

Cost data collection

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Dr. Jyoti Dixit

HTA Regional Resource Centre

Department of Community Medicine & School of Public Health

Post Graduate Institute of Medical Education and Research

Chandigarh, India



Outline

Purpose

Perspective

Health Care Costs:

- Health system cost
- Patient costs

Purpose

Budget Estimation

Scale up of services

Insurance (Reimbursement rates)

Inform Health Technology Assessment

Perspective of Costing

From whose point of view is the costing being undertaken?

Patient Perspective

Health-system Perspective

Societal Perspective

The perspective will determine which costs are to be included and will affect the methodology

Cost assessment methods

TOP DOWN

BOTTOM UP

***TIME FRAME: A
FINANCIAL YEAR***

Top Down vs Bottom Up

Top Down (or Gross Costing)

Accounting exercise using retrospective data on healthcare expenditures.

Dividing expenditures by the services provided in the period expenditure was done.

Is useful in case majority resource use is in form of health technologies (pharmaceuticals, medical devices etc.)

Less time consuming with low precision

Bottom Up (or Micro Costing)

Defines the type and quantity of input or ingredients used to produce the service output

Inputs include physical goods or services, human resource time, medicines, consumables, equipments etc.

Using price data and units of input resources, cost of service provisioning is computed

More time consuming with high precision

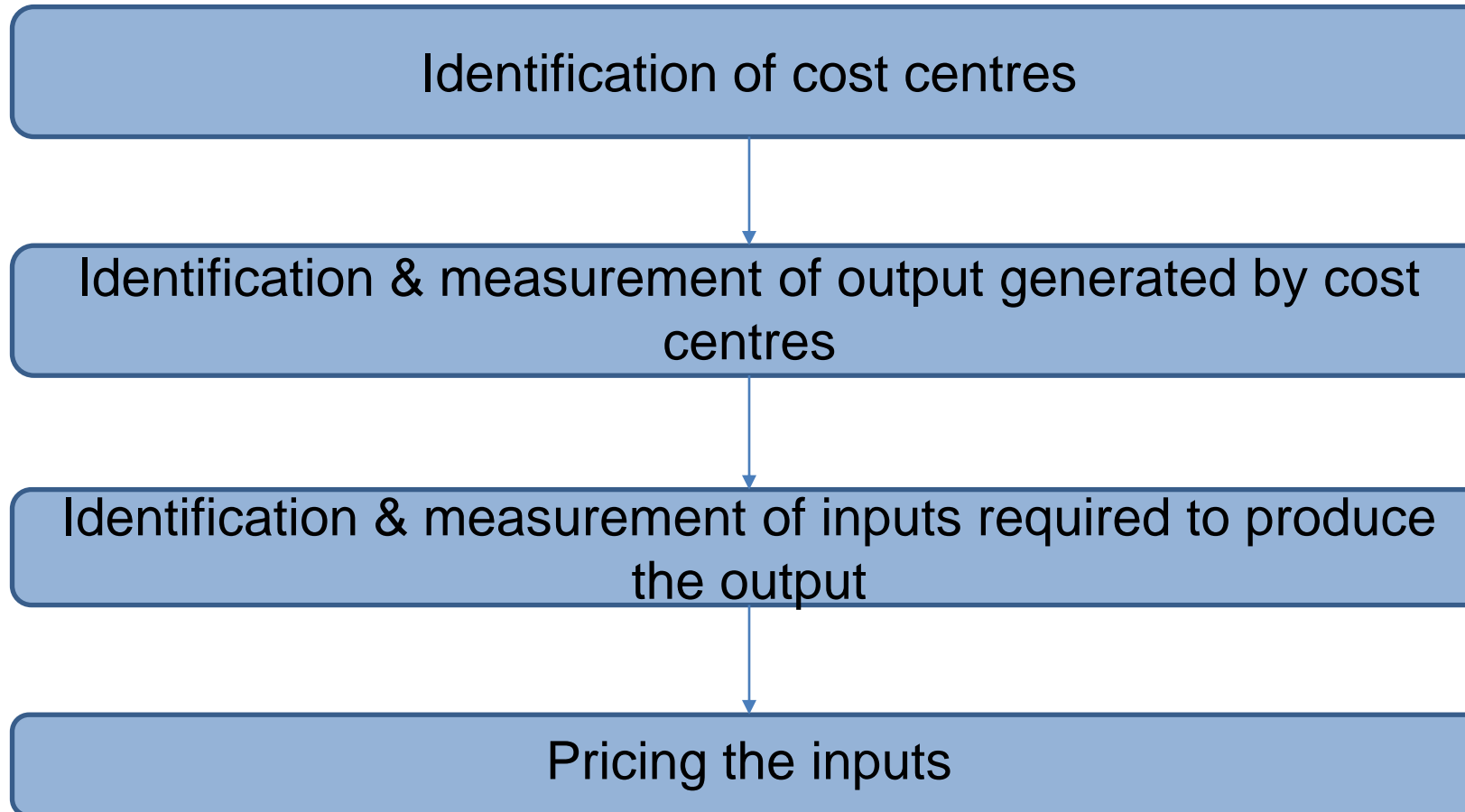
Steps of Health system costing (Bottom-up approach)

- Establish objectives
- Describe service(s) to be measured
- Identify and classify resource items and units of resources utilized
- Measure resource consumption
- Place monetary value on these resource items
- Calculate the unit costs of a particular service

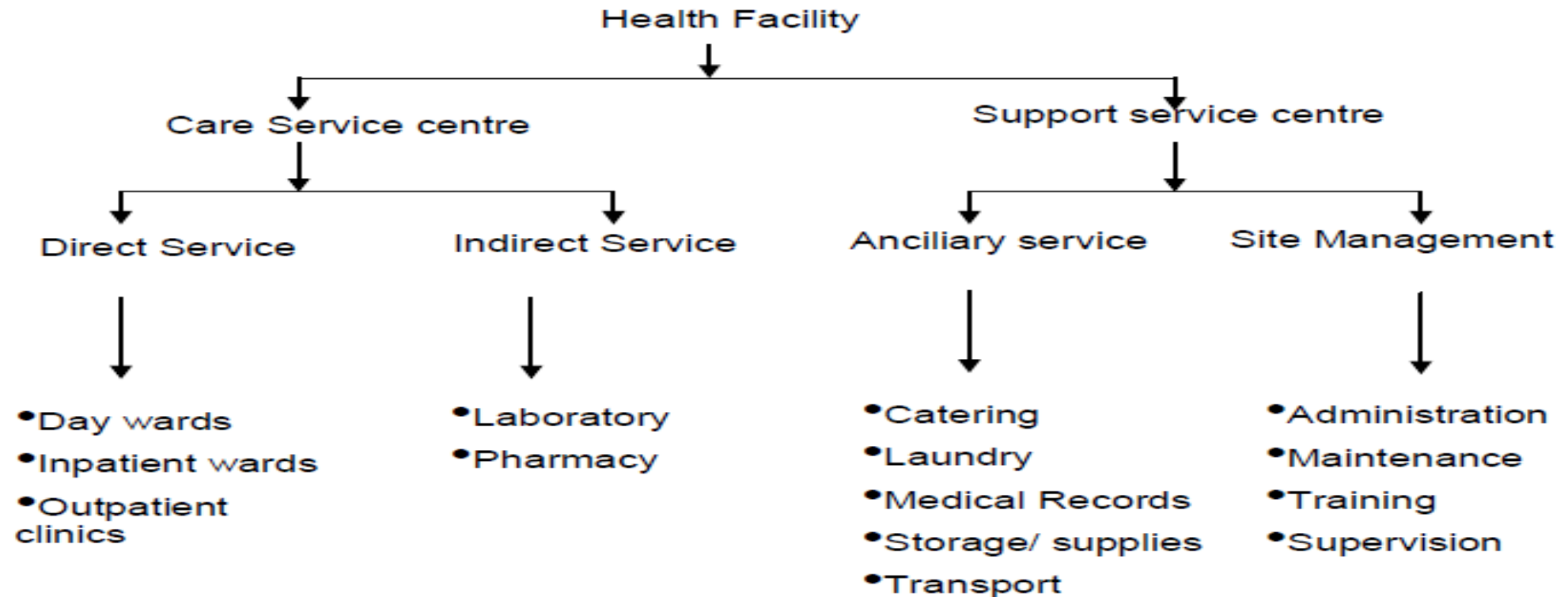
Cost centres

- A responsibility center of the organization that is held responsible for the costs that it incurs, but not for revenues or capital investments.
- Usually refers to institutional departments or services.

Data collection methodology: Health System Costs



Identification of cost centres



**Human
Resources**

Capital

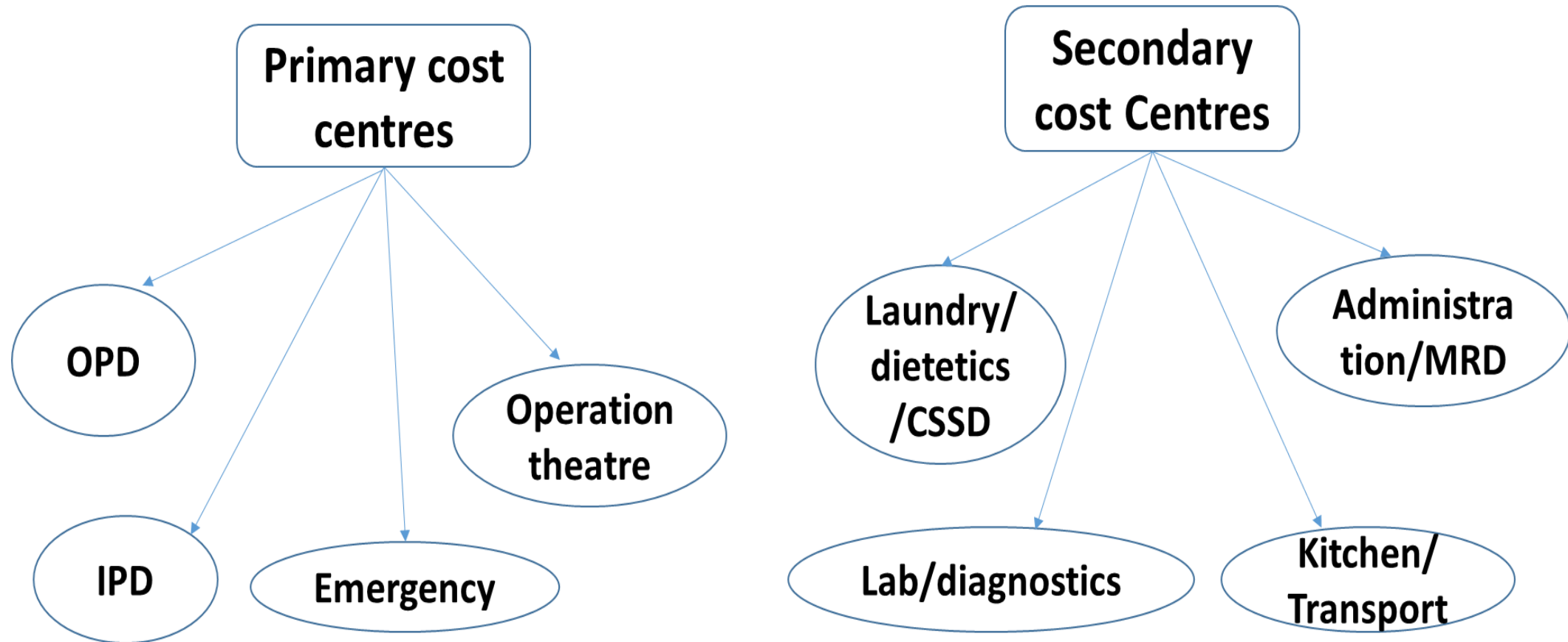
Equipments

Consumables

**Non-
consumables**

Overhead

Identification of cost centres



Identification of outputs

- Number of outpatient consultations
- Number of patients admitted for inpatient care (& bed-days stay)
- Number of surgeries/operations
 - Number of PTCA operations
 - Number of laparoscopic hysterectomies
- Number of diagnostic tests

Units of outputs

Services	Unit
Routine OPD	Number of patients
Inpatient Department	Number of patients & Average length of stay
Institutional deliveries	Number of deliveries
CATH Lab	Number of surgeries
Operation theatre	Number of surgeries
Immunisation	Number of doses
Special care services	Number of patients
DOTS provision	Number of patients
Meetings	Number of meetings

Identification of inputs

Capital

- Space/building
- Equipment
(medical and non-medical)
- Furniture
- Vehicles

Recurrent

- Salaries of human resource
- Drugs
- Consumables (Sanitary, Surgical, Stationary)
- Overheads (water, electricity, telephone, diesel, etc.)

Others

- Funds and grants
- Cash benefits
- Revenue generated
- IEC materials

Capital Resources

Inputs	Source of Information on quantity	Units
Space/building	Facility survey/Availability of facility maps	Square feet or metre
Equipment (Medical and non-medical)	Physical observation/Non-consumables stock registers	Number of each equipment in working condition

Recurrent Resources

Inputs	Details	Source of Information on quantity	Units
Wages <ul style="list-style-type: none"> • Medical or non medical • Regular or part time • Partly or completely involved 	<ul style="list-style-type: none"> • Monthly gross salary • Annual incentives (TA/DA) • Housing allowance • Facility of transport • Other special allowances 	Salary slips of each staff member from the accounts department	INR
Drugs and consumables	<ul style="list-style-type: none"> • Drugs • Injections • Surgical 	Consumables stock registers/Indent books/vouchers/pharmacy and store records	Number of items consumed

Recurrent Resources

Inputs	Source of Information on quantity	Units
Electricity	Electricity bill	Annual expenditure in INR
Water	Water bill	Annual expenditure in INR
Internet	Bill	Annual expenditure in INR
Laundry	Respective records/Account records	Number of different items/Annual expenditure in INR
Dietetics	Respective records/Account records	Number of diets served/Annual expenditure in INR

Recurrent Resources

Inputs	Source of Information on quantity	Units
Stationary	Quantity of stationary items consumed/Account records	Number of items consumed/ Annual expenditure in INR
IEC material	Account records	Annual expenditure in INR
Maintenance of equipment	Account records	Annual expenditure in INR
Maintenance of equipment	Account records	Annual expenditure in INR
Transport (Maintenance, insurance, fuel)	Account records	Annual expenditure in INR

Pricing of inputs

Inputs	Price	Source
Space	Market rental price	Key informant interviews (KIIs) Rental land price from government to private sector
Equipment	Procurement price	Rate contract list of the respective states/ providers
Drugs	Procurement price	
Consumables	Procurement price	
Furniture	Procurement price	

Key staff members

Head of the facility/MO/SMO

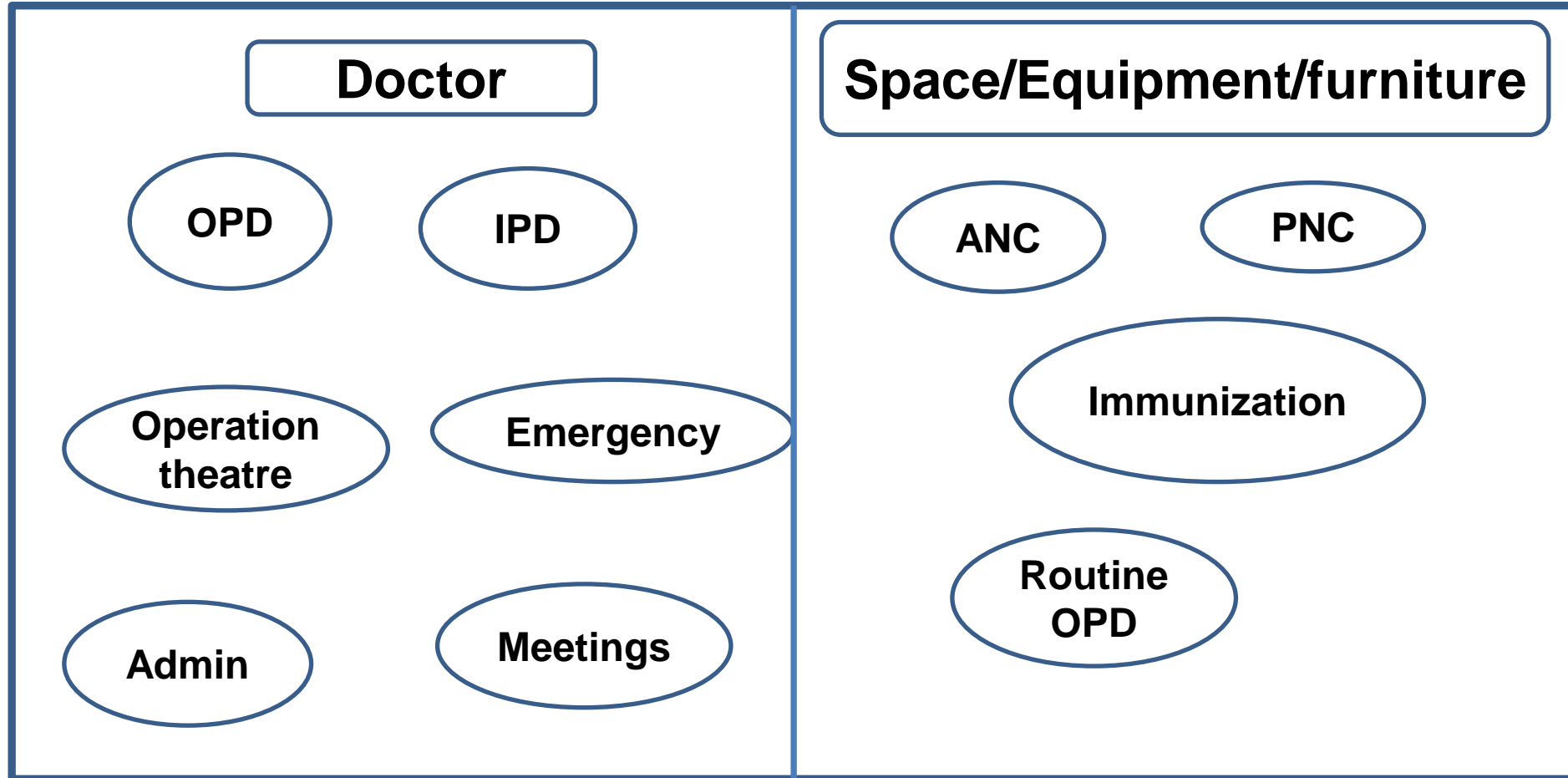
Head nurse/ward sister

Accountant/administrative assistant

Data entry operator/manager

Pharmacist

Joint/ Shared Resources

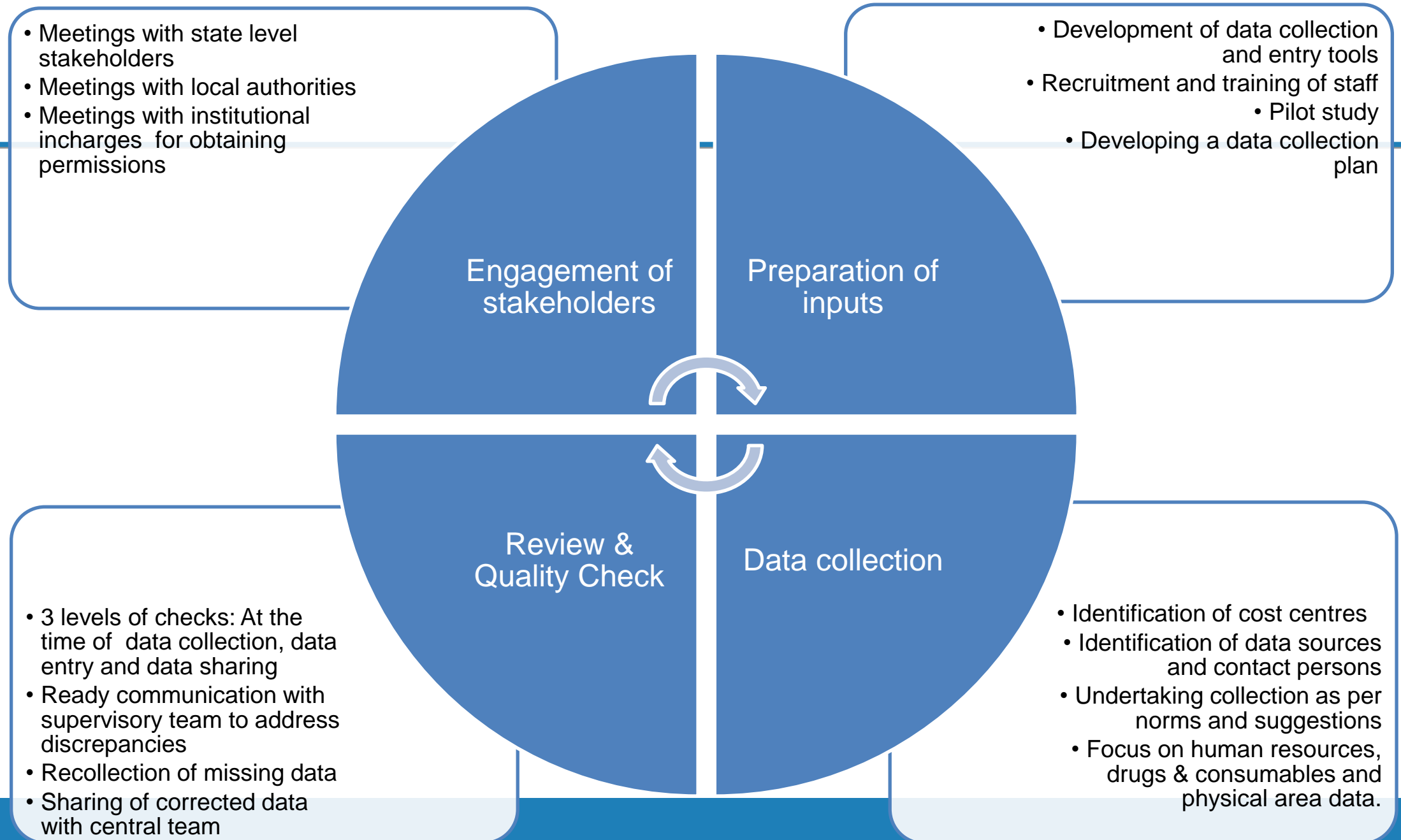


Time allocation methods

- Used for apportioning of joint costs
- Methods
 - Time and motion studies
 - Diary method
 - **Interview based**
 - Data based

Time allocation: Interviews & observation

Activity name	Type of activity		Fixed schedule activity			Routine activity		
	Fixed schedule	Routine	Frequency	Hours per day of activity	Days for which the activity was done during the reference year	Time per person (in minutes) (a)	Number of beneficiaries on a routine day (b)	If not (a) and (b) then how much time to do the activity
OPD								
IPD								
Operation Theatre								
General Administration								
Teaching/Training								
Workshop/Conference								
Outreach								
Meetings								
Research								
Others (Specify)								



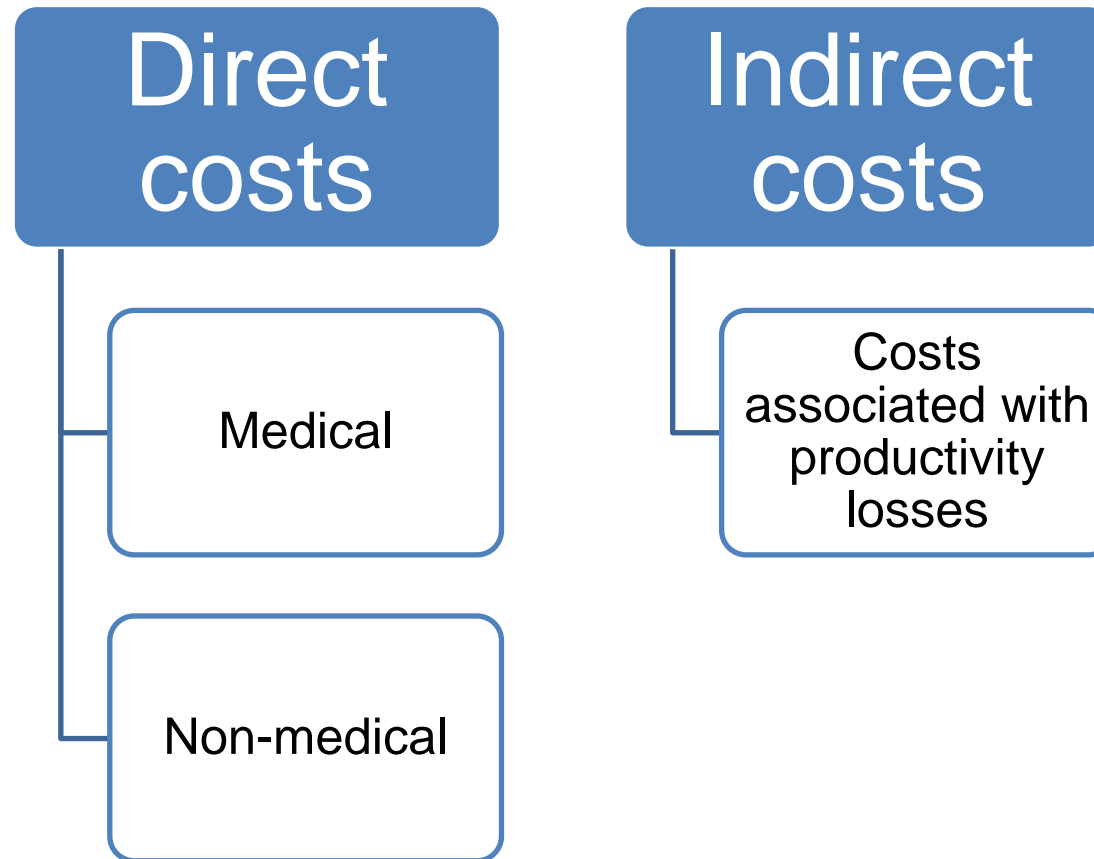
Patient Costs



What is Out-of-pocket expenditure (OOPE)

- **Out-of-pocket** payments (OOPs) are defined as direct payments made by individuals to **health** care providers at the time of service use.
- For example, when operating a vehicle, gasoline, parking fees and tolls are considered out-of-pocket expenses for a trip.
- Similarly, in case OOPE related to illness, all expenditures incurred for seeking care will be considered.

Types of Patient costs



Different components of OOPE

Components of OOPE

Travelling cost

Medicines

Lab tests/Diagnostics

Procedure/surgery

User fees/Hospital charges (including bed charges, diagnostics etc.)

Informal payment

Boarding/lodging

Food

Other

Total



Components of OOPE

Direct Medical Costs: costs which are incurred for a defined intervention and all follow-up costs for a particular illness.

- Drugs: All the drugs that the patient paid for a particular procedure
- Diagnostics: All the tests and scans that the patient underwent and paid from his own pocket
- Procedure/User fees: The fees charged by the health facility either for a particular procedure or general user fee



Components of OOPE

Direct Non-medical cost: These are the additional costs incurred by the patient while seeking the medical care for a particular illness

- Travel: This includes expenses incurred by the patient and his caregiver while travelling to a health facility, be it in the public transport or the personal vehicle.
- The field investigator should also record the number of visits in case the patient visits the facility multiple times for a particular treatment.
- Boarding/Lodging: This involves the cost borne by the patient and his caregiver for the overnight stay in or near the health facility especially for patients who travel to different cities to seek treatment as well as for the caregivers of the admitted patients.
- Food: This involves the cost incurred by the patient and his caregiver on food etc. during his/her visit to the health facility.

Thank you

