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HEALTHCARE COSTING FOR VALUE INSTITUTE

Case study

Sheffield Teaching Hospitals NHS Foundation Trust

Sheffield Teaching Hospitals NHS Foundation Trust has made a number of key improvements to its costing and coding process to improve the accuracy of its patient-level costs. For example, averaging of prosthesis costs across all orthopaedic activity has been replaced with accurate allocation of costs to the appropriate patients. The trust has also looked to improve medical staff cost allocation by introducing a new, regularly updated job planning system and has reviewed some general ledger expense codes.

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Allocating prosthetic costs to patients

Sheffield Teaching Hospitals NHS Foundation Trust was keen to improve the allocation of prosthesis costs. Instead of allocating these costs across all orthopaedic patients, the trust wanted to allocate prosthesis costs to those patients actually receiving the prostheses.

With more than £3m spent on prosthetics in a large orthopaedic department, imprecise allocation of costs could significantly distort costs across all orthopaedic healthcare resource groups and patients. Without improving the process, there was the danger that patients undergoing, for example, hip and knee replacements would be under-costed, while more general orthopaedic activity was over-costed. The process also took little account of the difference between different prostheses.

Working with the lead clinician for the specialty and the orthopaedics finance manager, the costing team identified a number of primary procedure codes associated with different types of prosthesis. For each of these codes, the average cost of that prosthesis was agreed and tied back generally to the total orthopaedic spend on prosthetics.

An SQL script was created that identifies orthopaedic patients having any of the identified procedure codes and allocates the agreed cost to that patient. For more specialised items – including those that had been custom built – the actual cost-per-case values were allocated to the specific patient.

Turning on this more accurate allocation process involved a number of actions. One of the first identified issues was that the prosthetic spend was not identified in enough detail in the general ledger. You could not tell from the expense code whether an item was a prosthetic hip, knee or something else.

The general ledger now has specific expense codes for hips and knees and, in some instances, for specific types of prosthesis. While this has provided a major step forward, some expenditure is still coded incorrectly, which results in manual recharges being carried out within the costing system to move expenditure. This is still an ongoing area of work.

The system also relies on the average costs of prostheses being kept up to date to reflect changes in costs from the previous year and when there are changes in suppliers or model type. These costs are amended in discussion with the specialty.

The trust now has agreed costs being allocated to the correct patients, increasing confidence both in patient-level data and in the healthcare resource group-level data in the reference cost submission.

The trust is now looking to build on this improved allocation by capturing more detailed information, including the model and supplier of specific prostheses. This would support the identification of different care and cost patterns between different consultants to inform discussion. The trust would also be keen to explore the potential for bar coding within theatres to enable the capture of specific patient-level use of prostheses and other consumables.

General ledger - expense codes

Sheffield Teaching Hospitals NHS Foundation Trust undertook a major review of expense codes as part of the mapping of E-class codes to general ledger expense codes.

All non-pay codes were reviewed as part of the exercise. This involved discussions being held concerning all non-pay expense codes between a nominated lead for each area with management accounts, supplies and costing.

Through these discussions codes were removed from the general ledger that were no longer deemed necessary and new codes were created where there was a need for greater clarification or depth of coding.

In all instances the lead for costing had the final say over any deletions and additions. Formal agreements were made and signed off by all three sections.

Job plans

Sheffield Teaching Hospitals NHS Foundation Trust has been challenging specialties to improve the quality of their job plans (JP) for a number of years.

Previously the most robust data was that held within the costing system, with ad-hoc updates as changes occurred.

The trust recognised that they needed a central repository of JPs which were agreed and signed off on a regular basis by both clinical directors & the medical director.

The trust has now implemented a new job planning system: Zircadian, administered by medical personnel. This requires JP's to be signed off yearly & if updated, again in year.

Details included in these JPs are the rotas that are being worked which are then translated in to the quantity of programmed activities (PAs) for direct clinical care, supporting programmed activities and other PAs as designated by the specialties (for example, work for other organisations).

This information is then utilised within the costing system by analysing PAs into:

- Wards
- Day care theatres
- Main theatres
- Outpatients
- Activity for other organisations
- Ward & theatre on-call
- Multi-disciplinary teams (MDTs) activity
- Clinical administration
- Research
- Postgraduate (PG) teaching
- Undergraduate (UG) teaching and
- Other supporting professional activities (SPAs).

Clinician time is then allocated according to the split of workload: for example if 80% of a consultant's time is spent on inpatient activity, the system uses that to allocate time to all inpatients.

Each consultant uses the same rate in the system. However, if the clinician is part time, then a reduced allocation rate is used.

All starters and leavers are also identified from medical personnel records and an adjustment is made to these individual consultant codes to be reflected within the system.

One key advantage is being able to identify where consultants have sessions for other areas, such as endoscopy. This has allowed more accurate sessional recharges to be made.

By holding data at this level the trust has also used the updated JPs to assist in the education & training reference cost collection by using this data in discussions with both clinicians and specialties.

However, there is a danger though that too much detail can be provided. If JPs cover individual sub specialties but are not revised frequently, then if there is relatively little patient activity assigned to those sub specialties due to changes between years, individual patient costs can become heavily loaded. Therefore there is always a need to review and revisit job plans with specialties on a regular basis, even if they are not updated on the central system to ensure that they reflect any changes.