

chapter **eighteen**

Finland: DRGs in a decentralized health care system

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18.1 Hospital services and the role of DRGs in Finland

18.1.1 The Finnish health system

In its institutional structure, financing and goals, the Finnish health care system is closest to those of other Nordic countries and the United Kingdom, to the extent that it covers the whole population and its services are mainly delivered by the public sector and financed through general taxation (for more details, see Häkkinen, 2005, 2009; Häkkinen & Lehto, 2005; OECD, 2005; Vuorenkoski, 2008). However, compared to the other Nordic countries, the Finnish system is more decentralized (Magnussen et al., 2009); in fact it can be described as one of the most decentralized in the world. Even the smallest of the 342 municipalities (local government authorities) are responsible for arranging and taking financial responsibility for a whole range of 'municipal health and social services'. From an international perspective, another unique characteristic of the system is the existence of a secondary public financing scheme (the National Health Insurance scheme) also covering the whole population, which partly reimburses the same services as the tax-based system, but only services which are provided by the private sector. The National Health Insurance also partly reimburses the use of private hospital care.

Municipally provided services include primary and specialized health care. In addition, municipalities are responsible for other basic services, such as nursing homes and other social services for the elderly, child day-care, social assistance and basic education. Municipal health services are financed through municipal taxes, state subsidies and user charges. Primary health care is mainly

provided at health centres, which are owned by municipalities or federations of municipalities. Preventive care for communicable and non-communicable diseases, ambulatory, medical and dental care, an increasing number of outpatient specialized services, and various public health programmes (such as maternity and school health care) are provided by the health centres. They also provide occupational health services and services for specific patient groups (for example, clinics for diabetes and hypertension patients). Health centres include also inpatient departments. The majority of patients in these departments are elderly and chronically ill people, but in some municipalities, health centres also provide acute short-term curative inpatient services. In addition to the inpatient departments of the health centres, long-term care is provided at homes for the elderly that in administrative terms come under municipal social services.

Specialized care (psychiatric and acute non-psychiatric) is provided by hospital districts, which correspond to the federations of municipalities. Each municipality is obligated to be a member of a hospital district. In addition to services provided through health centres and hospital districts, municipalities may purchase services from a private provider.

18.1.2. Hospital services in Finland

Acute somatic hospital care is mostly publicly provided by hospital districts and, to a lesser extent, some health centres are supplemented by care provided in private hospitals. In 2007, specialized care comprised in total 33 per cent of the total health care expenditure, of which the share of private service provision was only 1 per cent (THL, 2010).

There are 21 hospital districts in the country. Most hospital districts have a central hospital and in some districts, care is supplemented by small regional hospitals. There are 14 regional hospitals in the country. Tertiary care is provided in five university hospitals, which also act as central hospitals for their hospital district. All of the 34 hospitals owned by hospital districts provide both inpatient and outpatient services; in 2007, on average 59 per cent of resources were allocated to inpatient care, 7 per cent to day-case surgical care, and 34 per cent to ambulatory care. In addition, some acute somatic care is provided in health centres owned by municipalities or federations of municipalities, as well as in private hospitals (Table 18.1).

Hospital districts are managed and funded by the member municipalities. Funding is mainly based on municipalities' payments to hospital districts, according to the services used (see Figure 18.1). In 2008, the share of municipal payments of all costs of somatic care was 89 per cent. A total of 2 per cent of the total funding of hospitals comes from state subsidies for research and teaching, and 4 per cent from user charges. The Government defines the maximum fees that hospitals can charge. In practice, every hospital applies the maximum fees. In 2010 these were €32.50 for an inpatient day, €27.40 for outpatient visits and €89.90 for day surgery. User charges within public sector health care have an annual ceiling (€633), after which patients receive services free of charge.

Table 18.1 Acute hospital key figures by type and ownership, 2009

Type and ownership	Number of hospitals		Patients (inpatient and day-case surgical care)		Discharges (inpatient and day-case surgical care)		Bed days (inpatient and day-case surgical care)		Average length of stay, days		Emergency discharges		Day-case surgery discharges	
	Number	Share	Number	Share	Number	Share	Number	Share	Number	Share	Number	Share	Number	Share
University hospitals	5	5.4	271 104	39.7	394 975	41.0	1 396 570	40.76	3.5	162 968	39.4	58 892	32.4	
Central hospitals	15	16.1	245 278	35.9	355 703	36.9	1 240 606	36.20	3.5	180 566	43.6	59 078	32.5	
Regional hospitals	14	15.1	79 094	11.6	103 520	10.8	353 804	10.33	3.4	48 359	11.7	21 103	11.6	
Health centres (specialised)	15	16.1	37 868	5.5	51 186	5.3	281 331	8.21	5.5	20 866	5.0	9 317	5.1	
Public hospitals	49	52.7	633 344	92.7	905 384	94.0	3 272 311	95.50	3.6	412 759	99.8	148 390	81.5	
Private hospitals	44	47.3	49 954	7.3	57 579	6.0	154 321	4.50	2.7	984	0.2	33 605	18.5	
Total	93	100.0	683 298	100.0	962 963	100.0	3 426 632	100.00	3.6	413 743	100.0	181 995	100.0	

Source: Authors' own compilation based on the national hospital discharge data.

Note: Finland no longer compiles data on hospital bed numbers since this is recognized as an inaccurate measure of hospital capacity.

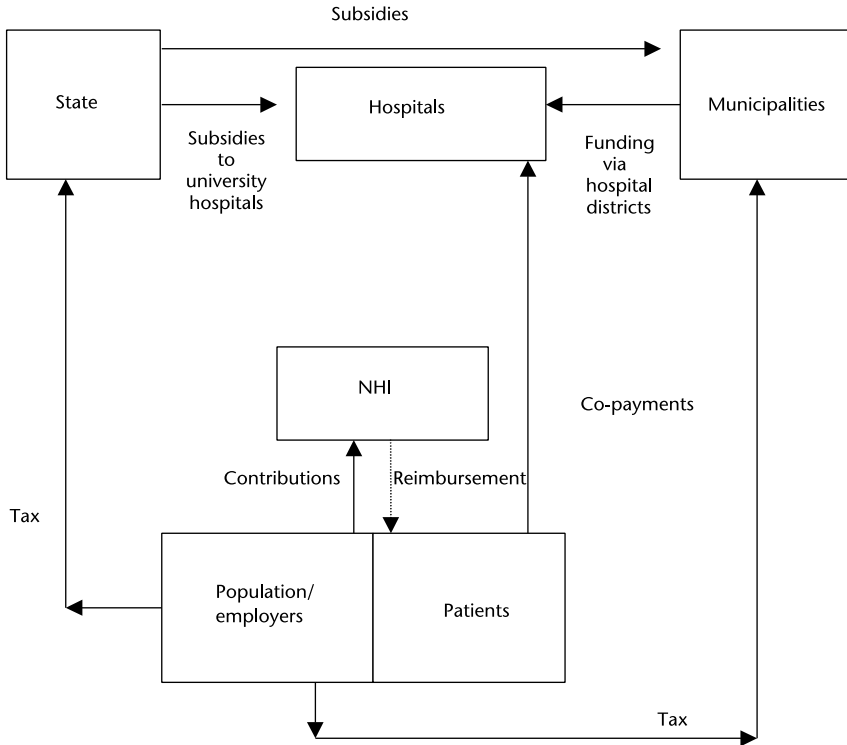


Figure 18.1 Funding of hospital care in Finland

Note: NHI: National Health Insurance

As purchasers, municipalities negotiate annually the provision of services with their hospital district. There are different contractual or negotiation mechanisms between hospital districts and municipalities for agreeing target volumes and payments. Both the volumes and costs are planned based on the previous year. In many cases, the municipalities and the hospital districts differ in opinion regarding the correct size of the resource allocations. There is a tendency for budgets to be set too low, which means that agreements sometimes need to be revised during the year, according to the actual amount and type of hospital services delivered. Usually, no explicit sanctions are applied if agreed plans and targets are deviated from, and municipalities cover any deficits and retain any savings in their accounts. The negotiation mechanisms have been under continuous change and development.

The budget of each hospital district is formally decided by a council, the members of which are appointed by each municipality. The council also approves the financial statements (such as payment methods and levels of payments (prices)) and makes decisions regarding major investments. The hospital payments from municipalities are based on the total budget and the predicted use of services. If the hospital budget is exceeded, the municipalities

must cover the deficit from their own revenues, usually by paying higher prices for services. In the case of budgetary surplus, the prices per service can be lowered. Thus, the major purpose of hospital pricing systems has been to cover the costs of production and to allocate hospital costs fairly between the municipalities that finance the provision of services within a hospital district.

In the absence of nationally set regulations or even guidelines, each hospital district determines the payment methods used to reimburse its hospitals. Payment methods are organized according to district and as such they vary from district to district. The trend of pricing has been consistently moving away from a price-per-bed-day approach towards case-based pricing. Currently, 13 out of 21 districts are using DRG-based payment methods. The principles and rules for DRG usage vary greatly between hospital districts.

In order to diminish municipalities' financial risk from expensive patients, a compensation system has been created. With this system, treatment costs per patient above a particular limit are shared between all the member municipalities of a hospital district. In most hospital districts this limit is between €50 000 and €60 000. Variation exists, and in some districts the limit is even higher than €80 000. The payment share for each municipality is defined based on the number of citizens living in the municipality.

18.1.3 Purpose of the DRG system

Within the hospital districts, the DRG system (as well as other prevailing payment systems) is not used for resource allocation but mainly as a method of collecting payments from municipalities; that is, as a billing instrument. Hospital districts use DRG-based prices to charge municipalities for the services they have delivered. The Finnish payment system does not create similar incentives to the prospective payment system used in many countries. This is because hospitals do not bear any responsibility for financial loss, as municipalities cover their deficits.

In addition to the collection of payments, DRGs are used for patient classification in the planning, evaluation and management of hospital services. The motivation behind using DRGs was to simplify the hospital product definitions, in order to assess hospital performance, develop hospital operating processes, monitor the quality of care and develop performance-based budgets.

At national level, DRGs are used for hospital benchmarking. In 1996 the then National Research and Development Centre for Health and Welfare (STAKES, now the National Institute for Health and Welfare) launched a project, called the Hospital Benchmarking Project, in cooperation with the hospital districts (Linna & Häkkinen, 2008). Its main purpose was to provide hospital managers with benchmarking data for improving and directing activities in hospitals. The project designed and implemented an Internet-based information system supporting continuous data gathering and processing, as well as displaying benchmark measures at the desired level of aggregation. The project has taken advantage of the existing information systems in hospitals (the patient administration systems, cost-accounting and pricing/reimbursement data, and cost-administration processes) to collect patient-level data on delivered services

and their costs. Now, annual data are collected routinely. Productivity and efficiency calculations are made with traditional activity measures, such as DRG admissions and outpatient visits, with a more advanced DRG-weighted measure for episodes of care.

The quality as well as efficiency of specialized care has been evaluated since 2004 in the PERFECT project (PERformance, Effectiveness and Cost of Treatment episodes).¹ Within the framework of this project, protocols have been developed for eight diseases/health problems (acute myocardial infarction; revascular procedures (percutaneous transluminal coronary angioplasty, coronary artery bypass grafting); hip fracture; breast cancer; hip and knee joint replacements; very low birth weight infants; schizophrenia; and stroke) (Häkkinen, 2011). The development has been undertaken in seven separate expert groups, the members of which are leading clinical experts on the aforementioned diseases. DRGs are used for calculating the costs of diseases. At present, register-based indicators (at both the regional and hospital levels) relating to the content of care, as well as costs and outcomes between 1998 and 2008 are available for seven health problems. The indicators are freely available on the Internet, and they are to be routinely updated using more recent information. They have been widely used in local decision-making and have also been discussed in the media. The Ministry of Social Affairs and Health uses the information in strategic planning: the indicators developed in the project will be used to evaluate the development of regional differences in the effectiveness of specialized care. The Ministry has also used the information in its recommendation concerning the centralization of certain services (such as care of low-birth-weight infants) to university hospitals with adequate resources.

18.2 Development and updates of the DRG system

18.2.1 The current DRG systems at a glance

Currently, two different DRG systems are in use: the NordDRG Classic and the NordDRG Full systems (see Chapter 16). The main difference between these two groupers is that the Classic system covers only hospital inpatient and day-case surgical activities, whereas the Full system extends the coverage to hospital outpatient activities, that is, to scheduled and emergency visits. Because of the lack of outpatient groups, the Classic DRGs were supplemented in productivity analysis with a separate outpatient grouping based on visit types by specialty. This grouping has been developed as part of the Finnish Hospital Benchmarking Project and is not used as a pricing method.

In the Classic DRG system, inpatient and surgical day cases with the same diagnosis and procedures are grouped to the same DRG. The Full DRG system takes lengths of stay into account and classifies one-day cases into so-called O-groups. As such, the O-groups contain both surgical and medical day cases. The O-groups are equivalent to inpatient groups, except that they have a lower cost weight indicating the lower cost structure of day cases.

18.2.2 Development of the DRG systems

The development of the NordDRG system is described in the NordDRG chapter of this volume (see Chapter 16). In Finland the growing significance of hospital outpatient services during the late 1990s created demand for a more advanced grouping structure for these services. In 2004 the Nordic Centre for Classifications in Health Care implemented a NordDRG Full version for both hospital in- and outpatients. The first Full grouper comprised 831 groups, of which 91 were ambulatory care groups. The ambulatory care groups consist of series of groups for endoscopies (so-called '700-series'), non-extensive procedures ('800-series'), and 'short therapies' (short-stay treatment) without significant procedures ('900-series'). Since the first version, the ambulatory care grouping has been developed markedly; the 2010 Full grouper comprises 370 ambulatory care groups and in total 1020 groups. The Full grouper applies the same rules that are used in inpatient settings in assigning patients to specific outpatient groups. The Finnish Full DRG version has been in use in the Helsinki and Uusimaa hospital district (HUS) since 2004. At the beginning of 2008 the system was also introduced in one central hospital. Since 2008, the Finnish Hospital Benchmarking Project has used the Full grouper.

A summary of all the DRG systems that have been used in Finland is presented in Table 18.2. The information represents the official national DRG groupers, which are not used in every hospital district. In the absence of national guidelines for DRG usage, hospital districts are free to change the national groupers; for example, splitting groups further if they find it necessary for their own purposes. The actual number of DRG groups used in different hospitals may therefore vary.

Table 18.2 Main facts relating to the different DRG versions

	<i>FinDRG</i>	<i>NordDRG Classic version*</i>	<i>NordDRG Classic version</i>	<i>NordDRG Full version*</i>	<i>NordDRG Full version</i>
Year of introduction	1995	1996	2010 (current)	2004	2010 (current)
(Main) Purpose	Research	Billing		Billing	
DRG system	HCFA Version 3 modified	HCFA Version 12 modified		HCFA Version 12 modified	
Data used for development	Cost data from 3 university hospitals	Cost data from Helsinki and Uusimaa hospital district		Cost data from Helsinki and Uusimaa hospital district	
Number of DRGs	470	495	650	831	1020
- of which scheduled and emergency visits	-	-	-	91	370
Applied to	Some public hospitals, inpatients	Some public hospitals, inpatients		Some public hospitals, in- and outpatients	

*Updated annually.

18.2.3 Data used for development and update of the DRG systems

The Finnish version of NordDRGs is based on patient-level data from the HUS district hospitals. These hospitals provide about 30 per cent of specialized care in the country. In HUS hospitals a patient information system is used, which collects all relevant information needed in the DRG grouping. In 2010, about 2 million cases were used to calculate DRG cost weights for the NordDRG Full grouper. Data are now available from all university hospitals (about 370 000 cases) for calculating cost weights for the NordDRG Classic version.

18.3 The current patient classification system

18.3.1 Information used to classify patients

In the Classic DRG system, the grouping algorithm used to assign a patient to a DRG is based on the inpatient hospital discharge dataset, which consist of: major diagnosis, secondary diagnoses, procedures, patient characteristics (gender, age, weight of neonates) and discharge status (death, transferred to other institution, left against medical advice). In the Full DRG system the grouping algorithm is similar to the Classic one, except that it uses both in- and outpatient data to assign patients to a specific DRG. Moreover, it uses the length of stay as a grouping criterion alongside the aforementioned criteria.

18.3.2 Classification algorithm

In the grouping process, patient discharge data are fed into a special software tool, the so-called 'grouper'. The process is described in detail in the NordDRG Users' Manual (Nordic Centre for Classification of Health Care, 2009). In NordDRGs the grouping rules are presented as a series of ten tables.

Diagnoses and procedures that have an effect on the grouping are clustered into larger subsets called 'categories' and 'properties'. Each code belongs to only one category, but it may have several properties. A CC property (co-morbidities and complications) is binary; that is, it has only two levels. An OR property (operating room procedure) is binary in the Classic DRG grouper, but in the Full grouper it can have three values. Values 1 and 0 indicate whether a surgical procedure has been carried out or not. According to this information, cases are assigned into 'surgical' and 'medical' DRGs, respectively. Procedures that are important in the outpatient setting but do not affect the DRG assignment of hospital inpatients have OR property 2 (OR=2). In the case of hospital inpatients OR=2 has no impact on the DRG assignment (see Figure 18.2).

Because of the complexity of the decision process, as well as for logistical reasons, one specific DRG can be represented by several rows in the DRG logic table. The complexity of the table is a reflection of the detailed nature of the original assignment rules. The rows in the table follow the hierarchy of the original assignment rules. Therefore, when allocating patient cases, each row

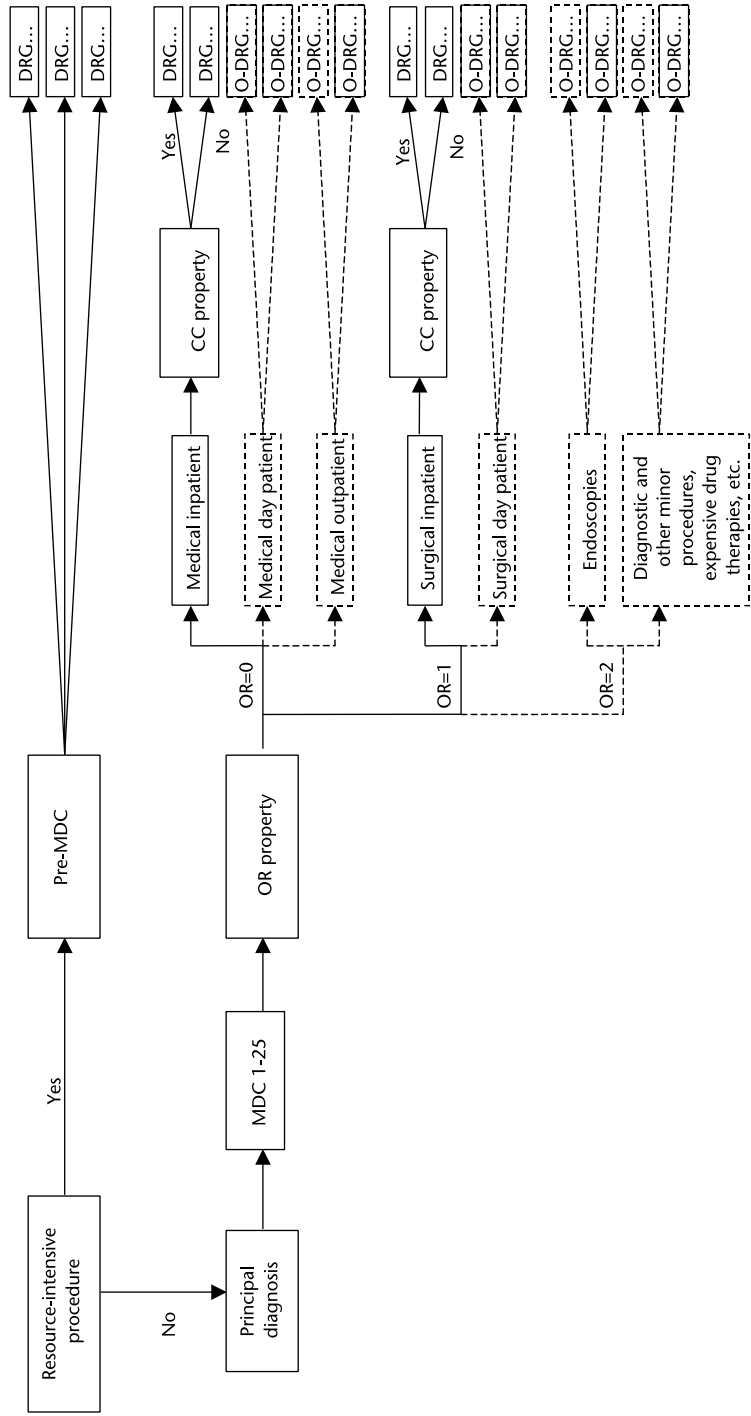


Figure 18.2 Grouping process in the NordDRG system

Source: Nordic Centre for Classifications in Health Care, 2009.

Note: The Classic system is depicted by continuous lines, the Full system also includes the parts presented with dashed lines.

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has to be checked in ascending order until a match is found. The order in which variables are checked on each row does not affect the allocation, while preceding through the logic rows in the correct order is essential to obtain a correct grouping result.

18.3.3 Data quality and plausibility checks

Due to the lack of national guidelines for the use of DRGs, no official data quality and plausibility checks are undertaken. Hospitals themselves are responsible for data quality assurance. Hospitals use DRGs in billing municipalities for the services they have provided and it is therefore important for the hospitals that patient cases are correctly assigned to DRG groups. Incorrect DRG assignment leads to a failure in the billing process. After the patient is discharged, the DRG grouping system performs the grouping automatically, using information on diagnoses; procedures; and patients' age, gender and discharge status. Special attention has been paid to the coding of diagnoses and procedures. One problem has been the insufficient coding of secondary diagnoses and additional procedure codes – so-called 'Z-codes' which indicate, for example, long lengths of stay, bilateral operation and emergency status. The lack of these codes leads to a 'down-coding' and therefore a lower billing price. To enable correct billing, a manual check is performed to ensure that each patient is assigned to a correct DRG group.

18.3.4 Incentives for up- or wrong-coding

Since DRGs are not used as a prospective payment system, there are no strong incentives for up- or wrong-coding. Hospitals only need to cover their operating costs and therefore they do not have any profit-based incentives for up-coding. The use of DRGs as a payment system has increased the accuracy of coding secondary diagnoses and procedure codes. Information from the STAKES hospital benchmarking database² shows that the coding quality is much higher in those hospital districts that use DRGs as a payment method, compared to the hospitals without DRG payment.

18.4 Cost accounting within hospitals

18.4.1 Regulation

In Finland there are no national guidelines for cost accounting. Hospital districts or individual hospitals are therefore allowed to choose their own level of cost accounting and the cost-accounting system used. For DRG purposes, however, a particular standard is required. Advanced patient-level cost-accounting systems were originally only used in the HUS hospitals. Today, some other large hospitals have also developed patient-level cost-accounting data systems that fulfil the requirements for calculating cost weights. In 2010,

national weights for the Classic DRG version were calculated using data from all five university hospitals.

18.4.2 Main characteristics of the cost-accounting system(s)

In the HUS hospitals, an advanced cost-accounting system (Ecomed IC) is in use.³ Cost accounting starts with the calculation of the overhead costs, which are then allocated to lower organizational levels, using a top-down approach. All overhead costs (such as administrative costs) are allocated to the organizational level relevant for hospitalization days, outpatient visits, operations or ambulatory procedures. After this stage, the 'bottom-up' cost-analysis phase begins. For each treated patient the following costs are defined: nursing (basic care – 'price of the hospital day'), procedures undertaken in OR and ambulatory care settings, radiology, laboratory tests, expensive drugs, blood products, and pathological services (see Table 18.3). These costs include both staffing and devices. The bottom-up cost accounting is undertaken in each of the five hospitals, at department level. 'Controllers' bear the main responsibility for cost accounting, and nurses and doctors are used as experts in the process.

18.5 DRGs for reimbursement

18.5.1 Range of DRGs used for reimbursement

In Finland, DRGs are not used as a prospective payment system, as in many other countries, but rather as a financing instrument in hospital districts,

Table 18.3 Distribution of cost by categories used in cost accounting in the HUS, 2009

<i>Cost category</i>	<i>Inpatient and day surgery DRGs (Classic)</i>	<i>Scheduled and emergency visit DRGs (O-groups) (%)</i>	<i>Classic and O-groups total (%)</i>
Basic (inpatient) care	50.5	14.1	45.8
Basic (outpatient) care	0.2	14.2	2.0
Inpatient consultations	0.4	0.0	0.3
Laboratory tests	4.2	1.4	3.9
Blood products	1.9	0.2	1.7
Pathological services	1.1	1.4	1.2
Physiological services	0.1	0.0	0.1
Radiology	3.7	2.7	3.6
OR procedures	26.9	49.8	29.8
Procedures in outpatient departments	9.1	15.4	9.9
Expensive drugs	1.6	0.4	1.4
Expensive products	0.3	0.5	0.4
Total	100.0	100.0	100.0
Share of total cost	87.1	12.9	100.0

Source: Compiled by the authors on the basis of information provided in a personal communication from Virpi Alander (HUS).

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used to collect payments related to services use by municipalities. As explained in section 18.1.1 the total budget (including capital, administration) for hospital districts is decided first and prices are then set in such a way that they fit the budget.

Not all hospitals use the system, and those that do use it do so in different ways. For example, some hospitals have split the DRGs further where necessary for their own purposes, which is acceptable due to the lack of national guidelines relating to the use of DRGs.

There are no national guidelines that obligate hospitals to use DRG. The Finnish National DRG Centre – which is a part of the private FCG Finnish Consulting Group OY – maintains and develops the groupers, as well as providing recommendations for their use. Currently 13 out of 21 hospital districts use DRG billing, but the extent to which it is used varies a lot between the hospital districts. Moreover, the type of services covered by DRG billing varies; in all hospitals, psychiatric patients and patients requiring long-term intensive treatment (such as patients with respiratory arrest) are excluded and in some hospitals dermatological and cancer patients, for example, are also excluded. DRG billing covers outpatient visits (completely or partially) in four hospital districts. The pricing and billing of services excluded from the DRG system is based on bed days or treatment packages in inpatient settings and on visit types by specialty in outpatient settings.

18.5.2 Calculation of DRG prices/cost weights

The national cost weights calculated by the National DRG Centre are based on patient-level costing data from the HUS and (since 2010) university hospitals (the costing data are described in more detail in subsection 18.4.2). The National DRG Centre also calculates cost weights for individual hospitals based on their patient-level cost data. Trimming is used in defining the average cost of a DRG group, and because of skewed distribution (SD) of cost. The trimming process is depicted in Figure 18.3. The trimming is undertaken in two phases: in the 1st phase, patient cases for which treatment costs are ± 3 SD from the mean cost of all patient cases are excluded; in the 2nd phase, patient cases for which the treatment costs are ± 2 SD from the mean cost of the 1st phase patient population are excluded. In 2010 the centre also calculated the outliers using a method based on variation coefficients. The National DRG Centre recommends that university hospitals should use outlier methods in their pricing, since a considerable proportion of the high-cost patients come from municipalities not belonging to their own hospital districts. The centre does not recommend applying an outlier approach in central and regional hospitals, in which almost all patients came from municipalities within their own districts.

18.5.3 DRGs in actual hospital payment

Five out of thirteen hospital districts (using DRG as payment method) have calculated cost weights based on their own patient-level costing data. Other hospital districts use the national relative cost weights calculated by the National

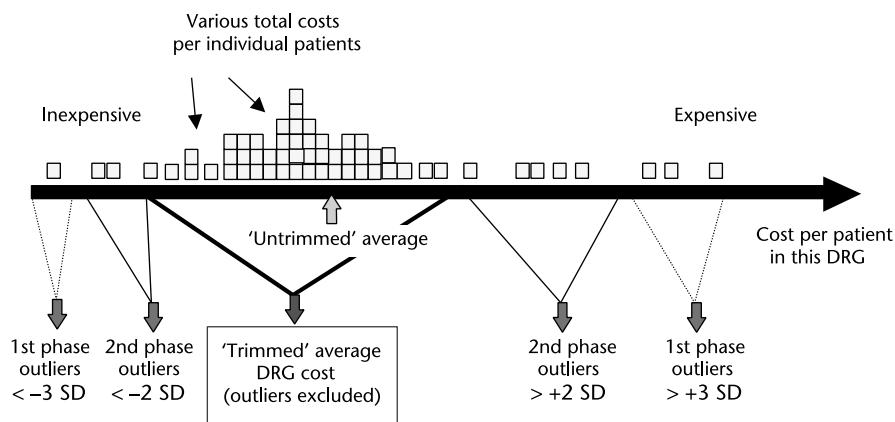


Figure 18.3 Definition process of the average cost of a DRG group

Source: Compiled by Jorma Lauharanta.

DRG Centre, but have calculated the price for a DRG point (that is, base rate), based on their own cost accounting. The price of a DRG point represents the costs of an average DRG group in the whole system; the billing price of each individual DRG group is obtained by multiplying the price of a DRG point by the respective cost weight. In most hospital districts, irrespective of whether they use their own or national cost weights, the price for a DRG point is defined separately for each hospital, and in many hospitals, separately for each department. This is because the casemix complexity – and hence the average treatment cost – varies between hospital and department types; this variation is not captured perfectly by the cost weights. For example, large university hospitals treat on average more complex and expensive patients than small local hospitals, and the current DRG system is too rudimentary to take this into account.

Many hospitals have a defined upper outlier limit based on the number of bed days above which DRG billing is not used, but the billing is based instead on bed days. The outlier limit varies markedly between hospital districts and this creates great variation in terms of the billing prices for the outlier patients. For these patients the billing price consists of the DRG price and the sum of outlier bed-day prices.

As already explained, the use of DRGs varies considerably between hospital districts. In the HUS, where DRGs have been in use since 1998, about 65 per cent of service charges paid by the municipalities were based on NordDRGs in 2008; the rest of the billing was based on bed days and outpatient visits (HUS, 2009). Similar data are not available from other hospitals.

18.5.4 Quality-related adjustments

As explained in subsection 18.1.2, the budgetary and payment system used in Finland does not create similar incentives for hospitals to use DRGs to those that a prospective payment system is known to create. There are no

quality-related adjustments in pricing and, thus, there are no financial incentives for efficiency or quality. In Finland these aspects are thought to have been taken into account by involving municipalities as purchasers as well as owners in decision-making within the hospital districts. The aim of comparative information on productivity, efficiency and outcomes is to help the local decision-makers to improve their performance, but the use of this information in decision-making varies considerably between hospital districts (Junnila, 2004; Linna & Häkkinen, 2008).

18.6 New/innovative technologies

18.6.1 Steps required prior to introduction in hospitals

Funding decisions are made at hospital district or department/clinic level, based on the total budget approved by the hospital district. There is no national regulation. It is assumed that the introduction of new technologies is based on health technology assessment. It is generally accepted that before the introduction of new equipment, treatment practices or drugs can take place, evidence relating to cost-effectiveness is required. University hospitals and some large central hospitals carry out these kinds of research activities on their own. The Finnish Office for Health Technology Assessment (Finohta) – in cooperation with hospital districts – provides information on the effectiveness and safety of new technologies for national use. Systematic literature reviews are undertaken in order to gather all relevant information. Finohta does not issue any guidelines, but it provides hospitals with information needed for decision-making. However, there is no exact information available as to how decisions are made in each hospital district and to what extent they are based on scientific evidence.

18.6.2 Payment mechanisms

Hospital districts have different practices for funding new technologies. The funding can be based on surpluses from previous years, internal financing or loans. The costs of new technologies are at least partly transferred to DRG prices via depreciation and interest on loans. Exact information is not available regarding the principles of funding new technologies in hospital districts.

18.6.3 (Dis-)incentives for hospitals to use new technologies

No direct financial incentives or disincentives exist for the use of new technologies. The system is based on the idea that municipalities – as providers of specialized care for their citizens and as financiers of hospital districts – are interested on the one hand in receiving the best possible care for their populations and on the other hand in controlling for the how the money they have paid to hospital districts has been used. With this dual role in mind, municipalities

are likely to be interested in making sure that the money is used for effective technologies, rather than it being wasted on something less effective.

18.7 Evaluation of the DRG system(s) in Finland

18.7.1 Official evaluation

In Finland the right to make decisions regarding specialized care is afforded to hospital districts, which can decide independently their own method of charging municipalities for the services that their citizens use. It has therefore not – so far – been of interest to the central Government to evaluate how the DRG system (or other prevailing payment systems) works in practice.

18.7.2 Authors' assessment

In Finland the main problem concerning DRGs is that there are no national guidelines on how to use the system. Not every hospital uses the system and those that do are free to use it in different ways. The main purpose of the DRG system in Finland is to make hospital billing transparent by encouraging hospitals to introduce the same billing system. However, as long as hospital districts keep modifying the system in order to make it perfectly suitable for each individual hospital, using different rules (for example, differing outlier limits and department-level DRG point prices), comparison of billing prices between hospitals is impossible. Each municipality is obligated to be a member of one hospital district and without being able to compare the prices, municipalities are not able to make rational choices. This prevents competition, which, in turn, does not incentivize hospitals to improve their operating efficiency. In order to make the DRG billing system function properly and to enhance efficiency, the Ministry of Social Affairs and Health should introduce national rules and obligate all hospital districts to use the DRG billing, as has been implemented in many other countries. This is also important because private and non-profit-making – and even multinational – firms are now entering the health care market. In addition, a new Health Care Act (accepted by the Finnish Parliament in December 2010) introduces patient choice of hospital. However, so far, it has not been decided (or indeed proposed) how municipalities would pay hospitals within the new framework. If the central Government is to take a more active role in developing the pricing rules, the development of the DRG system should also be carried out by a public authority, not by a private firm (National DRG Centre) as is currently the case in Finland.

In individual hospitals the introduction of DRG billing has brought about improvements. In these hospitals it has been necessary to pay more attention to the coding of diagnoses and procedures, and indeed the coding has been improved compared to hospitals not using the DRG billing system. This has made hospital billing more accurate, but also improved hospital management. It is therefore possible that the introduction of a DRG-based pricing system could lead to much improvement in the management and provision of hospital

services, such as greater transparency and more accurate cost information (Häkkinen & Linna, 2005). However, if the system moves in the direction of a general prospective payment system, the potential for incentives/bias should be considered (see Chapter 6 of this volume). Given the current structure of the Finnish health care system, the choice of pricing method is not the most crucial one to be made. Efforts should be directed towards more important questions, such as the development of contracts between municipalities and hospitals, the management and control of care chains (total episodes of care), quality of services, or (even more generally) the governance role of central Government, as well as the issue of centralization – that is, increasing the size/impact of the purchasing and providing functions. All these elements are currently under considerable scrutiny in Finland.

18.8 Outlook: Future developments and reform

18.8.1 Trends in hospital service (or general health care) delivery

Finland places a strong emphasis on the public provision of health services. However, the importance of private service provision has been growing rapidly in recent years. Simultaneously, the boundary between public and private service provision has become blurred. Public hospitals order services from private producers if they are not able to produce the services themselves within the required time scale. Municipalities can also order private services directly. This trend is expected to continue.

Finnish public hospitals have not traditionally been highly specialized. Hospital districts have tried to be as self-sufficient as possible in treating their patients. In recent years it has been realized that it is not efficient, or even conducive to delivering high-quality health care, to provide all services in each hospital district. A trend has been developing towards more specialized units. At the same time, an increasing number of patients are treated as outpatients, in day-care and ambulatory care settings. This has led to the reduction of inpatient capacity.

Since the early 2000s, several local reforms have been implemented to integrate municipal service provision into a single organization. The purpose of these reforms is to enhance cooperation between primary and secondary health care and social welfare services (Vuorenkoski, 2008). The reforms include merging health centres and local hospitals into one organization, creating new regional self-regulating administrative bodies for all municipal services (including health and social services, upper secondary schools, and vocational services) with their own regional councils, and hospital districts also taking responsibility for primary health care. In 2008 about 10 per cent of the Finnish population lived in areas in which most primary and secondary care is provided by the same organization. The most recent initiative from the Ministry of Social Affairs and Health is to create 40–60 health and social regions (federations of municipalities or large municipalities) that are responsible for social services as well as primary and (most) specialist care services, along with five districts with

special responsibility, which would be responsible for the most expensive tertiary care. If the trend continues and the proposal is to be implemented, the contract and payment systems for hospital care should also be reconsidered.

18.8.2 Trends in DRG application/coverage

In 2005–2007 the National DRG Centre organized a project related to the usage of DRGs in Finnish hospitals, in cooperation with Finnish DRG experts and hospital districts. In the final report (Kuntaliitto, 2007) the project team offers suggestions and a schedule relating to how to proceed in the implementation and development of a DRG system in hospitals in the near future. The main targets are as follows.

- The DRG billing would be implemented in all Finnish public hospitals by 2010, covering at least inpatient and day-care activities.
- The coverage of DRG billing would be extended to outpatient services by 2011 and at the same time the grouping would be developed to correspond better to outpatient and psychiatric services.
- By 2011 all the hospitals would have advanced patient-level cost-accounting systems in place, in order to calculate their own DRG cost weights.
- Hospitals would stop using the department-level pricing and use the same DRG prices across departments within a hospital.
- Hospitals would use a national handbook in order to ensure that all hospitals apply the same principles for cost accounting and coding for diagnoses and procedures; the coding handbook should be available on the Internet and it should be updated constantly.
- A certification system should be created for hospitals, which would obligate them to maintain their own system of internal quality standards in terms of coding, and to submit to regular external auditing.

Most hospitals that do not currently use the DRG billing system have already launched a DRG implementation project and are planning to introduce the system as soon as possible. For some hospitals, however, the target time frame for introducing the system by 2010 was too tight. Similarly, many hospitals currently using the Classic DRG system are preparing to implement the Full DRG system. Currently, four of the thirteen hospital districts (using DRGs) use the Full DRG system, at least in part.

There has been a trend towards outpatient production in Finnish hospitals since the early 2000s and the importance of developing a grouper which is able to take into account treatment episodes in ambulatory care is therefore growing. The Full DRG grouper contains outpatient groups, but it still functions mostly on a fee-for-service basis. The challenge will be to develop the Full DRG system so that it will be able to capture the whole treatment pathway, instead of separate visits. This will not be straightforward, as patient treatment in an ambulatory care setting is not as homogeneous as in an inpatient setting. Further development of inpatient groups is also needed, in order to ensure that they better take into account patient casemix. Currently, the DRG system underestimates the complexity level of patients treated in university hospitals.

18.9 Notes

- 1 More information available on the National Institute for Health and Welfare web site (<http://www.thl.fi/fi-FI/web/fi/tutkimus/hankkeet/perfect>, accessed 10 July 2011).
- 2 Outdated database available at the STAKES web site (<http://info.stakes.fi/benchmarking/EN/benchmarking.htm>, accessed 1 August 2011).
- 3 The system was developed by a private firm, Datawell. It was first introduced in the HUS but is now used in many other hospitals.

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