

chapter one

From the origins of DRGs to their implementation in Europe

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1.1 The starting point

Really the whole hospital problem rests on one question: What happens to the cases? [...] We must formulate some method of hospital report showing as nearly as possible what are the results of the treatment obtained at different institutions. This report must be made out and published by each hospital in a uniform manner, so that comparison will be possible. With such a report as a starting-point, those interested can begin to ask questions as to management and efficiency.

(Dr Eugene Codman, Address to the
Philadelphia County Medical Society, 1913)¹

The 'hospital problem', as presented by Dr Codman – a surgeon at Massachusetts General Hospital – at the beginning of the 20th century continues to present a challenge today, almost 100 years later (Fetter, 1991). The work which was initiated by Codman was revisited and further developed by Professor Robert Fetter and his colleagues at Yale University in the late 1960s, when they were invited to assist with the development of a programme of utilization review and quality assurance for their local university hospital. The questions posed of Fetter and his team relating to their work on this issue began what he later described as a 20-year process of 'measuring hospital production as a means of evaluating what takes place in the hospital' (Fetter, 1991, p. 4). It is interesting that the original initiative was prompted by the requirements of registration for the Medicare Program, which had been established in 1965, and it was the Medicare Program in 1983 that first implemented the diagnosis-related group (DRG) system that emerged from this lengthy development process.

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Because of the requirements to process very large sets of hospital data, developments in information technology (IT) were critical to the work that took place throughout the 1970s relating to ‘finding a way to measure and cost the output of hospitals’ (Fetter, 1993). The first version of what became the DRG system was developed in 1973 and comprised 54 major diagnostic categories (MDCs) and 333 final groups. The second version was developed for the Federal Social Security Administration and comprised 83 MDCs and 383 DRGs (Fetter et al., 1980), while the third version in 1978 was developed for the State of New Jersey, which was proceeding with putting in place a DRG-based hospital payment system. The final (original) version of the DRG system was developed by the Health Systems Management Group at Yale University within the framework of a contract with the Health Care Financing Administration (HCFA) for the purpose of developing ‘an inpatient classification system that differentiated the amount of hospital resources required to provide care and was clinically coherent in the sense that the groups were expected to evoke a set of clinical responses which resulted in a similar pattern of resources’ (Rodrigues, 1993). The so-called ‘prospective payment system’, which was introduced for the Medicare Program in 1983 mandated that payments for hospital services were determined on the basis of the first version of the HCFA-DRG system, which at that time comprised 470 groups across 23 MDCs.

The enactment of Medicare’s prospective payment system was considered to be ‘the single most influential post-war innovation in medical financing’ by Mayes (2007, p. 21), who notes that ‘Medicare’s new prospective payment system with DRGs triggered a shift in the balance of political and economic power between the providers of medical care (hospitals and physicians) and those who paid for it – power that providers had successfully accumulated for more than half a century’ (ibid, p. 21). The view put forward by Mayes that this change went virtually unnoticed by the general public is particularly interesting because what this book attempts to track is how this innovation worked its way around the world to the point where, almost 30 years later, the DRG system is the single most important patient classification system (PCS) in use internationally.

1.2 Crossing the Atlantic and the Pacific

Living, as we do, in an era of almost ‘instant’ communication, it would be easy to underestimate the significance of the international ripple-effect associated with the adoption of the DRG system by the United States Government in 1983. While we are now accustomed to being immediately informed about significant world events or important developments in our areas of interest, in the early 1980s we had to order journals by post, go to libraries to access literature and communicate with our international colleagues by fax or ‘phone!

Despite such challenges, however, the international impact of the move to a prospective payment system by the United States Medicare Program was rapid, with developments in Europe and Australia proceeding quickly by the standards of the era (and even by current standards). In Europe, a meeting hosted by the Ministry of Health in France in 1984 included Professor Robert Fetter, the leader of the team which developed the DRG system, and involved five countries

(Belgium, France, Ireland, the Netherlands and Portugal). A further international meeting was held just two years later in Dublin, already involving 11 European countries. When 15 countries participated in a meeting in Lisbon in 1987, they agreed to set up a network for those interested in working on issues related to the classification of patients, and Patient Classification Systems International (PCSI)'s Patient Classification Systems Network continues to function today.²

In parallel with the European developments, a National Seminar on DRGs was held in Australia in 1984. Following this seminar, the funding of a number of research projects sowed the seeds which quickly flourished into a substantial research area, producing the evidence base on which subsequent developments in DRG systems and their applications in Australia were founded.

The momentum in international developments regarding the portability and suitability of DRGs for use in health systems outside of the United States was given some additional support from international meetings organized by the Yale development team in London in 1986, Washington in 1987, and Sydney in 1988. In addition to profiling the activities in an increasing number of countries, these conferences enabled the researchers and policy-makers to make personal contacts which facilitated more rapid exchange of information and sharing of experiences than would otherwise have been possible (in the era before the World Wide Web). These meetings, together with those organized by PCSI, helped to foster a spirit of cooperation amongst those in a position at the fore in this field, such that each new entrant could quickly benefit from those who had gone before.

The momentum for international collaboration on developments and applications for DRG-type systems also benefitted from initiatives supported by a number of international organizations. In 1985 the Council of Europe supported a review of the research being undertaken in Europe at that time on DRGs, while the Organisation for Economic Co-operation and Development (OECD) began to publish international comparisons of average lengths of stay by DRG (Rodrigues, 1989). The European Union (EU) programme of the late 1980s which was concerned with supporting medical and health research also supported a number of projects relating to costing and using DRGs, and supporting the development of PCSs appropriate for European hospitals (Casas & Wiley, 1993; Leidl et al., 1990). Over the same period, WHO supported a number of planning meetings regarding the use of DRGs for hospital budgeting and performance measurement (Wiley, 1990).

While the lead-in to the application of DRGs within the United States prospective payment system was not particularly lengthy when viewed in terms of the pace at which translating research into policy applications usually takes place, it is interesting to note that a much more truncated period predated the first national applications of DRG-based payment systems in Europe and Australia. In Europe, Portugal was the first country to begin operating a DRG-based hospital payment system for payments from occupational health insurance schemes in 1988 (see Chapter 21), which accounted for about 30 per cent of hospital activity at the time. Norway followed, with the introduction of a DRG-based payment system in selected hospitals in the period 1991–1993 (Magnussen & Solstad, 1994), and Ireland began the introduction of a

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DRG-based budget allocation system for a limited number of acute care hospitals in 1993 (see Chapter 15). The first initiative in Australia dates back to 1988, when the then Australian Federal Health Department incorporated DRGs into the 1988–1993 Medicare Agreements between the Commonwealth and eight states and territories, and began funding the development of an Australian version of DRGs (Australian National (AN-)DRGs), introduced in 1992. Victoria was the first state to use DRGs (in 1993) to set budgets for its public hospitals (McNair & Duckett, 2002).

1.3 Where are we now? Aims of the book

It is evident that the development of the DRG casemix classification system – together with advancing a range of applications – could be described as an international phenomenon (Kimberly et al., 2008). It is rare in the world of health systems development to identify an initiative which has progressed so rapidly from the research phase to implementation and international dissemination. This book aims to bring readers up to date on developments in this field in European countries in more recent times. While it is clear that most countries have introduced DRG systems and DRG-based hospital payment systems with the aims of increasing transparency, improving efficiency and assuring quality in hospitals, it remains relatively unknown whether countries are really moving towards achieving these goals. This book therefore summarizes experiences and developments in European DRG systems.

The focus of the book on Europe relates to the fact that the EuroDRG project³ that gave rise to this initiative has been funded by the Seventh Framework Programme (FP 7) of the EU. The 12 countries (Austria, England, Estonia, Finland, France, Germany, Ireland, the Netherlands, Poland, Portugal, Spain, Sweden) which take part in the EuroDRG project and which are included in this book were selected based on their geographical region (for example, Portugal versus Finland, and Poland versus France), health system typology (such as National Health Service (NHS) versus Statutory Health Insurance (SHI)) and their duration of affiliation to the EU (for example, Estonia versus the Netherlands), in order to ensure a comparison of countries with truly different characteristics. However, it is recognized that there would be scope for a companion volume tracking developments in Australia, Asia, Africa, and Central and South America.

The book is addressed to health policy-makers and researchers from Europe and beyond and is intended to contribute to the emergence of a ‘common language’ that will facilitate communication between those researchers and policy-makers, from different countries. Both the overview of the key issues (Part One) and the experience from the 12 countries analysed herein (Part Two) should be particularly useful for countries and regions that want to introduce, extend, or optimize their DRG systems. However, in the context of the increasing importance of cross-border movement of patients and payments, this book also aims to draw attention to the potential for coordinating and eventually harmonizing DRG systems and DRG-based hospital payment in Europe. Clearly, the book demonstrates that progress has been made since the work undertaken by Codman a century ago, and that countries are continuously striving to

optimize their DRG systems in order to better understand what Robert Fetter termed 'the rather strange cost behaviour of hospitals' (Fetter, 1993, p. v).

1.4 Notes

- 1 See Codman, 1913–1917.
- 2 More information on the network can be found at the PCSI web site (www.pcsi-international.org, accessed 26 July 2011).
- 3 More information is available at the EuroDRG project web site (www.eurodrgeu, accessed 26 July 2011).

1.5 References

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