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### Pre-Planning of Imaging Workload



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Managing a continuously increasing workload is a major challenge for many imaging departments. However, effective workload management can be achieved through service level agreements, and will help radiologists in their interaction with hospital administrators, as well as helping purchasing groups to enable appropriate resources to be provided for the imaging services. The goal of implementing a service level agreement is to manage the workload of an imaging department in a proper and efficient way, which is linked to the facilities and resources available on a planned rather than a random basis. Pre-planning of work volumes should enable imaging departments to manage the flow of patients and to remain flexible in responding to changes in clinical practice. Achieving a balance between the resources available to undertake the work and the level of workload is fundamental to imaging departments that provide a service to others.

A service level agreement enables the clinically requesting group and the radiological deliverer of the service to agree the amount of work that is possible for an agreed budget and, in particular, to agree the quality of the service that is to be provided. This overview familiarises the reader with the concept of service level agreements and is based on the paper by the Royal College of Radiologists (RCR) in the UK on service level agreements.

#### **Basis of Budgeting**

##### ***Item-for-service budgeting***

Each and every item of service is paid for on an individual basis, thus accurate cost analysis of the service delivered will set the correct price for the work.

##### ***Health related groups***

The total caseload of the hospital is divided up into groups of conditions, and the treatment of these conditions is priced. There will be a slice for radiological investigations, and the total cost will represent the contract price for the group of conditions. The commissioning bodies would then contract for a specific number of cases within each group, and the payment to the individual hospital would cover the total cost of those cases.

##### ***Cost and volume contracts***

Cost-and-volume contracts represent a less sophisticated version of health related groups. A clinical specialty service or commissioning group may agree to contract for a block of work at a specific price, which may be variable in its content, but which would be agreed on the basis of an average costing of the case mix, and an agreed volume of work.

##### ***Cost Analysis***

Cost accounting is an essential tool in accumulating relevant cost data. It is one of the basic components in evaluating the use of resources in order that an appropriate service level agreement may be concluded. It assigns costs to the smallest segment of a business for which meaningful costs can be calculated, and serves as a database for decision-making and planning.

Before implementing cost accounting, it is important to decide the level of accuracy required. Complicated systems should be avoided. In developing such a system it is important to concentrate on the major cost factors, but the level of detail depends on the accuracy that is required of the data. Most of the data required can be extracted from examination lists, inventories and budget sheets.

## **Service Level Agreements**

### ***Content***

Some parts of the service level agreement are generic, those that would be accepted as an integral part of the radiological service, including the agreement to comply with all relevant radiation safety, health and safety, and data protection legislation. Other features might include the quality of patient facilities. These should be covered in general terms within the agreement.

The specific features of the service level agreement relate to the quality of the service provided. The level of qualifications and skills of the individuals undertaking procedures and reporting the images should be specified.

### ***Patients***

The type of patient referred to within the agreement should be clearly identified. This may include severely bed-ridden inpatients, more-active patients, and outpatients. The expected turnaround time of the patient within the hospital should be agreed. The expected numbers of patients in all categories, with the likely case mix, must also be defined.

### ***Availability of the service***

The timing of service provision should be explicit. The clinical commissioner would be expected to identify the likely times for service requirements, to expect a guarantee of adherence to those required times; and to accept an undertaking not to change them without due consultation and agreement. The agreement may include uninterrupted radiographer availability and on-call radiologists' service, 24 hours a day, seven days a week, or may restrict the service provided to office hours or to specific times.

### ***Requests for reports***

The quality of requests should be agreed. The referring clinician must agree to provide adequate clinical information dependent on the complexity of the case and the sophistication of the investigation or therapy requested.

Clinical commissioners should agree to the level of notice required for requests, within clearly defined limits. The criteria for non-urgent but acute and chronic cases should be identified, and the relationship to hospital expenditure should be clearly defined. The referring clinician must identify the level of reporting services that are required for specific requests, including immediate access to a consultant radiologist, clinicoradiological conferences, advice levels, and reports.

### ***Quality of reporting services***

The quality of the reporting service should be defined in terms of the speed with which the reporting is undertaken and the reports are dispatched to the referring clinician. This may also contain agreements regarding clinico-radiological conferences and ways of accepting urgent cases by direct access to radiologists.

### ***Transfer of reports***

This would include an agreed speed for typing of reports, the methodology of transfer of reports to the clinicians, and an outline of the responsibilities of each party for ensuring that the report is made available for the requesting clinician.

## **Service Level Agreements: Service Deliverer Agreements**

The commissioner of the service would expect to agree a number of specified criteria regarding volume of work and quality of service required. The imaging department must cost the agreed volume of work and quality of service. Careful cost analysis and a quantum of income budget must be agreed in order to provide the desired quality of service.

Within the agreement, variability clauses must be included. These may take the form of an increase in income at an agreed level if the workload increase is beyond a specific percentage overall, or if the case mix changes to more expensive investigations. Clear examples would include a transfer of back-pain investigations from plain x-rays to magnetic resonance, or a change of policy for treating biliary tract stenosis from surgery to stents. Penalties for poor service provision should be included, and similarly a recognition of the implications for the clinical commissioner if the quality of the referral pattern is not followed. This must be explicit within the service level agreement.

It is important in the management of a service level agreement that excess usage is identified early so that appropriate discussions and reviews can take place, to avoid a sudden cessation of service.

#### **Conclusion**

Service level agreements are required to monitor and assess workload within an imaging department. Many service level agreements have failed, due to inadequate monitoring of the agreement and failure to implement the penalty clauses and/or the financial transfers identified in the agreement. Ultimately these agreements will only work if applied rigorously and effectively by the service departments.

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