

Building a Star Alliance: Australian and German DRGs

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The context

In 2000, Germany selected the Australian DRG system as a base for a national standard German version (now called German DRGs, or simply G-DRGs). No serious consideration has been given thus far to major changes in the classification, because there are many practical issues that must be addressed within a short time-scale, given the German federal government's requirement that per case payment by DRG be implemented over a transition period from January 2003.

A 'self-government' Agency has been established and given responsibility by the government for design of the details of the new payment system, including further development of G-DRGs. The Agency consists of the German Hospital Association and the various groups of health insurance companies.

Thus a group of traditionally mistrusting and competing bodies must work together to find common ground. The Agency has already translated the source Australian DRG system and associated materials including coding standards. However, modifications are very difficult because every member of the Agency fears a negative effect on its own operations. This slows down the further development of the system. In my opinion, no pioneering changes can be expected in the near future.

While the DRG classification is unlikely to be modified in the short term, we cannot adopt the Australian cost weights, because they reflect the health system in a country and the funding policies. Moreover, the German government requires the use of per case payment for every inpatient. In contrast to Australian public hospitals, German hospitals have patients funded by many different insurers.

Hindle (2001) has critically reviewed the Australian DRG development process and proposed a mix of changes be considered, some of which I support and others I do not - at least, in the short term. In assessing the possibilities, I have tried to concentrate on the three major factors that must be taken into account if grouping to DRGs is to be precise and there is to be fair funding of patient care: the quality of clinical coding, the way that cases are grouped, and the calculation of average costs.

Coding methods and selecting the principal diagnosis

Precise and sensible coding methods are essential in all countries, but there are differences in the context that must be taken into account. One local factor for us is that German hospitals use doctors to generate most of the codes. Unlike Australia and the United States of America, doctors not only record diagnoses and procedures: they also undertake the coding (and hence the diagnosis sequencing tasks for DRG assignment purposes). We do not have (nor do we need) professional coders like those in Australian and US hospitals.

This has an important implication with respect to the definition of principal diagnosis. Hindle implies that the Australian definition (main reason for admission) is not as useful as the current German definition (most resource-consumptive condition) and that we were mistaken in deciding to change to the Australian definition. I will try to explain our decision.

Most German doctors work fulltime in a single hospital and feel responsible for their hospital and its financial stability. But they are not trained to think in terms of costs. If a clinician looks for the highest resource consumption and selects the principal diagnosis on his own "cost experience", we would almost certainly have different results for the same case, if the same case is coded by different doctors. If I ask the audience in my DRG training sessions for the cost of a pathology test or chest x-ray, most of the time nobody can give me the right answer.

In the German discussion about how to define the principal diagnosis, I strongly argued in favour of the Australian definition, because a resource-based definition cannot work properly. Doctors cannot always decide which part of the treatment process consumes the most resources. We do not have cases with an expensive heart operation and a cheap tonsillectomy every day - in which case the decision would be easy. We have cases with diabetes and heart failure, or an amputation of a toe and a medical treatment of peripheral vascular disease - very common combinations that doctors have to deal with regularly. In these cases, it is very difficult for the doctor to decide the right principal diagnosis based on resource consumption or cost-intensity. Who knows the detailed costs of an individual patient treatment process in Australia?

In a few years we may have many clinical pathways with detailed costs of every care element, and will therefore be able to select principal diagnosis on the basis of the pathway data. However, in most hospitals in 2001 we must base cost estimates on actual costs in a recent period, and we have many problems with prostheses, high cost drugs, high cost investigations, and so on. Due to the weakness of the information systems and patient costing data from the treatment process, we use cost modelling methods and distribute the cost according to crude indicators like the length of stay or time spent in the operating room. This is the reality.

Multiple procedures

Hindle argues that more should be done to improve the way that patients with multiple conditions - and especially those with multiple chronic conditions - are categorised. I agree. There are many circumstances in which the dominance of the principal diagnosis over procedures can lead to disadvantage with regard to cases with multiple procedures or multi-disciplinary cases, especially when the additional effort is indicated by the additional diagnoses. This implies that the same case can be differently grouped depending on the documentation. This may be an inappropriate stimulus for case management.

When implementing a German solution in the future, it may be better to classify and sort the procedures regardless of the major diagnostic category. Thus all performed procedures and not only those that belong to the specific principal diagnosis could be taken into consideration for grouping. Combinations of procedures that often occur could be grouped to avoid systematically wrong weights. Procedures which can be performed in combination with different other procedures and are not regarded in the definition of case groups could be identified by the system.

Thus there could be a modular approach to class assignment. This idea is not unknown. For example, the Austrian LDF hospital payment system includes additional components whereby payment rates can be increased above the standard for the individual case groups.

Making more use of procedures to define classes

Procedural data do not only relate to surgical patients. In the Australian system, procedures including expensive non-OR investigations are also used in a few cases. In one DRG (I68), the system uses a procedure to group the case to a 'medical' DRG. This is a new approach compared with US-DRG variants, and is one reason why Germany selected the Australian DRG variant as its starting point.

I agree with Hindle's view that more use should be made of this approach. Based on the Australian system rules, it should be possible to include more procedures in medical cases and thereby increase resource use homogeneity.

The handling of patients with multiple conditions

Like Australia, Germany is facing difficulties with respect to 'multi-disciplinary cases' - that is, patients who require treatment from more than one department for more than one disease during the same hospital stay. Most DRG systems group multi-disciplinary cases into an error DRG, or use an exception (outlier) payment category defined by the unusually long duration of stay. These approaches are inadequate.

It is likely that the probability of multi-disciplinary cases is associated with the number of departments in one hospital and this is in turn associated with the size of the hospital. A hospital with few departments is more likely to refer the patient to another hospital, which means a second DRG. A larger hospital is more likely to treat all the problems itself rather than refer elsewhere. Something needs to be done to avoid an increase in transfers simply to qualify for a second DRG. Maybe more than just one DRG can be reimbursed, if the different episodes of treatments are clearly recognisable. In the longer term, however, we need to develop more sophisticated classification rules.

The French DRG-system (GHM= "Groups homogene de malade"), based on a mix of HCFA and AP-DRGs uses a very good approach to find the right DRG in multidisciplinary treated cases. There must be one record for every episode in a department in the hospital during the same hospital stay. Every transfer from one department to another inside the hospital produces a new record and doctors have to code a principal diagnosis for every episode. If the patient receives only one treatment and lies only in one department, the grouper uses the principal diagnosis of this department. If the patient has more than one episode, the grouper checks all episode records and looks for the episode with the highest resource consumption, and then assigns the principal diagnosis by following systematic rules. This is a clear decision based on an algorithm, rather than the individual decision of a doctor or a coder.

New variables

It makes sense to begin to consider using more variables than ICD-10 diagnoses and procedures. However, much research is needed to find the right variables. My hope is that many clinicians can be involved in the DRG development process in Germany. At present, there are many DRG users but only a few people with considerable knowledge of the internal features of the DRG system.

The potentially useful variables suggested by Hindle help to indicate the scope. However, I do not believe that transfer to an intensive care unit is a good variable if only because of the variations in ICU facilities between hospitals. For example, sometimes patients with heart surgery are transferred from our university hospital to a community hospital. They are discharged from a regular ward and admitted to an ICU in the community hospital. We have different opinions about the definition of intensive care, and we need a ward-independent definition.

DRG research and evaluation studies in Germany

I noted earlier that no major changes in the DRG classification can be expected in Germany in the near future. However, we have begun to undertake DRG research that is likely to suggest possible improvements.

For example, we have begun a series of analyses in our DRG-Research-Group (Beeson & Roeder 2000). We collected routine clinical and administrative data for three months in around twenty hospitals. In addition, we collected data to analyse the costs for every patient. After checking the quality of the data, we grouped the cases and analysed the cost homogeneity. We tried to find reasons for cost differences in a very detailed way and to find patient-related variables to explain the cost differences. The variables were often diagnosis or procedure codes, but also included other variables like LOS on a special ward, high cost drugs, special high cost pathology.

The goal is to build and test hypotheses for new DRG classes. However, our suggestions will need to be validated in our national cost data surveys. If our hypotheses are right, we have to modify the system. If they are not right, the clinicians can accept the system more readily, because we investigated the problem and can provide explanations based on solid data.

One example of our analyses concerns DRG F12Z, which concerns pacemaker implantation (Roeder et al, 2000). We have three different main pacemaker types: one chamber, two chambers and complex multi-chamber devices. The cost differences between these devices are very high and 80% of the total costs relate to the devices. We have therefore recommended the splitting of this DRG into three parts according to the procedure codes.

Classification needs to help in the management of more than just costs

Hindle argues that DRGs should be defined to take account of desirable methods of care, and not only on the basis of actual average patterns of care. It is clear to me that this needs to be done if we are to avoid the risk that insurers will set prices on the basis of finding the cheapest hospital. This will require us to be able to measure the extent to which some hospitals may need to be paid more to produce better products. It will no doubt be very difficult to find valid variables for outcome measurement, but there is no excuse for failing to move in this direction.

Collaboration across countries

It is clear that many of the problems are much the same in Australia and Germany, and that the large amount of research needed to be done will be better handled if there is collaboration on a long-term program. My hope is that Australia and Germany can accomplish this task together with other countries, using your excellent AR-DRG system. Let us learn from each other and build a "Star Alliance" for DRG development.

References

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