



## User Guide to Unit Cost Estimator

### Background Information

The unit cost estimator uses statistical methods to generate a cost per outpatient visit or inpatient admission for a healthcare facility using a set of key variables. To develop the tool, a cost function model was constructed using data from the National Health System Cost Database- Round 1 data. The unit cost estimator provides estimates of the cost per inpatient admission and cost per outpatient visit for public sector healthcare facilities using data on geographical location, level of health facility, size of the facility and patient load etc.

### Type of Estimators

1. Inpatient Cost Estimator
2. Outpatient Cost Estimator

### Number of States included

1.	Andhra Pradesh	11.	Jharkhand	21.	Punjab
2.	Arunachal Pradesh	12.	Karnataka	22.	Rajasthan
3.	Assam	13.	Kerala	23.	Sikkim
4.	Bihar	14.	Madhya Pradesh	24.	Tamil Nadu
5.	Chhattisgarh	15.	Maharashtra	25.	Telangana
6.	Goa	16.	Manipur	26.	Tripura
7.	Gujarat	17.	Meghalaya	27.	Uttar Pradesh
8.	Haryana	18.	Mizoram	28.	Uttarakhand
9.	Himachal Pradesh	19.	Nagaland	29.	West Bengal
10.	Jammu & Kashmir	20.	Odisha		

### Health System Levels included

1. District Hospital
2. Community Health Centre/ Primary health care Centre

## Step Guide for Users

When we click on the **Access the Unit Cost Estimator** button, a default window will open as shown in picture 1.

Picture 1: **Default Opening Window**

**Cost Estimator**

Inpatient Cost Estimator

Outpatient Cost Estimator

### Inpatient care: Cost per inpatient admission

Enter the values instructed to obtain a cost per admission or cost per outpatient visit for the different states in India. If you do not have a value for the variable, the online tool will use a default value for the state. The starred variables are required for the model. All costs are presented in Indian Rupees - 2016 prices.

[User Guidance](#)
[Variables Definition](#)
[Methodology](#)

Inputs	Enter your data in this column	Average values for the chosen state (Default Values) <span style="color: red;">Read Only</span>
*State	Jharkhand	
Health system level	District Hospital	
Number of inpatient beds	<input type="text"/>	
Number of inpatient admissions per year	<input type="text"/>	
Number of doctors at the facility	<input type="text"/>	
Doctors' monthly salary (INR)	<input type="text"/>	

[Submit](#)
[Reset](#)

**Step 1:** Select the **Estimator {Inpatient Cost Estimator} {Outpatient Cost Estimator}** for which the user is interested to generate the estimate by clicking the buttons provided in the left panel as shown in picture 1.

- **Inpatient Cost Estimator** will open in default window open.

**Step 2:** Select the state and level of health system for which the user is interested to generate the estimate as shown in picture 2 (**Outpatient estimator** taken as example).

- 1) **State:** Select the state of interest from the dropdown
- 2) **Health system level:** Select the level of health system from the dropdown

Picture 2: Selecting State and Health System Level

**Outpatient care: Cost per outpatient visit**

Enter the values instructed to obtain a cost per admission or cost per outpatient visit for the different states in India. If you do not have a value for the variable, the online tool will use a default value for the state. The starred variables are required for the model. All costs are presented in Indian Rupees - 2016 prices.

User Guidance Variables Definition Methodology

Inputs	Enter your data in this column	Average values for the chosen state (Default Values) Read Only
State	Jharkhand	
Health system level	District Hospital	
Number of inpatient beds		
Number of outpatient visits per year		
Number of doctors at the facility		
Doctors' monthly salary (INR)		

Submit Reset Top

**Step 3:** This step involves providing the data for input variables to generate the cost estimate. There are two options available in this step i.e. if the user has the data available on input variables that data can be inserted in the blank cells. If the data is not available on these variables, state-specific averages are used by the estimator as default values to generate the cost estimate.

- 1) **Number of inpatient beds:** Please fill in the actual value for number of beds at the health facility or average number of beds for the level of health facility for your sample as shown in picture 3.1. If you do not enter a value the default value - the state average - will be used.

Picture 3.1: Entering input data for Number of inpatient beds

**Outpatient care: Cost per outpatient visit**

Enter the values instructed to obtain a cost per admission or cost per outpatient visit for the different states in India. If you do not have a value for the variable, the online tool will use a default value for the state. The starred variables are required for the model. All costs are presented in Indian Rupees - 2016 prices.

User Guidance Variables Definition Methodology

Inputs	Enter your data in this column	Average values for the chosen state (Default Values) Read Only
State	Jharkhand	
Health system level	District Hospital	
Number of inpatient beds	100	
Number of outpatient visits per year		
Number of doctors at the facility		
Doctors' monthly salary (INR)		

Submit Reset Top

- 2) **Number of annual outpatient visits:** Please fill in the actual value for number of annual outpatient visits for the health facility or average annual outpatient visits for level of health facility as shown in picture 3.2. If you do not enter a value the default value - the state average - will be used.

Picture 3.2: Entering input data for **Number of outpatient visits per year**

**Outpatient care: Cost per outpatient visit**

Enter the values instructed to obtain a cost per admission or cost per outpatient visit for the different states in India. If you do not have a value for the variable, the online tool will use a default value for the state. The starred variables are required for the model. All costs are presented in Indian Rupees - 2016 prices.

User Guidance Variables Defination Methodology

Inputs	Enter your data in this column	Average values for the chosen state (Default Values) Read Only
State	Jharkhand	
Health system level	District Hospital	
Number of inpatient beds	100	
Number of outpatient visits per year	50000	
Number of doctors at the facility		
Doctors' monthly salary (INR)		

Submit Reset

Top

- 3) **Number of doctors at the facility:** Please fill in the actual value for number of doctors at health facility or average doctors for level of health facility (as shown in picture 3.3. If you do not enter a value the default value will be used.

Picture 3.3: Entering input data for **Number of doctors at the facility**

**Outpatient care: Cost per outpatient visit**

Enter the values instructed to obtain a cost per admission or cost per outpatient visit for the different states in India. If you do not have a value for the variable, the online tool will use a default value for the state. The starred variables are required for the model. All costs are presented in Indian Rupees - 2016 prices.

User Guidance Variables Defination Methodology

Inputs	Enter your data in this column	Average values for the chosen state (Default Values) Read Only
State	Jharkhand	
Health system level	District Hospital	
Number of inpatient beds	100	
Number of outpatient visits per year	50000	
Number of doctors at the facility	100	
Doctors' monthly salary (INR)		

Submit Reset

Top

- 4) **Doctor's monthly salary (INR):** Please fill in the actual value for average salary of doctors for level of health facility as shown in picture 3.4. If you do not enter a value the default value will be used.

Picture 3.4: Entering input data for **Doctors' monthly salary (INR)**

**Cost Estimator**

Inpatient Cost Estimator

**Outpatient Cost Estimator**

### Outpatient care: Cost per outpatient visit

Enter the values instructed to obtain a cost per admission or cost per outpatient visit for the different states in India. If you do not have a value for the variable, the online tool will use a default value for the state. The starred variables are required for the model. All costs are presented in Indian Rupees - 2016 prices.

User Guidance   Variables Definition   Methodology

Inputs	Enter your data in this column	Average values for the chosen state (Default Values) Read Only
State	Jharkhand	
Health system level	District Hospital	
Number of inpatient beds	100	
Number of outpatient visits per year	50000	
Number of doctors at the facility	100	
Doctors' monthly salary (INR)	60000	

Submit   Reset

**Top**

**Step 4:** When the step 2 is complete, click on the **Submit** button. The cost estimator will produce the estimates for selected **State** selected **Health system level**. Results can be generated in 3 ways depending on information entered by user for input variables as shown in picture 4.1, 4.2 and 4.3.

- 1) In case the user enters the values for all the input variables i.e. **Number of inpatient beds, Number of Outpatient visits per year, Number of doctors at the facility and Doctors' monthly salary (INR)**.

Picture 4.1: Generating results

**Cost Estimator**

Inpatient Cost Estimator

**Outpatient Cost Estimator**

### Outpatient care: Cost per outpatient visit

Enter the values instructed to obtain a cost per admission or cost per outpatient visit for the different states in India. If you do not have a value for the variable, the online tool will use a default value for the state. The starred variables are required for the model. All costs are presented in Indian Rupees - 2016 prices.

User Guidance   Variables Definition   Methodology

Inputs	Enter your data in this column	Average values for the chosen state (Default Values) Read Only
State	Andhra Pradesh	
Health system level	District Hospital	
Number of inpatient beds	100	41.23
Number of outpatient visits per year	50000	2452.94
Number of doctors at the facility	100	
Doctors' monthly salary (INR)	60000	
<b>Mean Value : 4684.27 (₹) INR</b> 2.5% Value : 2377.26 (₹) INR 97.5% Value : 9311.49 (₹) INR <small>INR : Indian National Rupee The estimates represent the year 2016</small>	Conversion to Constant price 2017 Submit	<b>Mean Value : 4863.94 (₹) INR</b> 2.5% Value : 2468.44 (₹) INR 97.5% Value : 9668.63 (₹) INR <small>INR : Indian National Rupee The estimates represent the year 2017</small>

Submit   Reset

**Top**

## User Guide to the Unit Cost Estimator

- In case the user enters the values for all the input variables i.e. **Number of inpatient beds** and **Number of Outpatient visits per year**.

Picture 4.2: Generating results

**Cost Estimator**

Inpatient Cost Estimator

Outpatient Cost Estimator

### Outpatient care: Cost per outpatient visit

Enter the values instructed to obtain a cost per admission or cost per outpatient visit for the different states in India. If you do not have a value for the variable, the online tool will use a default value for the state. The starred variables are required for the model.

All costs are presented in Indian Rupees - 2016 prices.

[User Guidance](#) [Variables Definition](#) [Methodology](#)

Inputs	Enter your data in this column	Average values for the chosen state (Default Values) Read Only
State	Andhra Pradesh	
Health system level	District Hospital	
Number of inpatient beds	100	41.23
Number of outpatient visits per year	50000	2452.94
Number of doctors at the facility		
Doctors' monthly salary (INR)		
Mean Value : 443.97 (₹) INR 2.5% Value : 223.08 (₹) INR 97.5% Value : 923.46 (₹) INR <small>INR : Indian National Rupee The estimates represent the year 2016</small>		Conversion to Constant price 2017 Mean Value : 461.00 (₹) INR 2.5% Value : 231.64 (₹) INR 97.5% Value : 958.88 (₹) INR <small>INR : Indian National Rupee The estimates represent the year 2017</small>

[Top](#)

- In case the user does not enter the value for any of the input variables, the state averages will be used as default information (Please see **Methods** for more detail). The Default values are in the form of **\*Read only format**.

Picture 4.3: Generating results

**Cost Estimator**

Inpatient Cost Estimator

Outpatient Cost Estimator

### Outpatient care: Cost per outpatient visit

Enter the values instructed to obtain a cost per admission or cost per outpatient visit for the different states in India. If you do not have a value for the variable, the online tool will use a default value for the state. The starred variables are required for the model.

All costs are presented in Indian Rupees - 2016 prices.

[User Guidance](#) [Variables Definition](#) [Methodology](#)

Inputs	Enter your data in this column	Average values for the chosen state (Default Values) Read Only
State	Andhra Pradesh	
Health system level	District Hospital	
Number of inpatient beds		41.23
Number of outpatient visits per year		2452.94
Number of doctors at the facility		
Doctors' monthly salary (INR)		
Mean Value : 1721.00 (₹) INR 2.5% Value : 917.62 (₹) INR 97.5% Value : 3372.95 (₹) INR <small>INR : Indian National Rupee The estimates represent the year 2016</small>		Conversion to Constant price 2017 Mean Value : 1787.01 (₹) INR 2.5% Value : 952.82 (₹) INR 97.5% Value : 3502.32 (₹) INR <small>INR : Indian National Rupee The estimates represent the year 2017</small>

[Top](#)



## User Guide to the Unit Cost Estimator

**Step 5:** The output generated will have a mean estimate of unit cost per outpatient visit and **2.5<sup>th</sup>** and **97.5<sup>th</sup>** confidence limits for the mean estimate in Indian National Rupee (INR)

**Note:** All the steps for **Inpatient Cost Estimator** are same as for the **Outpatient Cost Estimator**.