervisors are responsible for ensuring the accuracy and reliability of data collection. This involves the activities described below.

**BOX 6.1****Lessons from the field: tips for successful data collection**

- Data collectors should always be neatly dressed and polite – they are the face of a national medicine price and availability survey
- Data collectors should carry identification and letter of endorsement and/or introduction from the survey manager
- Data collectors should make themselves known to the pharmacy or health facility manager when they arrive, and before they begin collecting prices
- Data collectors should collect prices as quickly as possible, causing minimal disruption (if the facility is extremely busy and the manager requests that they return later in the day, they should comply)

**6.1.1 Field supervision**

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.

**6.1.2 Daily check of completed Medicine Price Data Collection forms**

It is important that area supervisors review completed Medicine Price Data Collection forms at the end of each day to check that the data are complete, consistent and legible. Once the team has left the field, it becomes difficult to verify information that may be missing or incomplete.

The supervisors should highlight any missing or unreliable information on the form and identify the source of the problem. If necessary, data collectors should return to the facility to collect any further data required. If any Medicine Price Data Collection form shows that less than 50% of medicines were available at the outlet, the area supervisor should ensure that a back-up facility has been visited.

Once the area supervisor is satisfied with the completeness and reliability of a Medicine Price Data Collection form, he or she should sign the form's first page to record that it has been checked. Forms should then be safely stored until completion of data collection, at which time they will be transferred to the survey manager (see 6.1.5).

**6.1.3 Validation of data collection**

Area supervisors should validate data collection by conducting the survey again at selected medicine outlets and checking their results against those of their data collectors. This validation should be performed for 20% of the facilities per sector per survey area (or one public outlet and one private outlet in each survey area where the recommended sampling frame has been followed in these sectors). Where possible, medicine outlets visited for validation should be selected at random. Ideally, the validation should be done on the same day as data collection to avoid changes in the availability of the survey medicines (soon after the data collectors have left the facility). Any discrepancies between the results of the area supervisor and those of their data collectors should be discussed with the data collectors and the data collection protocol should be clarified as necessary. Any problems that cannot be resolved in the field should be discussed with the survey manager.

#### **6.1.4 Calculating the unit prices of medicines**

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.

Some unit prices may have already been calculated by data collectors to determine the lowest-priced generic product for certain medicines; these should be double-checked by the area supervisor.

#### **6.1.5 Storing completed Medicine Price Data Collection forms**

Completed forms should be copied and stored in waterproof plastic bags in the field, in a location that is protected from moisture, direct sunlight, rodents and insects. Originals should be stored in a separate location from copies. All original data collection forms, including those for validation visits, should be transferred to the survey manager upon completion of fieldwork. Area supervisors should retain the copies for use in the event that the originals become lost or damaged.

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## **6.2 FIELDWORK: DATA COLLECTORS**

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### **6.2.1 Before going out into the field each day**

Before going out into the field each day, data collectors should check that they have all the materials they will need for data collection, namely:

1. A list of data collection teams and contact information
2. The contact details of their area supervisor, including a mobile phone number to call in case of difficulty in the field
3. A schedule of visits to survey sites
4. The contact details of the sites to be visited
5. Details of back-up facilities to be visited if scheduled visits are not possible, or less than 50% of the medicines are available
6. Copies of letter(s) of endorsement and letter of introduction
7. Relevant handouts or instruction sheets
8. A Medicine Price Data Collection form for each sample medicine outlet to be visited that day
9. A Medicine Price Data Collection form for each back-up site that may need to be visited that day
10. A calculator for determining the unit price of medicines so as to identify lowest-priced generic products
11. Pens (pencils should not be used to record data), a clipboard and other supplies
12. A notebook to record any significant events or findings
13. 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.

### 6.2.2 On arrival at the facility

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.
- Check that the facility information on the first page of the Medicine Price Data Collection form is complete and correct, and inform the area supervisor at the end of the day if there were any inaccuracies.
- Enter the following information on the first page of the Medicine Price Data Collection form:
  - Date of the data collection visit;
  - Name of the person(s) who provided information on medicine prices and availability (if different from the facility's manager); and
  - Name(s) or codes of the data collector(s).

### 6.2.3 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 IN COLUMN A:

##### 1. Identify the lowest-priced generic product available at the medicine outlet

While the Medicine Price Data Collection form already contains the name and manufacturer of the originator brand product, the lowest-priced generic product must be identified during the field visit. *The lowest-priced generic product is the one with the lowest unit price or price per pill, tablet, dose or ml.*

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

product name in Column C and the manufacturer's name in Column D, in the row marked *Lowest-priced generic*.

## 2. Complete Column E: available

Complete Column E by answering 'yes' or 'no' as to whether each of the following is available:

- Row 1: Originator brand
- Row 2: Lowest-priced generic equivalent

**Always ask to see a pack of the product and only record that it is available if you actually see it.**

### CAUTION

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. **For each survey medicine, collect data only for the dosage form and strength listed.**

**Tablets and capsules are considered equivalent.**

**Plain, coated and film-coated products are considered equivalent.**

**Modified release formulations (e.g. slow release, retard) should be considered as separate products.**

**If the dosage form listed in Column A is not found, the medicine product should be treated as 'unavailable'. Similarly, if the strength listed in Column A is not found, the medicine product should be treated as 'unavailable'.**

If a product is temporarily out of stock:

- Record medicine as 'unavailable' (Column E: Available = 'no').
- Do not enter any pack size or price data in the relevant row.
- State that the product was out of stock in Column J: Comments.
- **Do not substitute an alternative product.**

If several medicines listed on the form are unavailable:

- Collect data for as many medicines as possible.
- If less than 50% of the medicines on the form are available, you will need to visit an additional facility, identified in advance as a back-up, and conduct the survey again. Contact the area supervisor, who will advise you on the best time to visit the back-up facility. Depending on your data collection schedule and the time available as well as the distance between outlets, it may be preferable to visit the back-up facility that same day or on another day.

**NOTE: If less than 50% of the medicines are available at a back-up facility, no additional medicine outlet is visited.**

### 3. Complete Column G: Pack size found

In Column G for each medicine, enter the pack size actually found in the facility for:

- Row 1: Originator brand
- Row 2: Lowest-priced generic equivalent.

If the recommended pack size is available, record data on this pack size. If it is not available, select the closest, larger pack size found. Whenever possible, select the same pack size for the originator brand and the lowest-priced generic 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.

**Each medicine has a recommended pack size (Column F). 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.**

**The pack size and price of that pack is only entered on the form if it is physically in stock (you must actually be able to see it).**

**For each product, only collect the price for one pack size.**

### 4. Complete Column H: Price of pack found

In Column H, enter the price of the pack found, in the national currency, for:

- Row 1: Originator brand
- Row 2: Lowest-priced generic equivalent

**Ask to see either the price list or price label on the product before entering the price on the Medicine Price Data Collection form.**

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 (Column J).

In the public sector, medicines are often distributed free of charge or for a fixed fee for either the medicine or the visit. If this is the case in your country, you will likely be instructed to:

- collect the prices the pharmacy/dispensary pays to its supplier; or
- collect medicine availability only (for the public sector).

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 free of charge 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 (Column J) for each free/fixed fee medicine. Otherwise, it may appear that you have simply forgotten to enter the price.**

**Where a fixed fee is paid, record what it covers in the Comments (Column J). For example, in the public sector it may include the consultation cost plus the medicine dispensing cost.**

### 5. Complete Column J: Comments, as required

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

- Product temporarily out of stock (note: no price data should be recorded).
- Percentage discount offered.
- Medicine is free or available only for a fixed fee.

#### 6.2.4 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. They should also check to see whether at least half of the survey medicines were available to determine whether a visit to a back-up facility is required.

Data collectors should thank the medicine outlet staff for their participation, and alert them of a potential second visit by the area supervisor to validate the data collected.

Tables 6.1 and 6.2 show an extract from a completed Medicine Price Data Collection form, which data collectors in the field have completed. The area supervisor has entered the unit prices.

## 6.3 ENSURING DATA QUALITY

The quality of the information that the medicine price and availability survey generates depends on the accuracy of data collection. The survey manager has overall responsibility for the quality of the data, though all survey personnel have a role to play in ensuring the accuracy of the data collected. The area supervisors and data collectors should receive regular supervision. Rigorous enforcement of data collection procedures will pay off with the ease with which data entry and analysis occur. The following steps will also help to ensure greater accuracy.

1. Thorough preparation and training is the first step in minimizing errors.
2. Establish procedures to check for data completeness, consistency, plausibility and legibility in the field when it is still possible to correct errors or to fill in missing information. Area supervisors should review data collection forms every day after completion of the field work and resolve any problems before the next day of data collection. Entries on the data collection form must be complete