

Activity analysis (time and motion study)

Establishing the cost of a service does in part rely on accurate activity data, so robust and repeatable collection of this data is crucial. Many departments or services will have a methodology in place to undertake an activity analysis or time and motion study but included in this document are example forms and analysis charts which can be used by staff.

Prompt and empathetic communication of the reason for undertaking time and motion studies is necessary with all staff who are to be involved. Time and motion analysis is not a performance management tool and staff must be reassured of this as well as the need for robust data and data collection. Engaging staff early in the process should alleviate concerns and may even result in staff championing the process.

A data collection form should be designed that clearly and accurately records the data needed for analysis (an example is included below). Take time to clarify the data collection sets with staff and remove ambiguity through discussion and clear labelling of categories.

Activity list	
Direct Patient Care	Patient care: <ul style="list-style-type: none"> • single • double • triple • class
Indirect Care	Patient administration support Handover/ liaison Patient related meeting Equipment preparation
Non-Clinical	Non-clinical meetings Teaching/CPD Non patient administration Travel



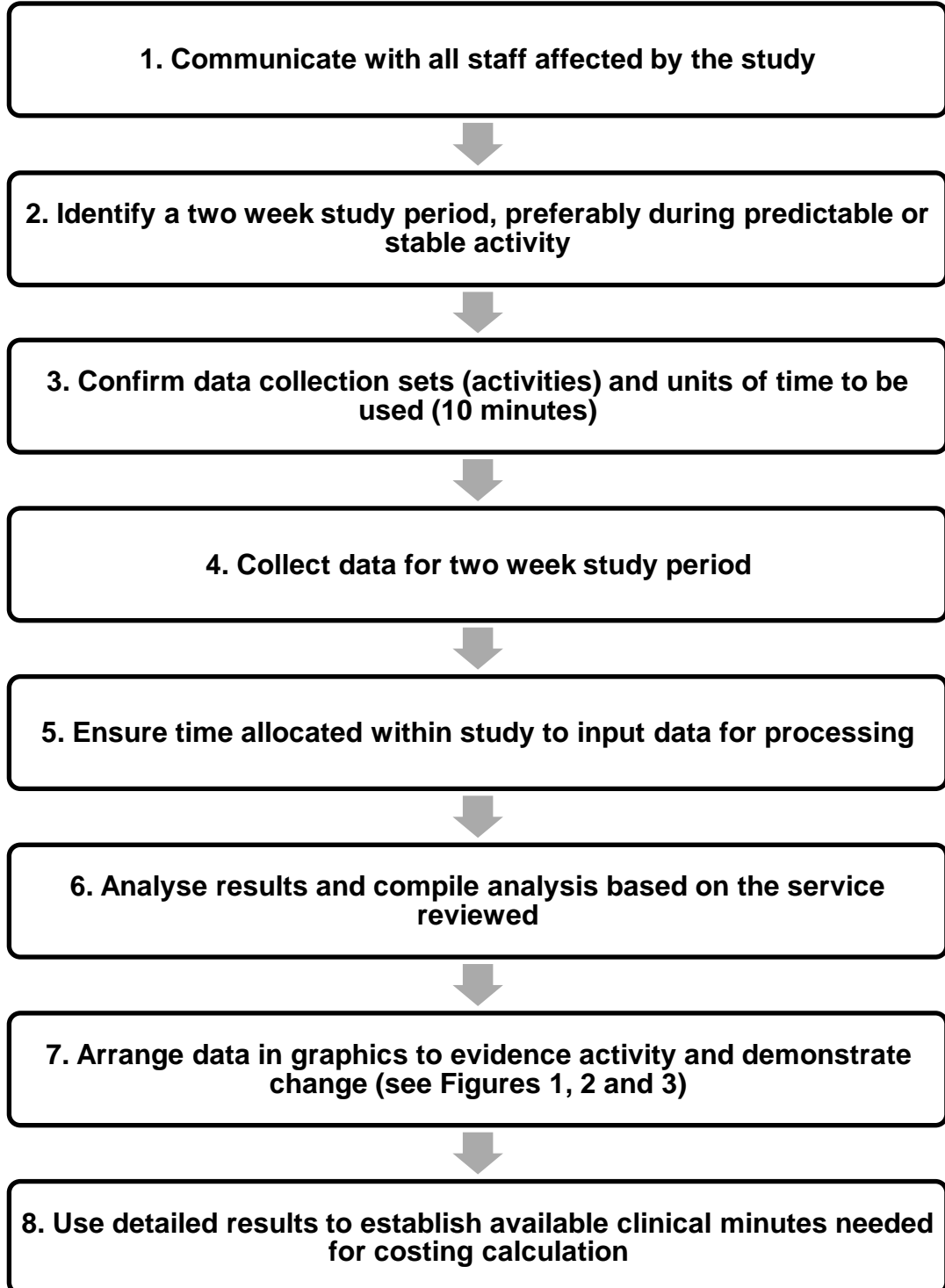
Data collection should ideally be for a two-week period during a predictable or normal period of activity.

Analysis of activity

Once the data collection period is over and the data inputted to the relevant IT resource, a detailed analysis can begin. Exactly how activity is analysed will depend on the service that has been reviewed. Access to previous time and motion data will allow a comparison over time, but stand-alone data is also useful perhaps for comparing teams or bandings. See example graphs below.

The next important step is to work out the available clinical minutes from the data collected. This will need to be done for each grade of staff but this is the key data needed for the costing calculation.

Diagram D: Flowchart to support activity analysis methodology



The raw activity data can be inputted to simple statistical computer programs to demonstrate activity results. This could be used to demonstrate activity by band, face to face activity by teams, or activity against previous data. Example graphs are shown below:

Figure 1: Face to face activity by band

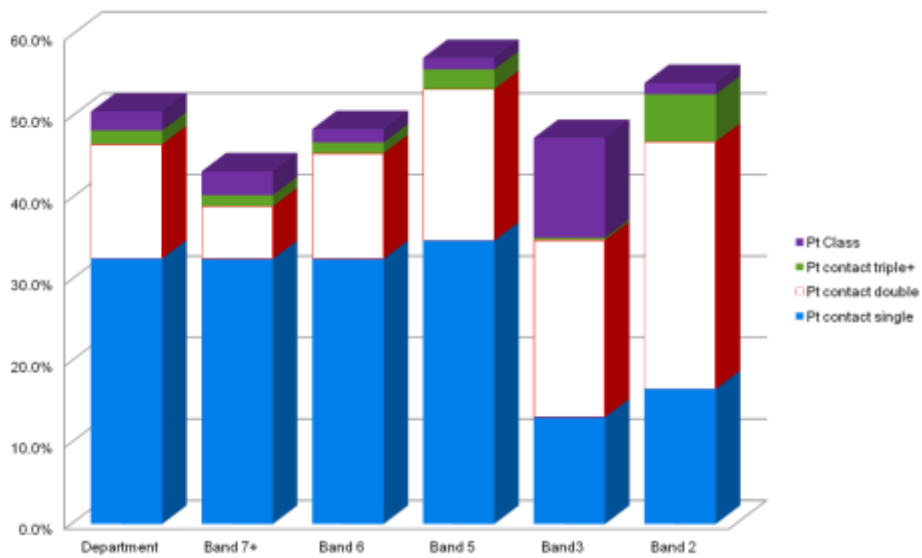


Figure 2: Patient care by team

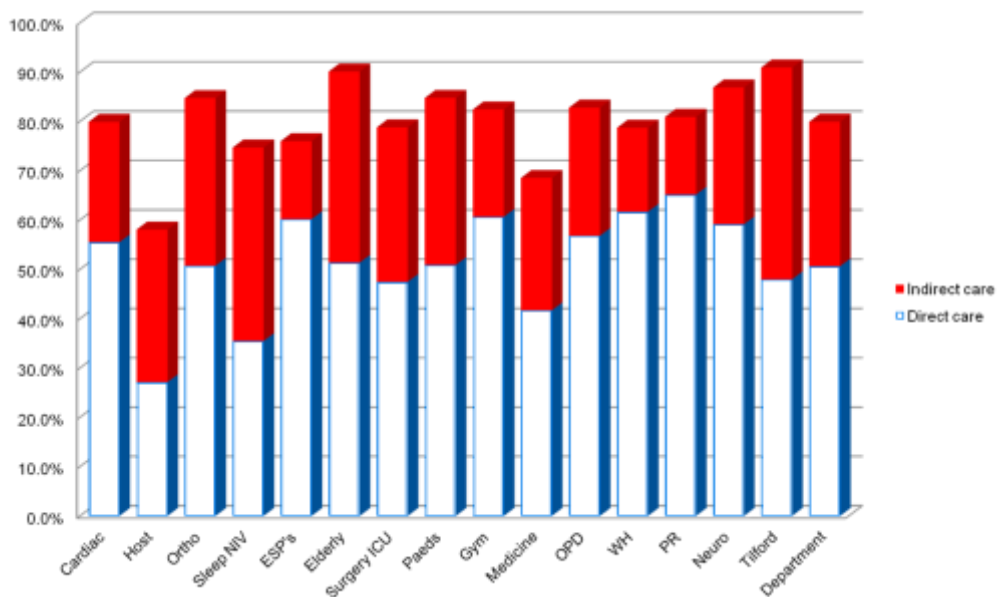


Figure 3: Sample time and motion data collection sheet

Jobtitle	Date																												
	07/01	07/01	07/01	07/01	07/01	07/01	08/01	08/01	08/01	08/01	08/01	08/01	08/01	08/01	08/01	08/01	08/01	08/01	08/01	08/01	08/01	08/01	08/01	08/01	08/01	08/01	08/01	08/01	08/01
Pt contact single																													
Pt contact double																													
Pt contact triple+																													
Pt class																													
Pt related admin																													
Handover / liaison																													
Pt related meeting																													
Non-clinical meetings (inc. appraisal etc)																													
Teaching / CPD																													
Non-patient admin																													
Equipment prep etc																													
Travel (walking)																													
Other																													
Off duty (inc. lunch)																													
Comments																													
	12/31	12/31	12/31	12/31	12/31	12/31	12/31	12/31	12/31	12/31	12/31	12/31	12/31	12/31	12/31	12/31	12/31	12/31	12/31	12/31	12/31	12/31	12/31	12/31	12/31	12/31	12/31	12/31	12/31
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