

## Calculating the Cost of a Service

### Stage 1:

Three key pieces of information are required to establish the 'cost' of providing physiotherapy services. These are the direct, indirect and overhead costs. Examples of this are in the table below:

DIRECT	INDIRECT	OVERHEADS	TOTAL COST
<i>E.g. New car £15,000 (x 20% =£3,000 to give an approximate annual depreciation value)</i>	<i>Parking Permit  £120</i>	<i>Petrol; insurance; servicing the vehicle £1000+£1000+£600</i>	<i>Car ownership  £5,720 per annum</i>
Staff; consumables – sticks, walking frames etc	Staff training; uniform; phones	Rent; corporate costs (HR, IT, finance etc)	Physiotherapy service

The most important aspect of this stage is that all costs are included somewhere, rather than which category they are in.

### Stage 2:

Working out the amount of direct patient/client time, plus the activities undertaken by staff, is established by undertaking a staff activity analysis (time and motion study – see document). A derived figure of available clinical minutes/hours will be required for the calculation of unit cost.

### Stage 3:

It is essential to know the number of weeks staff are available for; i.e. 52 weeks of the year, minus five weeks annual leave, minus average study leave, minus average sick leave, equals the number of weeks of staff availability (normally c.42 weeks per annum).

**For example: 52 – 5 – 3 – 2 = 42 total available weeks**



(If entitled leave is not subtracted and allowances made for sickness/unexpected leave, the service will not be accurately costed and the projected service performance will be compromised).

The information that follows provides the step-by-step methodology to work out the cost per activity. The overall calculation is:

**Cost per activity = unit cost x duration of activity (minutes)**

### Diagram A: Calculate direct client-related staff costs

It is useful to work out 'costs' monthly (as opposed to per year) for a more accurate estimate of service costs. This will provide a clearer picture of how costs vary month by month, for example, due to different training or meeting schedules.

#### **A1. Calculate 'on-duty' hours**

$$= \text{contracted hours} - (\text{annual leave} + \text{variable leave})$$

Work out 'on-duty hours' for 1.0 WTE – these are the hours that a therapist is available for work. Deduct annual leave and variable leave (study, sick leave). On average a therapist will be available between 40-44 weeks per year. Staff will divide on-duty hours between direct face-to-face client contact (direct clinical), client related (indirect clinical) activity, and other activities (non-clinical)



#### **A2. Calculate number of hours available for client-related activity**

$$= \text{on-duty hours} - \text{hours for non client-related activity}$$

Deduct time for non-clinical activities, such as routine meetings, admin, service-specific training, supervision, statistics, from on-duty hours. These calculations must be done locally. Once all deductions have been made it is possible to work out how many on-duty hours are dedicated to client work



#### **A3. Calculate staff costs per hour for client-related activity**

$$= (\text{salary} + \text{on-costs}) / \text{hours for client related activity}$$

Using salary scales plus on-costs (employers National Insurance and superannuation – available from Finance) calculate client-related staff costs per hour. It is advisable to check with Finance the point of the salary scale that is usually used for calculations. It is commonly mid-point for each banding

## Diagram B: Work out available clinical minutes

Clinical minutes = minutes available for direct face-to-face clinical contact. This is distinct from indirect client-related activities such as documentation, client administration, clinical governance activity (it might be appropriate to work out direct clinical time in hours).

### **B1. Create a list of activities performed by your service**

Categorise activities into direct clinical, indirect clinical and non-clinical activities



### **B2. Carry out time and motion study to allocate timings to activities**

Use the activity list and time and motion study (see document) to divide 'on-duty hours' between direct clinical, indirect clinical and non-clinical activity



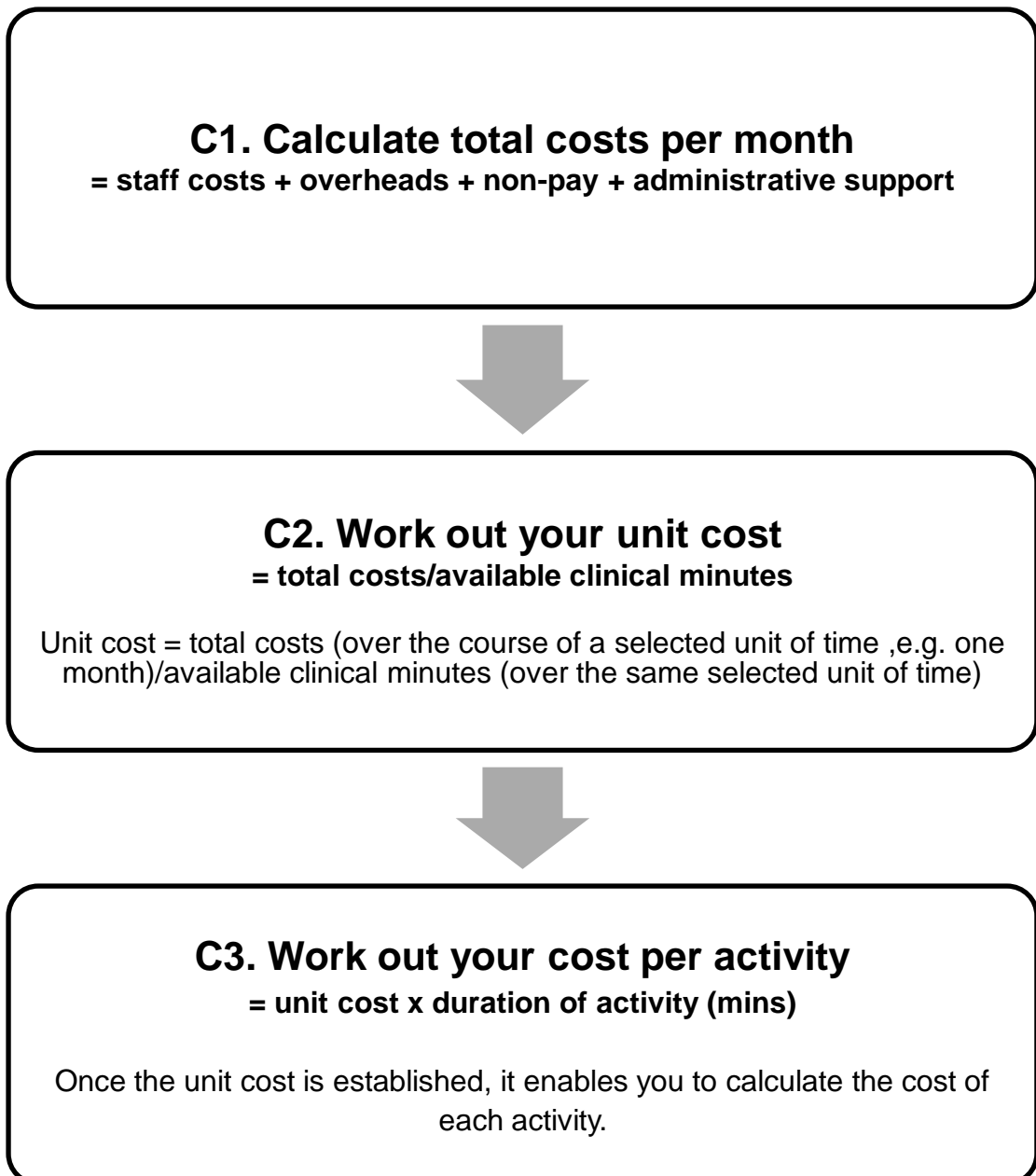
### **B3. Work out available clinical minutes**

= time allocated to direct face-to-face client contact

Work out available clinical minutes for direct, face-to-face clinical activity (direct clinical activity) using this data

### Diagram C: Calculate unit costs and use to determine activity cost

Unit cost is the cost to the service for the delivery of one unit of activity. In this instance, unit cost is worked out at cost per minute, but it may be more appropriate to work this out per hour. Remember to be consistent with the unit of time selected.





The unit cost for physiotherapy has been established and the service is fully costed. The worked example gives unit cost per minute but this can also be calculated to reflect a service appropriate time unit (per hour, per 15 minutes).