Costing exercise

A)Top-down costing:

Suppose we wish to determine the cost of cardiovascular surgery intensive care unit. For each patient we have data on the number and the type of laboratory tests performed. For simplicity, let us assume that these were the only services received by patients.

The first task is to determine a unit output for those departments directly serve patients. We will be determining a cost per unit output , and multiplying this cost by the usage of each patient to determine the cost per patient. Thus the unit of output must be homogeneous as possible with respect to cost. and yet be available in the data for each patient.We have selected a patient day as the unit output of the ICU, and a workload measurement unit for the labarotary.Each laboratory test is assigned a pre-determined number of workload measurement units according to the amount of work needed to perofrm the test.

An allocation basis must be determined for each overhead department. For example, square feet of floor space has been selected for housekeeping. This means that housekeeping costs will be allocated to departments receiving housekeeping services in proportion to the square footage of floor space in the department. Similarly , paid hours has been selected as the allocation basis for administration costs, and kilograms of laundry for the laundry costs.

Allocate the costs according to the information given above and by the numbers given in the table and calculate

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Annual direct costs ($) | Annual units of output | Direct cost per unit ($) | Allocation basis | Annual paid hours | ft2 | Annual laundry(kg) |
| Overhead departments | | | | | | | |
| Administration | 2,000,000 |  |  | Pd-hrs | 200,000 | 30,000 | 0 |
| Housekeeping | 1,500,000 |  |  | ft2 | 300,000 | 4,000 | 80,000 |
| Laundry | 1,300,000 |  |  | kg | 200,000 | 8,000 | 0 |
| Other | 10,200,000 |  |  |  | 300,000 | 158,000 | 120,000 |
| Subtotal | 15,000,000 |  |  |  | 1,000,000 | 200,000 | 200,000 |
| Final departments | | | | | | | |
| Laboratory | 4,000,000 | 8,000,000 | 0.50/WMU |  | 250,000 | 30,000 | 25,000 |
| ICU | 500,000 | 5,000 | 100/PT.DAY |  | 50,000 | 8,000 | 75,000 |
| Other | 30,500,000 |  |  |  | 1,700,000 | 562,000 | 1,200,000 |
| Subtotal | 35,000,000 |  |  |  | 2,000,000 | 600,000 | 1,300,000 |
| Hospital total | 50,000,000 |  |  |  | 3,000,000 | 800.000 | 1.500.000 |
|  |  |  |  |  |  |  |  |

1)Ignore overhead cost and calculate

1. Laboratory cost/WMU
2. ICU cost/patient day

2)Allocate overhead and calculate

1. Laboratory cost/WMU
2. ICU cost/patient day

B) Costing exercise 2

By using the following details please calculate the cost of stroke per patient. Once a patient have a stroke he/she will be first reffered to stroke unit and then will be followed by general medical ward before discharge. After discharge he/she will be screened by outpatient clinic on regular basis

|  |  |  |
| --- | --- | --- |
| Cost component | Unit cost | Unit |
| Stroke unit | 150 Euros | Per day |
| General medical ward | 50 Euros | Per day |
| Thrombolysis | 500 Euros | Per patient |
| Percentage of patients being thrombolysed | 1% |  |
| Average length of stay in Stroke Unit | 6 | days |
| Average length of stay in Stroke Unit in general medical ward | 4 |  |
| Time available for physician for each day of stay | 30 | minutes |
| Physician wage | 10 Euros | hour |
| Average wage | 1o Euros | Day |
| Outpatient visit | 10 Euros | Per diem |
| Average number of visits | 4 | Per year |

1. What is the hospital cost of stroke?
2. What is the outpatient cost of stroke?
3. What is the societal cost?