A decade of the Australian Casemix Classification

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Australia’s move to developing its own casemix classification came after five years of research into the use of casemix in Australia. This research was funded under the then Medicare Agreements. Whilst all the research in the late 1980s and early 1990s was focused on the use of the Health Care Financing Administration (HCFA) diagnosis related groups (DRGs), it was felt that DRGs in Australia needed to be localised to reflect the differences in regional health care.

The Australian National Diagnosis Related Groups (AN-DRGs) version 1 was published in 1992, for use from the 1993 financial year. This was the result of collaboration between the Commonwealth Department of Health and Family Services (now the Department of Health and Ageing). This first version was based on the All-Patient-Refined DRGs version 7.0, but contained some local changes such as a variation in paediatric splits, HIV being split on principal or secondary diagnoses, liver or bone marrow transplant, multiple trauma, and tracheostomy (respiratory or other). In addition, a new numbering system was used for the AN-DRGs. The decision not to use only the principal diagnosis as the initial variable in DRG assignment resulted in a change to the DRG hierarchy. In addition, there were a number of changes to the Paediatric Major Diagnostic Category (MDC). The AN-DRGs were based on the American ICD-9-CM codes for a few years; in 1995 this changed to the Australian Modification of ICD-9-CM. AN-DRG versions were produced yearly, and the use of ICD-9-CM continued until 1998. The Commonwealth Department of Health and Family Services decided to change from ICD-9-CM and, in 1995, shifted from having a sole supplier of the classification to using ICD-10 Australian Modification (ICD-10-AM) with multiple DRG suppliers.

It was recognised that the process of moving to a new coding classification and a new casemix classification would take considerable time and effort and, in March 1995, the development of the fourth version of the Australian casemix classification commenced and was changed to the Australian Refined Diagnosis Related Groups (AR-DRGs). This process consisted of a number of reviews:

- Clinical review of AN-DRG version 3
- Technical review of the clinical recommendations
- Review of the Surgical and Other hierarchies
- Complication and Comorbidity Level (CCL) refinement project
- Clinical Complexity Factor (CCF) analysis
- Preliminary changes due to future conversion to ICD-10-AM codes
- Development of software for AR-DRG version 4.0
- Testing and certification of software for AR-DRG version 4.0

At the same time as AR-DRG version 4.0 was being produced using ICD-9-CM codes, another version, AR-DRG v4.1, was also produced which used ICD-10-AM codes. When the AR-DRG classification was implemented, only half the Australian states chose to move to ICD-10-AM, while the remaining states continued to use ICD-9-CM. This was confusing; however, all states used the same DRG numbering system for the 12-month period during which there were two different coding classifications.

With the change to ICD-10-AM, there were many problems with the mapping between ICD-9-CM and ICD-10-AM. AR-DRG v4.2 was based mainly on the corrections to some of these mapping problems. The Commonwealth Department of Health and Aged Care also decided, on the advice of the states, to move to a two-year cycle for the casemix classification rather than the previous one-year cycle. The Commonwealth decided that a major revision would be undertaken every fourth year, with a two-yearly minor revision. This coincides with the ICD-10-AM edition cycle for the National Centre for Classification in Health (NCCH). The Commonwealth Department of Health and Aged Care published AR-DRG version 5.0 in 2002.

A major revision is one where the logic of the group classification changes, and new DRGs are added and some may be deleted. The Department of Health and Ageing looks at the performance of the classification and decides whether logic changes should be made. In AR-DRG v5.0 the most changes were in the Obstetric MDC 14, where the logic was completely changed from other versions. In this version, cost data were used to determine the impact of the changes, instead of just relying on length-of-stay data.

The Department of Health and Ageing relies on coders, health information managers, clinicians and any other health professional to identify grouping anomalies, suggest new DRGs or nominate areas for future changes. The Department advertises for public submissions for changes to the classification when it is undergoing a major review. For minor changes, the Department evaluates the requests received during the year to determine whether the codes are in the

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Useful references on the history of the Australian casemix classification

correct DRGs and, when the Department receives new codes from the NCCH, ensures that they are mapped correctly to the appropriate AR-DRGs.

The Australian casemix classification has been sold to New Zealand, Germany, and Slovenia and is in the process of being sold to Ireland. It is reassuring to know that the Australian classification has become the de facto gold standard for casemix classifications; this was evidenced by the number of countries comparing their performance to the AR-DRG classification at the 2002 Patient Classifications Systems – Europe (PCS-E) conference in Innsbruck, Austria. Most of the authors tried to make their systems appear to perform better than the Australian classification by removing such things as the same-day DRGs.

In 2002, the whole issue of *Australian Health Review*, volume 25, no.1, focused on the theme 'Funding of hospitals in Australia'. Each state reported on how their public hospitals were funded and how they used casemix to fund hospitals. Some states, such as Victoria, have been using casemix-based funding for many years, whilst other states, such as New South Wales, have used casemix at the area level to fund hospitals, using output-based funding models, rather than the Victorian model of direct funding to the hospitals from the Departments. Each State has taken a different approach according to their funding needs.

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