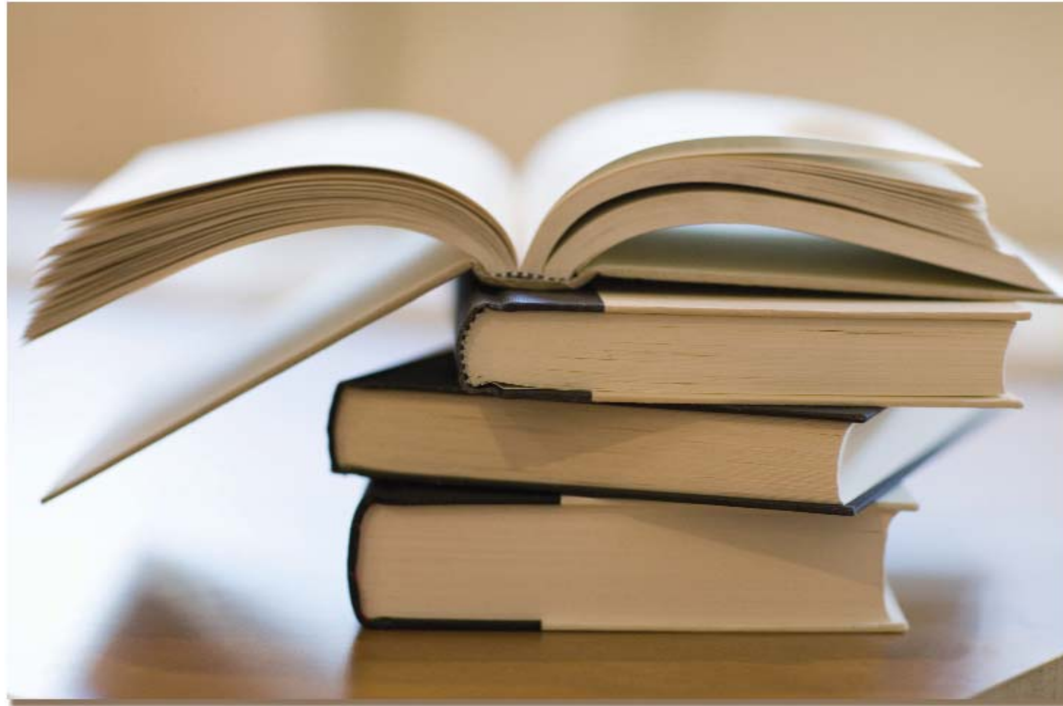
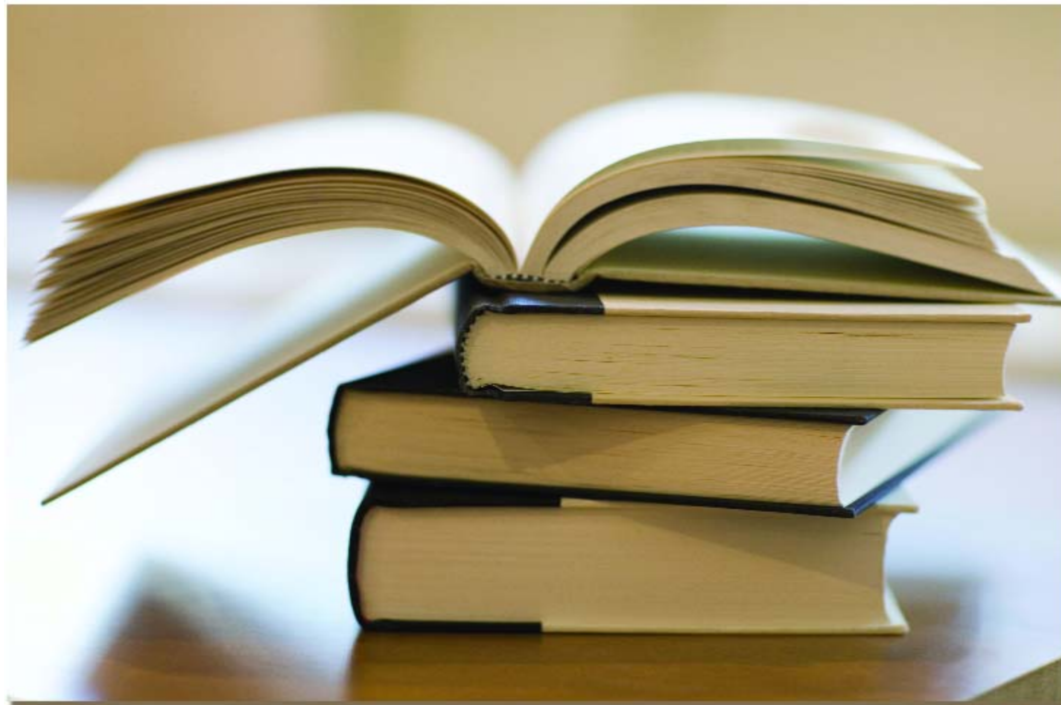
DRGs as a financing tool





Introduction

Financing is not a new item for HOPE. It can be dated from its origin when in 1966 the hospital federation of the then six member states of the European Union decided to compare each others' system. Financing of hospitals was of course already an issue... Since then many publications have been produced and several conferences have been organised by HOPE around this topic. Trends in Hospital Financing in the EU, published in 1997, was followed in 1999 by a conference in Berlin organized with the German Hospital Federation (DKG). Three documents had been published before: Strategy, Tactics and cost of Health Care Provisions in 1976, Methods of Cost Containment in Hospitals in 1978 and Cost Containment and Clinical Budgeting in Europe in July 1988. Financing is also at the heart of several other issues and was present in the conference co-organised in Paris in January 2005 with AIM Private or Public Hospitals? Which choice for health insurance tomorrow, in the publication of 2003 Health as a Growth Factor a Comparative Analysis, as well as in Waiting Lists and Waiting Times in Health Care - Managing Demand and Supply, 2001. Comparative information on health care systems has certainly improved in the last fifteen years. Organisations such as the Organisation of Economic Cooperation and Development, the World Health Organisation, the European Observatory on Health Systems and Policies and more recently the European Commission are producing comparable information. Academic research has at the same time entered this sphere with numerous studies published or in process.

Yet, there are still some gaps in this field of knowledge that HOPE with its resources tries to fill. One of these gaps is the use of Diagnoses Related Groups (DRGs) and more precisely the financial use of DRGs. This concept, created and used in the United States, has been introduced in the member states of the European Union during the last twenty years. As its importance is growing in some of them, HOPE has found an opportunity to structure a first comprehensive study on this, eventually to be regularly updated.

One of them is the use of DRGs and more precisely the financial use of DRGs. As this is something (rather) new in Europe, HOPE found this an opportunity to structure a first comprehensive study. The goal of HOPE study was to understand and to describe the present use of the DRG system in Europe in financing hospitals. This meant a questionnaire to clarify the reasons for the origin of the introduction of this system. It was useful to look at the relationships between the way systems are organized, showing differences from country to country and within countries in the way they use the new system. Finally it was necessary to describe the implementation process and to identify the possible obstacles that occurred.

16 countries answered the questionnaire: Austria, Belgium, Cyprus, Denmark, Finland, France, Germany, Italy, Luxemburg, Portugal, Sweden, Spain, Switzerland, The Netherlands and England and Wales in the UK. Luxemburg, Cyprus, Greece, the Czech Republic, Northern Ireland and Scotland in the UK answered that they do not use DRGs. Ireland, Slovenia and Hungary are using DRGs but did not answer to the questionnaire.

A decision was made by the Plenary Assembly of HOPE in 2004 to work on this issue. The first concrete step was the creation of HOPE Working Party on DRGs with a starting point in Nottingham on 16 and 17 February 2005. This Working Party was run under the supervision of HOPE Sub-committee Economics and Planning and worked with the contribution of the secondment of Frederik Coussée from HOPE member VVI (Belgium).

The report structure and content is clearly linked to the goals, set up for the Working Party. The general goal is to provide HOPE members with comparative elements on the use of DRGs in European countries and more specifically the financial use of DRGs.

With almost all EU countries answering the questionnaire, diversity is certainly the most obvious result of this work. This will not be a surprise for those who know how diverse healthcare systems are, deeply rooted in national culture and history. Determinants of diversity can of course be found in the classical distinction "tax based system/insurance system" but it is worth emphasizing upon the importance of decentralisation of European healthcare systems. This decentralisation varies of course in content: financing, organisation and delivery, but this has a particular importance on the way DRGs were implemented and are used.

As there are still countries not using DRGs at all, there are other countries using DRGs but not for direct financial purposes, there are even countries using them for very limited financial purpose, for example, transfer of patients within the country, or using them differently within the country. With a very important decentralisation of the organisation of health care in some countries, individual local or regional authorities might not use (when they do) DRGs with the same goals. This adds to the complexity of the picture and one has to be careful when reading that country X is using DRGs as a financial tool, since this might differ in the extent to which it does. Even in Nordic countries using the same so-called "Nord DRGs" there are major differences between countries and within countries. The different level of investment in resources to develop DRGs and the political will behind it are major factors explaining this.

Adding to this complexity it is also clear that differences are increasing, making communication between systems more difficult. This is particularly true for medical and surgical procedures.

However, a common denominator is that the role tasked to DRGs, even when they are implemented for a prospective financing system, is never limited to financing. It becomes clear reading these results that in general the first goal was transparency and that the financial use arrived second. In terms of transparency, the result is viewed as positive even when DRGs are not used as a direct financial tool. It is however too early to know the real influence on the organisation and production of healthcare, as another major result of the study is that there are no links made available between DRGs and quality of care indicators. There is also no clear causality relationship between implementation of DRGs and reduction of waiting lists. DRGs and waiting lists are not always linked. However, some countries are using DRGs to reduce their waiting lists or at least trying to avoid risk of selection.

Finally, a major finding of HOPE study is that national and even regional adjustments are keys to the success of DRGs' implementation. And one does not take any risk saying that DRGs are here to stay, not necessarily for reimbursement but at least for the use of case mix.

Pascal Garel
Chief Executive

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Participants of the Working Party

Schermann-Richter	Ulrike	Bundesministerium für Gesundheit und Frauen	Austria
Coussée	Frederik	Caritas Verbond der Verzorgingsinstellingen	Belgium
Jaeger	Christian	Deutsche Krankenhausgesellschaft	Germany
Sjuneson	Hanne	Sundhedsstyrelsen - National Board of Health	Denmark
Garrigues	Bernard	Fédération Hospitalière de France - Centre Hospitalier du Pays d'Aix	France
Nonis	Marino	Ospedale SGC-Fatebenefratelli - Ministero della Salute	Italy
Lerario	Mario	IRCCS, Ospedale Oncologico	Italy
Medeiros Borges	Cláudia	Ministério da Saúde - IGIF – Instituto de Gestão Financeira e Informática da Saúde	Portugal
Candoso	Fatima	Ministério da Saúde - IGIF – Instituto de Gestão Financeira e Informática da Saúde	Portugal
Do Ceu Valente	Maria	Ministério da Saúde - IGIF – Instituto de Gestão Financeira e Informática da Saúde	Portugal
Virtanen	Martti	Nordic Centre for Classifications in Health Care	Sweden
Weaver	Andrew	Nottinghamshire Healthcare NHS Trust	United Kingdom

People who provided the answers

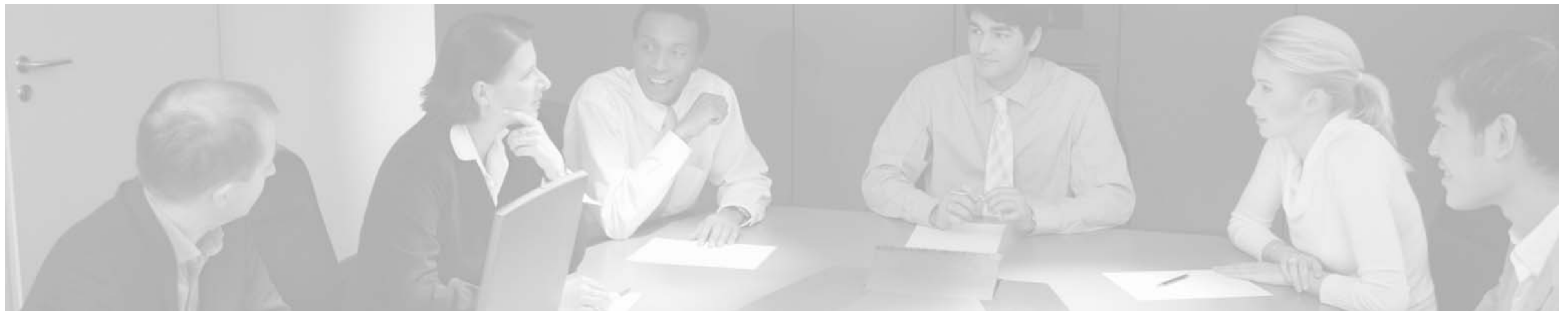
Schermann-Richter	Ulrike	Bundesministerium für Gesundheit und Frauen	Austria
Coussée	Frederik	Caritas Verbond der Verzorgingsinstellingen	Belgium
Bruna	Pavel	Nemocnici Na Homolce	Czech Republic
Jaeger	Christian	Deutsche Krankenhausgesellschaft	Germany
Hansen	Poul Eric	Sundhedsstyrelsen	Denmark
Jensen	Morten Rand	Copenhagen Hospital Organisation	Denmark
Sjuneson	Hanne	Sundhedsstyrelsen - National Board of Health	Denmark
Garrigues	Bernard	Fédération Hospitalière de France - Centre Hospitalier du Pays d'Aix	France
Di Martino	Maria Paola	Ministerio della Salute	Italy
Nonis	Marino	Ospedale SGC-Fatebenefratelli - Ministero della Salute	Italy
Lerario	Mario	IRCCS, Ospedale Oncologico	Italy
Medeiros Borges	Cláudia	Ministério da Saúde - IGIF – Instituto de Gestão Financeira e Informática da Saúde	Portugal
Candoso	Fatima	Ministério da Saúde - IGIF – Instituto de Gestão Financeira e Informática da Saúde	Portugal
Do Ceu Valente	Maria	Ministério da Saúde - IGIF – Instituto de Gestão Financeira e Informática da Saúde	Portugal
Pupato Ferrari	Sara	Instituto Nacional de Gestión Sanitaria	Spain
Casas	Mercé	IASIST	Spain
Arias	Antoni	IASIST	Spain
Weaver	Andrew	Nottinghamshire Healthcare NHS Trust	United Kingdom
Wegmüller	Bernhard	H+ Les Hôpitaux de Suisse	Switzerland

Participants in the initial seminar in Nottingham

Schermann-Richter	Ulrike	Bundesministerium für Gesundheit und Frauen	Austria
Coussée	Frederik	Caritas Verbond der Verzorgingsinstellingen	Belgium
Veris	An	Universitaire Ziekenhuizen Leuven	Belgium
Steiner	Peter	Deutsche Krankenhausgesellschaft	Germany
Linnakko	Eero	Kolumbus	Finland
Weltner	Janos	Semmelweis University	Hungary

Other contributors

Veris	An	Universitaire Ziekenhuizen Leuven	Belgium
Delicata-Camilleri	Nadine	Ministry of Health	Malta
Johansson	Lars	Sveriges Kommuner och Landsting	Sweden
Krizan	Peter	FNsP Milosrdni bratia	Slovakia
Jones	Carolyn	NHS Confederation	United Kingdom



1. DRGs AND THEIR ENVIRONMENT

1.1. HEALTHCARE SYSTEM AND DRGs

1.1.1. Healthcare policy and organisation

Hospitals are deeply rooted in their political and administrative organisation of their country, in their social protection and of course are part of healthcare systems. Looking back at the way hospital where financed is also a major element to understand why and how DRGs have been implemented whatever there are used for.

	STRUCTURE OF THE HEALTHCARE SYSTEM	FINANCING OF THE HEALTHCARE SYSTEM	STATUS/OWNERSHIP OF HOSPITALS
Austria	- Delivery and control of healthcare is a public task of the federal authority, except for hospitals which depend from the states - Public, private not for profit and for profit players - The compulsory social insurance system is apart from the rest of the healthcare system and makes itself social security legislation - Uniform supply and quality of hospital services is supervised by statutory agreements between federal states and the federal government as well as hospital financing	- Taxes - Contributions to compulsory social insurance - Private insurance contributions - Patients' co-payments	- 262 hospitals, of which 190 are acute care hospitals. - The acute care hospitals count for 72,5% of the total number of beds, which is the equivalent of 53.240 beds. - 50% of all hospitals are public - 10,3% of all hospitals are private, but not for profit - 39,7% of all hospitals are private and for profit. - 75% of beds are public - 8,4% of beds are private not for profit - 16,5% of beds are private and for profit
Belgium	- Almost all matters about healthcare are regulated by the federal state, besides investments, buildings and quality of care - Federal ministry of health and the national insurers' institute are the most important financing authorities in Belgium	- Governmental collected means o Social security contributions (70%) o Taxes on cigarettes o VAT - Out of pocket contributions and additional insurances (together 25% of all expenditures)	- All hospitals are not for profit - 65% of beds are not for profit and private - 35% of beds are public
Denmark	- Healthcare is the responsibility of the counties. From 2007 5 regions. - The counties collect taxes to finance healthcare activities. From 2007 4 financing sources to regions: From government 75 % of budget block grants, 5 % activity based financing. From municipalities 10 % block grants, 10 % activity based financing. - The development and maintenance of the healthcare system is a federal duty	- At least 20% of hospital budget is financed by activity rising to 50 % in few years. - The counties are allowed to have their own system of measuring hospital activity - All the counties use Danish DRGs to measure hospital activity	- 95,9% of beds are public - 4,1% of beds are private - Public hospitals cover 98% of beddays - Private hospitals count for 2% of beddays

	STRUCTURE OF THE HEALTHCARE SYSTEM	FINANCING OF THE HEALTHCARE SYSTEM	STATUS/OWNERSHIP OF HOSPITALS
England	- The NHS is governed by the department of health, which is a part of the national government - The provision of healthcare is guaranteed by healthcare trusts and private, independent providers - The commissioning of providing healthcare is undertaken by primary care trusts on behalf of the local populations	- Taxation via national government - Voluntary private insurances	- Majority of hospital care is through public ownership via the NHS - Trend towards greater plurality of provision. As a result, one expect an increased independent/private provision
Wales	- The Welsh NHS is governed by the Welsh Assembly Government acting on behalf of the National Assembly for Wales. - The majority of secondary and tertiary health provision is undertaken by the 14 NHS trusts and one local health board that has both commissioning and providing responsibilities. - Primary care provision is through independent contractors (General Practitioners, General Dental Practitioners etc.) - Commissioning of healthcare is undertaken by 22 local health boards, which are co-terminus with Welsh local authorities, and Health Commission Wales, that commissions specialist (mainly tertiary) services on an All-Wales basis.	- The Welsh NHS is funded from the National Assembly for Wales' block grant, which in turn is funded from the UK government. - Approximately 10% of the Welsh population has private medical insurance.	- The majority of hospital provision in Wales is in publicly owned NHS hospitals. - There are a small number of private hospitals, but the split between public and private bed numbers is not available.
Finland	- Central government determines the national health policy and allocates the state subsidy to the municipalities - State subsidies covers about 20% of all health expenditures and is supposed to equalise the resources between municipalities based on the actual healthcare needs of the population - Municipalities acts as purchasers of healthcare for their population	- National taxation - Local taxation - Private health insurances count for about 25% of total health expenditures	- Most hospitals are public - Private hospitals count for almost 5% of national bed capacity - The share of private provision is increasing because of additional contracting between municipalities. - The value of private healthcare provision accounts for 22% of all healthcare provision

	STRUCTURE OF THE HEALTHCARE SYSTEM	FINANCING OF THE HEALTHCARE SYSTEM	STATUS/OWNERSHIP OF HOSPITALS
France	- The role of the national level is to define the rules; but recently since the beginning of "T2A" (tarification à l'activité which is a prospective payment system on basis of French DRGs) the role of the national government has increased. As a result, the calculation of hospital budgets is made at the national level nowadays. - The regional role (ARH : agence régionale d'hospitalisation) is to conduct planification and to sign "goals contracts" - As a conclusion, we can say that the French system is a national system with some regional customisation	- Compulsory social security for all citizens	- 66% of beds are public but public hospitals count for 57% of acute beds - 14% of beds are private not for profit but private not for profit count for 12% of acute beds - 20% of beds are for profit but for profit hospitals count for 31% of all acute beds
Germany	- The healthcare system is preliminary determined by national rules and legislation - The states level (16 states) is accountable for the equipment investments and the guarantee of sufficient supply	- Compulsory social security contributions (funds) - Additional private insurance fees - Taxes (only for equipment investments for hospitals)	- 53,6% of beds are public - 36,4% of beds are private not for profit - 10% of beds are private and for profit
Italy	- There are three main institutional levels o state level is accountable for the compatibility and coherence of the overall health system o regional level is in charge of territorial planning, organization and control o local level is responsible to provide all healthcare services to the citizens - Continuing process of raising responsibility for regional and local level - Regions and national government define together common health objectives, which need to be realised by the regions	- Local taxes (36,07%) - VAT (35,67%) - Private insurance contributions (1,05%) - Out of pocket payments (27,21%)	- 66,54% of beds are public - 5,86% of beds are private not for profit - 27,59% of beds are private and for profit
Portugal	- 5 regions,18 districts and 2 autonomous islands - The autonomous islands have their own political and administrative structures	- Taxation (70%) - Patients' co-payments (30%) o pay roll taxes o private insurance o out of pocket payments	- 78% of beds are public - 22% of beds are private for profit and not for profit

Spain

STRUCTURE OF THE HEALTHCARE SYSTEM	FINANCING OF THE HEALTHCARE SYSTEM	STATUS/OWNERSHIP OF HOSPITALS
- The National Health System is made up of both, the State and Autonomous Community Health departments (AC) - The general organisation and coordination of health, international health, international health relations and agreements and the National Institute for Health management is a national authority. - Through their respective Autonomy Statutes, the ACs have gradually taken on powers in the area of health. The devolution of Health powers from de National Health Institute (INSALUD), began in 1981 and was completed in 2002, with the central State administration keeping the responsibility for health management in the autonomous cities of Ceuta and Melilla, through the National Institute for health management (INGESA). The AC now holds powers on: Health Planning, Public Health, health care. - Each AC has a Regional Health service which is the administrative and management body responsible for all centres, services and facilities in its own Community, whether these are organised by regional or town councils or other intercommunity administration. - The principles governing health coordination on a nationwide level are laid down in the General Health Act 14/1986 which also specifies the tools for collaboration and creates the National Health System's Interterritorial Board, as the coordinating body. Act 16/2003 on Cohesion and Quality in the National Health system deals in greater depth with the role of the Inter-territorial Board and with general coordination and cooperation within the NHS.	- Health care in Spain is a non contributory benefit (public funding with universal, free health services at the time of use, with provision of holistic health care, aiming to achieve high quality, with proper evaluation and control). - It is paid for through taxation and is included in the general budget for each Autonomous Community. - Two additional funds are the Cohesion Fund managed by the Ministry of Health and Consumer Affairs and the savings Programme for Temporary Incapacity.	- 40,1% of hospitals are public - 47,5% of hospitals are private not for profit - 12,4% of hospitals are for profit - 72,5% of beds are public - 27,4% of beds are private

	STRUCTURE OF THE HEALTHCARE SYSTEM	FINANCING OF THE HEALTHCARE SYSTEM	STATUS/OWNERSHIP OF HOSPITALS
Sweden	- A decentralised public system for financing, providing and evaluating healthcare activities - Central government which has a legislative supervisory role - County councils are responsible for financing and providing almost all health services - Local municipalities have same responsibilities as the counties but only for elderly care and disabled	- Mainly local and counties' income taxes - Patients co payments (2,5%)	- 87 hospitals are public (owned and financed by the counties - 3 hospitals are private and for profit - A small minority of private and not for profit hospitals
Switzerland	- Three levels of authority o federal o cantonal o municipal	- Taxation - Compulsory sickness insurance contributions - Premiums for basic services - Additional and optional insurance premiums for supplementary services	- No information available
The Netherlands	- Traditionally the Dutch government plays a major role in planning and regulating the health care sector. - The Dutch Health care system is undergoing a major change since January 2006. It is moving towards a more market-oriented and demand-driven approach. The central government is shifting responsibilities towards the health care providers and health insurance organisations; more self-regulation based on market principles. - The shift in focus from supply to demand asks for a new set of information that offers a transparent insight in both the production process and the output of the health care process. Therefore a new concept has been introduced in which the information provision is organised around medical products. Medical products are classified according the DBC (Diagnosis Treatment Combinations) methodology, which offers a framework for product definition and cost allocation.	- As of January 2006, a new insurance system for curative healthcare came into force in the Netherlands. Under the new Health Insurance Act (Zorgverzekeringswet), all residents of the Netherlands are obliged to take out a health insurance. - The new system is a private health insurance with social conditions. The system is operated by private health insurance companies; the insurers are obliged to accept every resident in their area of activity. A system of risk equalisation enables the acceptance obligation and prevents direct or indirect risk selection. - The insured pay a nominal premium to the health insurer. Everyone with the same policy will pay the same insurance premium. The Health Insurance Act also provides for an income-related contribution to be paid by the insured. Employers contribute by making a compulsory payment towards the income-related insurance contribution of their employees.	- Almost all Dutch hospitals are still private and are all non-profit organizations - There are 47.458 acute care beds in acute hospitals and 7.795 acute care beds in university hospitals

	STRUCTURE OF THE HEALTHCARE SYSTEM	FINANCING OF THE HEALTHCARE SYSTEM	STATUS/OWNERSHIP OF HOSPITALS
The Netherlands		- The new health insurance comprises a standard package of essential healthcare. The package provides essential curative care tested against the criteria of demonstrable efficacy, cost effectiveness and the need for collective financing. - Before 2006, there were two types of health insurances: compulsory and voluntarily. Employees, people entitled to a social benefit and self-employed people with incomes to a certain level were compulsorily insured under the Social Health Insurance Act (Ziekenfondswet). People on a higher income could choose to either take out a private health insurance or to go through life uninsured.	

This chart gives a clear view on the diversity of healthcare system. Determinants of diversity can of course be found in the classical distinction "tax based system/insurance system" but what is certainly worth emphasizing (and it will be obvious in the way DRGs are used) on the importance of decentralisation of healthcare systems. This decentralisation varies of course in content: financing, organisation, delivery. We will see that how this influenced the way DRGs are used. Did the use of DRGs reflect the decentralisation? Was the use of DRGs influenced by the previous system? How is mix public/private non profit/private for profit influencing the use of DRGs?

1.1.2. What kinds of mechanisms exist in the countries to make sure that healthcare systems foresee enough supply of hospital care?

Again the administrative level responsible for the provision of sufficient hospital supply depends on the political and administrative organisation chosen by the country: the National State or sub-national level. But the mechanisms range from explicit Central control to more subjective elements such as political pressure…

	GUARANTEE MECHANISMS FOR SUFFICIENT HOSPITAL SUPPLY
Austria	- The States are responsible for the provision of sufficient hospital supply - Hospitals funded by public financial means are obliged to accept all patients irrespective from their State of residence
Belgium	- The rules for running hospitals and hospital services are determined by the federal government - If a hospital wants to expand its activities (e.g. renal dialysis, specialised medical imaging applications, psychiatric units, …) and it fulfills the federal criteria, the approval of the regional minister of health is needed. - Usually, one get permission to perform additional activities when there is some undersupply in the region. - Undersupply is defined by number of population in the region.
Denmark	- Political pressure - for example to reduce waiting lists
England	- Waiting Lists. However, these are more demand management than supply - It is believed that the introduction of market principles will lead to more competition and thus less waiting lists.
Finland	- Local governments have to organise the healthcare for their population. However they do not have to produce the services themselves but they can purchase them from public or private providers. - National government has created a care guarantee systems that guarantees the treatment within certain time interval. - If the public sector capacity is not enough the municipality has to purchase the services from other hospitals outside the region or from the private providers.
France	- The State through hospital planning
Germany	- The States ensure sufficient hospital supply by hospital plans and by financing investments. - Under the DRG system there is a possibility to negotiate a supplement to secure care in isolated areas between a hospital and the insurance fund but the effectiveness of this instrument in the future is uncertain
Italy	- During the 90s hospitals and Local Health Units have been supported in order to introduce managerial tools such as budget and cost accounting for planning sufficient financial supply. - In addition to managerial tools there also are mechanism for controlling overall expenses of both hospitals and Local Health Units, including: o limitations to improve expenses (personnel enrollment cup, consulting contracts cup and similar) o restrictions to capital market (public hospitals need to have authorization prior to access capital market); o other mechanisms directly developed by Regions.

	Guarantee mechanisms for sufficient hospital supply
Portugal	- No answer
Spain	- No answer
Sweden	- The counties are responsible by law to secure supply of health care for the population resident in the county. - They can choose to produce health care services in public hospitals, buy from private providers or buy services from other counties. - The municipalities and county councils are also locally politically accountable through their political assemblies elected in direct elections.
Switzerland	- Federal and cantonal public health laws require that the State guarantee a sufficient hospital supply, whichever financing system is implemented.
The Netherlands	- It is believed that the introduction of market principles will lead to more competition and thus less waiting lists. - Since the reforms of the Dutch healthcare system in 2005 and 2006, new providers are allowed to enter the healthcare market.

1.2. INSTITUTION(S)/DECISION MAKERS/LEADING (AUTHORISED) PARTIES AND VARIATIONS

The healthcare systems might be very decentralised in Europe, the decision to introduce DRGs was however in almost all cases taken by the ministry of health.

	Identification of authorities/organisations that decided to introduce DRGs and description of their roles
Austria	- The decision to introduce a DRG based hospital financing was taken by the federal government and the social insurance funds, while the States agreed with it in statutory agreements. - The federal government is responsible for the legislative frame and the sanitary supervision of the hospital sector - The federal government and the social insurance funds are co-financiers for the hospitals. They also have co-ordinating and co-operating roles in monitoring and steering - The States are responsible for enacting and implementing federal hospital legislation and for ensuring hospital supply. They also are co-financiers - Many organisations and institutions were heard during the period of testing and development of the DRG-system. Their input was taken into account as far as possible. - Other leading parties involved the social insurance agencies, the DRG steering group and pilot hospitals
Belgium	- The minister and the ministry of health - Advice was given by an advisory body which represents all Belgian hospitals and the sickness funds.
Denmark	- The development of the Danish DRG-system is done by the government (Ministry of Interior and Health o First step: benchmarking o Later on: calculating tariffs for the treatment of patients that are hospitalised outside their county o Now: financing tool
England	- The Department of Health of the national government - All information on HRGs is linked with activity and financing - It is expected that another body than the department of health will become responsible for setting the tariffs in the future, but this is not decided yet.
Wales	- HRGs were adopted as the basis for recording casemix in 2000. The requirement to record activity by HRG was issued from the Welsh Assembly Government to NHS Wales trusts. - Prior to 2000, NHS Wales trusts were required to record activity by DRG.
Finland	- HRGs were adopted as the basis for recording casemix in 2000. The requirement to record activity by HRG was issued from the Welsh Assembly - The NordDRG Definitions are owned by the national health authorities in the Nordic countries, including Finland. - The responsibility for the NordDRG system lies with a Steering group representing the owners. - The Steering group supervises the medical development and maintenance work on NordDRG performed at the Nordic Centre.
France	- The Minister of Health

	IDENTIFICATION OF AUTHORITIES/ORGANISATIONS THAT DECIDED TO INTRODUCE DRGS AND DESCRIPTION OF THEIR ROLES
Germany	- The German government o enacted the Health System Reform Legislation (GKV-Gesundheitsreformgesetz 2000), in which the introduction of a DRG System for hospital financing was initiated, o authorised the self-administration to choose an appropriate DRG-System and to implement it, o provides the legal framework for the hospital financing by DRGs o and in the case of no agreement between the partners of the self-administration the Ministry of Health Care and Social Insurance is entitled to enact an execution by substitution. - The Self-Government (the contracting parties for hospital care, i. e. the German Hospital Federation and the Associations of Compulsory Health Insurances and Private Health Insurance) o resolves upon the introduction and continued development of the DRG system, o decided in 2000 to transfer the Australian AR-DRG system to Germany, o founded the DRG-Institute (InEK GmbH) in 2001, o developed a manual for cost calculation in hospitals, o developed coding guidelines, o resolves upon the new catalogue every year o negotiates and arranges for regulations for the accounting of DRGs, additional fees and supplements for the consideration of innovations in diagnostics and treatments. - The DRG-Institute (InEK GmbH) is charged with o the development of the yearly DRG-catalogue by analysis of hospital calculation data, o the appliance of a rule based method, o the calculation of cost weights, o and the definition and calculation of additional fees - Expert organizations of health professionals and other experts can present change proposals to the DRG institute within a structured dialogue.
Italy	- The political decision to introduce DRGs was taken by the Italian Government. - The technical development of the Italian DRG-system was supported by o The Ministry of Health o The National Institute for Healthcare Research o A selected group of hospitals and public institutions with the eye on testing and adapting the American HCFA-toot to the local situation
Portugal	- The Institute of Financial and Information Management (IGIF), is a personalized Service of the Ministry of Health which is responsible for studies, orientation, evaluation and execution of the information systems and the financing of the hospitals.
Spain	- The Ministry of Health through the Health Interterritorial Board agreed to use DRG as a case-mix measure to be used in hospital care all over Spain. Moreover, AP-DRG was chosen as the grouper to be used at national level although the regions that had implemented formerly keep using CMS-DRG for more than a decade.

	IDENTIFICATION OF AUTHORITIES/ORGANISATIONS THAT DECIDED TO INTRODUCE DRGS AND DESCRIPTION OF THEIR ROLES
Sweden	- DRGs have been in use in Sweden since the beginning of the 1990's. - The DRG-system was introduced by the Swedish Institute for Health Services Development (Spri) and came in use as a payment system for acute inpatient care in some county councils from 1991. - The CPK assumes responsibility for developing and maintaining the Swedish version of NordDRG. - Today, the counties in Sweden can be divided into four groups with regard to usage of DRG. o The first group uses DRG for reimbursement to hospitals for a large extent of the care (both in- and outpatients to some extent). o The second group of counties uses DRG as a component in the reimbursement system for a smaller part of health care, for example for "cross county border patients" or for one single hospital. o The third group only uses DRG as an analysing tool and to calculate case-mix and the counties o The fourth group doesn't use DRG at all (2 counties) - All in all - over 50% of all admissions in Swedish acute somatic care are reimbursed by NordDRG.
Switzerland	- Swiss association of hospitals (H+, www.hplus.ch) - Swiss medical association (FMH, www.fmh.ch) - Swiss nursing association (SBK/ASI, www.sbk-asi.ch) - Association of the Swiss Sickness Funds (santé suisse, www.santesuisse.ch) - Swiss National Accident Insurance Fund (SUVA, www.suva.ch) - Swiss Conference of the Cantonal Ministers of Public Health (GDK/CDS, www.gdk-cds.ch) - Swiss Federal Statistical Office (BFS/OFS, www.bfs.admin.ch) - APDRG Suisse (www.apdrgsuisse.ch) - SwissDRG (www.swissdrg.org). This organization is founded by the main healthcare institutions and aims at implementing a DRG-based hospital financing at the national level.
The Netherlands	- It was the Minister of Health who took the decision in 2000 after advice of the so-called commission "Biesheuvel".

When it comes to implementation within countries, the result gives a good picture of the diversity. Even in countries using the same Nord DRGs there are major differences. In that case to create differences meant to accept to invest resources. The technical added value might be less important than the "selling" factor of having a national system that could be more accepted by all actors.

It is also clear that differences are increasing with time, making it more difficulty to communicate between systems. This is particularly true for procedures. Diagnoses might be more comparable. There is today no level where you could directly compare.

	DIFFERENT UTILIZATION OF THE DRG-SYSTEM FOR VARIOUS REGIONS IN THE SAME MEMBER STATE
Austria	- The statutory agreements define the adaptation of DRGs within the different States.
Belgium	- Uniform national application of the DRG-system in the three regions

	Different utilization of the DRG-system for various regions in the same member state
Denmark	- A different use of the DRG-tool was one of the initial purposes of the central government. The use of DRGs is compulsory for all regions - The regions apply the system for local planning and financing - In the near future, it is expected that DRGs will be used in the daily operation of local hospitals
England	- Uniform application of HRG's in England
Wales	- The Welsh Government has never formally required NHS Wales organisations to use DRGs or HRGs as the basis of financing, and this is left to local agreement. - However, consideration is currently being given to introducing a national tariff within Wales, which may be based on HRGs.
Finland	- The NordDRG Steering group has decided on some basic principles of testing and certification of NordDRG groupers in order to maintain the integrity of the NordDRG System. - Software producers that wish to use NordDRG definitions in commercial applications are required to apply for certification through the Nordic centre.
France	- Uniform national application of French DRGs (GHM)
Germany	- Uniform national application of the German DRGs
Italy	- During the 90s, regions were only involved in the implementation phase of DRGs - Nowadays, regions are also competent for decisions and policies on DRGs. As a result, regions are allowed to rearrange case mix tools or tariffs and to contract price cuts or to set co-payments.
Portugal	- Uniform national application of the HCFA-16
Spain	- The application of DRG is regulated in each regional Health Care Service or Regional Service (Servicio de Salud) that usually has the role of managing public services and purchasing services from private hospitals when it is needed. The Service of Health Care depends on the Health Department of each region and the Director is appointed by the Minister of Health of each region.
Sweden	- The counties still decide themselves how they want to use the DRGs in their reimbursement systems and what complementary rules that should be applied (e.g. reimbursement of outliers, cost ceilings etc). They are also responsible for the follow-up of fraud and other abuse of the system. - The adoption and development of DRGs have mainly been the concern of the county councils. - An evolution of networking between the different counties resulted in the establishment of a national centre called "The Centre for Patient Classification system" (CPK) was established from 1999. - As a result, Sweden has undergone some centralisation concerning DRGs.
Switzerland	- APDRG Suisse was the first organization to introduce DRGs in a couple of cantons. As a result, the implementation of DRGs in Switzerland was not simultaneously realized in all cantons.
The Netherlands	- Uniform national application

1.3. ORIGINAL REASONS TO INTRODUCE DRGs

It is rather easy to identity precisely in all countries what were the official reasons of DRGs. The exercise of identifying non official reasons, non expressed reasons, is rather risky as it might depend on the position of the author of the answer. It is in any case interesting to identify four official original reasons. Improve transparency is first, followed by the use of DRGs as a financing tool. Ensure quality and benchmarking were also significantly mentioned.

	OFFICIAL ORIGINAL REASONS	OTHER REASONS	CHANGES IN OFFICIAL REASONS AND GOALS
Austria	- The Austrian DRG-philosophy is entangled in the statutory agreements on hospital financing which have following objectives: - Ensuring uniform hospital supply all over the nation - Ensuring uniform quality of all Austrian hospitals - With the agreement for the years 2005-2008 federal government, states and social insurance funds are involved and put forward following additional goals: - Better integration of the separately organized and financed healthcare sectors - Minimization of interface problems Ensuring high quality of healthcare services	- No other reasons detected	- No
Belgium	- Fixation of number of hospitals and hospital equipment - Definition of quantitative and qualitative standards about hospitals and their services - Hospital financing - Epidemiological analysis - Determine policies on the art of healing	- It is a way to shift from an open ended financing towards a closed financing. - Higher transparency on hospital activities so that government better knows what they are paying for. - The emphasis has utmost immediately been put on financing hospitals. As a result, the other objectives always have been neglected. - Only once, there has been drawn some kind of "pathology atlas" which gave in insight in the spread and concentration of different pathologies over the Belgian territory. The results of those studies have been published on the website of the Ministry of Health but the methodology and the study have never been redone.	-

	OFFICIAL ORIGINAL REASONS	OTHER REASONS	CHANGES IN OFFICIAL REASONS AND GOALS
Denmark	- Firstly: benchmarking of hospital performance in order to get more health value for money - Secondly: getting more activity out of the same money - Thirdly: used as a tool in a new financing reform for the health care sector from 2007	- No other reasons detected	- No
England	- The first introduction of HRGs in 1994 was to provide greater classification on hospital procedures in view of - managerial purposes - to monitor and measure hospital activity.	- In some quarters the introduction of HRG's was viewed initially with scepticism, especially from Medical staff even though the information had been agreed by their own Royal Colleges. As the number of HRG's has expanded then greater understanding and acknowledgement has been gained. - The extension of HRG's to finance of providers has caused much debate about its appropriateness over and above purely elective work. However, the Governments intention is to create plurality of provision and effective ways of making the funding follow the patient. This is seen as the vehicle for doing so.	- Now: a vehicle to fund providers in order to o Get more transparency of hospital activity o Get fairer remuneration of providers linked to fixed national prices o Drive plurality of provision and patient choice ("funding follows patient") o incentivise and fund the development of additional capacity.
Wales	- Recording case mix activity has been in place in Wales for several years, and the documented reasons for its original introduction are not easily accessible. The main reason is likely to have been to support the developing financial relationships in the early 1990s between commissioners (health authorities and GP fund holders) and providers (NHS trusts). Activity commissioned by GP fund holders was based on OPCS procedure codes, but this level of recording would probably have been considered too detailed as the basis for extensions to case mix contracting. - A Welsh Office (predecessor to the National Assembly) circular from 1996 indicates that consideration was being given to how DRGs could inform the contracting process.	- No other reasons detected	- No information available

	OFFICIAL ORIGINAL REASONS	OTHER REASONS	CHANGES IN OFFICIAL REASONS AND GOALS
Finland	- In buying and selling of hospital services between hospital district (= service provider) and municipality (buyer) o Economic: Product definition, budgeting, follow-up, reporting o Medical: defining products o municipality choosing from where will it buy health care services (Comparing DRG prices) - Comparing and benchmarking o hospital districts o private providers - Follow-up, development and reporting o Inside administration o Inside of hospital district (central hospital, area hospitals)	- No other reasons detected	- At first, an evaluation period was built in. - Since then, the objectives of DRGs are focusing on o Health service research o Reimbursement (penetration rate of 80% in 2005) o Benchmarking of acute hospitals
France	- Use a similar system for not for profit and for profit hospitals with a convergence of tariffs between the sectors of for profit and not for profit hospitals and convergence of tariffs within each sector - Adapt the budget with the real hospital activity - Give an incentive for hospitals to analyse their case mix, their medical performances and the cost structures - Promotion of certain activities (chirurgical day cases) and stop the continuous growth of other activities	- Journalists use the national data base to publish classification of hospitals or clinics using non controlled and non validated methods	- No
Germany	- The hope of more transparency and fairer remuneration in Hospital financing, - The creation of incentives to economical performance delivery, - The raise of efficiency in the utilisation of resources in the hospitals - Promotion of efficient hospitals - The reduction of uneconomical capacities.	- The German hospital federation expects the suspension of the system of continued limited budgeting	- No

	OFFICIAL ORIGINAL REASONS	OTHER REASONS	CHANGES IN OFFICIAL REASONS AND GOALS
Italy	- Enhancing responsibility on both financial and clinical aspects of care provisioning in order to improve performance (clinical and economical effectiveness) - Providing Regions and Local Health Units with a simple tool, which is also clinically meaningful, in order to improve management and planning of service provided.	- DRG introduction is part of a larger plan of healthcare reform began in 1992 in order to foster a new paradigm for organizing healthcare by devolving financial responsibility to regions, introducing internal markets and competition. - Introducing a new paradigm of care focused on the patient	- No
Portugal	- Hospital financing - Increase the effectiveness of distributing a total health care budget (resource allocation model)	- To create an integrated information system for hospital management: collect a set of necessary and uniform data, to measure and control hospital activity, support decision making, to plan and budget (within hospitals, between hospitals and regions)	- No
Spain *(continuation see next page)*	- The introduction and implementation was produced at different times and with different strategies in different regions and the ones that were pioneering the process are mentioned. - Catalonia created a public body to buy hospital services to multiple hospital providers and started to use DRGs in 1994 to evaluate a new budgeting system. It was used for reporting and analyzing different budgeting alternatives during 2-3 years till the new DRG based budgeting system came into operation in 1996. It immediately caused a great impact in hospital managers who started to take actions to increase the quality of hospital MBDS data and using DRGs internally to improve knowledge on hospital operations and to prepare the organization for the new system. - Valencian Community started to use DRGs essentially for monitoring and management almost at the same time and has always kept for that purpose and later used it for fixing DRG	- Some research teams worked with DRG previous to the adoption by Health Authorities. The research was devoted originally to DRG validation in the Spanish environment, later to cost weights and analytical methods (outliers, adjustments, etc.). After implementation a lot of health service studies and research are based on DRGs.	- The reasons have not changed essentially - Nevertheless some Authorities have culminated the process for hospitals budgeting and other does not. In almost all regional administrations most hospitals statistics are produced using DRG and are used for monitoring performance, setting objectives and contracts and evaluating accomplishment. - Since the early nineties some hospitals started to use DRGs internally for monitoring and benchmarking performance with other what has made an important contribution to the management culture of hospitals. Although there is important variability among hospitals using data in a large number of them doctors are used to benchmark their performance and clinical results.

Spain
(continuation)

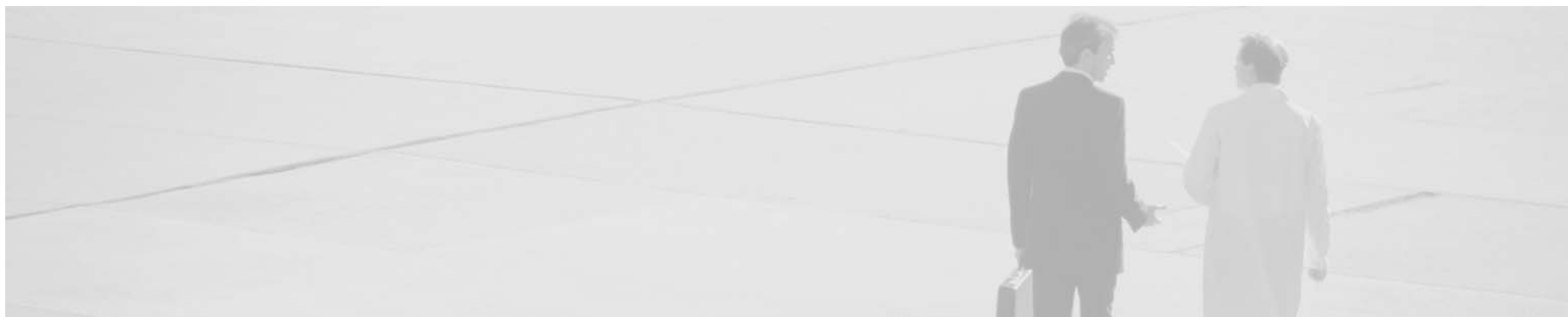
OFFICIAL ORIGINAL REASONS	OTHER REASONS	CHANGES IN OFFICIAL REASONS AND GOALS
prices to pay inpatient services when they are transferred to hospitals other than the one assigned as the health services funding is based on capitation. - Insalud, the larger health administration before 2002, started to introduce the DRGs as a tool for establishing the objectives in the annual contracts with their hospitals and to start to build "shadow" budgets based on DRGs while the traditional budget based in intermediate products (bed days and other products). When the Insalud services where transferred to the 10 Autonomous communities the hospitals and local administrations were already used to use DRG for reporting, management and setting objectives and it has remained but with different policies and intensity of use. - The Ministry of Health incorporated the DRG in 1996 for producing hospital statistics and studies. Although the Ministry had not much influence in the services planning and management it still gives the norms on MBDS, ICD-9-CM updating and DRG versions which is generally followed by the regions. - The reason for the introduction by health administrations was mainly to help them to increase efficiency in the 90' in a cost-control environment. The main objective for DRG introduction varied between Regions but the most common were: o Hospital budgeting and contracting o Fixing specific objectives to hospital in the annual contracts		

	OFFICIAL ORIGINAL REASONS	OTHER REASONS	CHANGES IN OFFICIAL REASONS AND GOALS
Sweden	- In the beginning of the 90's the main reason to implement the system was to introduce a new financial system based on DRGs in some Counties with following motives: o increase productivity o save, or make better use of, the money used for health care. o more transparency o being a part of the provider-purchaser system with more clear responsibilities and shared financial risk (only in some counties)	-	- Today's use of the DRG-system is much more diversified o Benchmarking o health statistic o measuring hospital performance o calculating productivity at all levels in healthcare - Whether the system is used for reimbursement or not is a question for the counties to decide - There has been a movement from DRGs as "way to reimburse performance" to DRGs a way to "describe performance".
Switzerland	- Introducing a prospective payment system where a specific price is attached to each hospital stay and charged to the payers (State and health insurers)		- No
The Netherlands (continuation see next page)	- Starting points of the new care system in Cure (including the introduction of DBCs) are: o focus on demand instead of supply, o payment on delivery instead of in advance, o decentralisation of responsibilities, o transfer of financial risk to health insurance companies. - This all should lead to more tailor made care and more efficient production. The change is realised by the introduction of market principles by the creation of a market for negotiation between health insurers and health providers. The change of the system will take place according a step wise approach. Speed of implementation will be determined by the realisation of market conditions. - In the end-model delivery of necessary care will be the starting point. Premiums are no longer the budget constraint for financing however will be determined by real performance figures.	- It is expected that agreements between health insurers, hospitals and medical specialists based on DBCs will lead to: o better allocation of resources; o better coordination of supply and demand for care; o greater price awareness; o better cost awareness; o better control of internal business processes; o improved internal control and budgeting; o quality and performance improvement through benchmarking; o improved capacity planning; o improved workforce planning; o greater influence of international performance standards and protocols.	- No

The Netherlands
(continuation)

OFFICIAL ORIGINAL REASONS	OTHER REASONS	CHANGES IN OFFICIAL REASONS AND GOALS
- Health insurers will compare providers on price and quality and based on this negotiate production agreements. In a sense there is an introduction of competition, which should improve the drive for quality and efficiency, and thereby better and quicker care. - The income of both hospital and specialists will be directly based on production which will stimulate production (incentive to eliminate waiting lists). - Modernisation of the system will definitely offer more space for social responsible entrepreneurship and should contribute to the enthusiasm and élan of people working in the sector. - Essential requirements for negotiations are transparency and the use of a common language. For this the DBC (Diagnosis Treatment Combinations) methodology has been put in place which is built around health care 'products'.		

It is quite clear that in general the first goal was transparency and then the financial use arrives second. But if one crosses those results with the history of implementation, the countries that decided to implement more recently DRGs favour first a financial use.



1.4. ATTITUDE OF HEALTHCARE ACTORS CONCERNING DRGs

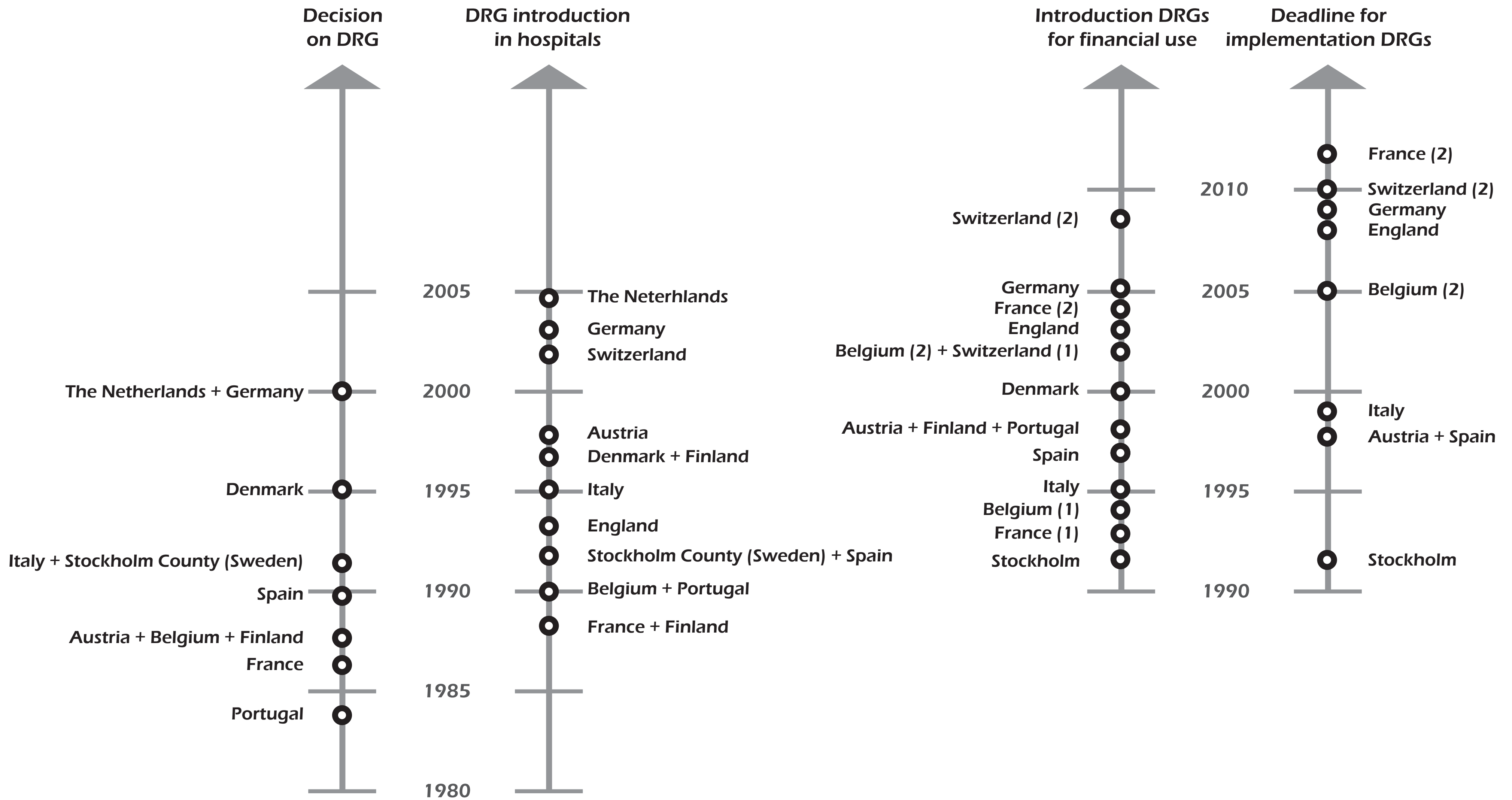
	Attitudes and changes of attitudes of the healthcare actors concerning DRGs
Austria	- The attitude have always been positive with regard to the DRG-system in se - Doctors and their representatives complain about additional work on very detailed and structured documentation - Scientists and researchers complain about the lack of documentation on DRGs for e.g. epidemiological purposes.
Belgium	- The hospital sector has been very narrowly involved in all discussions and technical features concerning the development of a DRG-system in Belgium. The sector, which is represented in an advisory body to the minister, has given advice on these matters. From this point of view, the representatives of the hospitals were able to guide the final direction of the Belgian DRG-tool. - The sickness funds do not have access to DRG-information of the hospitals and they are very willing to get insight in these information
Denmark	- Health professionals have been an active part of the development of the Danish grouping system and cost calculation. - The direct involvement has given a change in attitudes from a rather negative position to a positive but reserved acceptance.
England	- In some quarters the introduction of HRGs was viewed initially with scepticism, especially from Medical staff even though the information had been agreed by their own Royal Colleges. As the number of HRGs has expanded then greater understanding and acknowledgement has been gained. - The extension of HRGs to finance of providers has caused much debate about its appropriateness over and above purely elective work. However, the Governments intention is to create plurality of provision and effective ways of making the funding follow the patient. This is seen as the vehicle for doing so. - There are widespread concerns that funding based on HRG's will significantly add to the bureaucratic burden and introduce financial instability.
Finland	- The interest of medical profession was not too promising and most physicians announced that DRG should never be useful. - Because of limited interest the FinDRG system was used only for research purposes, for example to find out the actual cost of teaching and research in University teaching hospitals - The DRG system was also used to estimate the cost of road and occupational accidents. Based on the results the government imposed a tax for insurance companies to cover these costs (50 million euros).
France	- Actually the different actors agree with the principles of implementation but many people disagree the modalities because of lack of visibility - The price/volume regulation (the national budget is closed and so if the volume increases the prices will decrease)
Germany	
Italy	- At the beginning, the introduction of DRGs brought interest and enthusiasm within healthcare professionals because they were looking for improved governance by measuring hospital products. - This enthusiasm fall shortly, and it was followed by apprehension and anxiety because DRGs are also use for health professionals performance evaluation - As a result, doctors are against DRGs and they consider them as overhead (costs) which is too far away from the doctors' daily business and culture.
Portugal	- Health professionals concern about health expenditures and production through DRG-use.

	Attitudes and changes of attitudes of the healthcare actors concerning DRGs
Spain	- Nowadays DRG is a very common tool in most hospitals but at the beginning of the introduction process it was not very well accepted by doctors as it was seen as an economical and managerial tool lacking interest for them. - After 5-10 years it was seen as a common tool which is accepted and understood by doctors although there are important differences on the availability of DRG information concerning medical variations between regions and hospitals. If DRGs are considered as not enough clinically focused then the MBDS is the base for giving doctors more useful information. - Everybody agrees that the quality of the MBDS would not have been the same without the DRG introduction for contracting and funding hospital services.
Sweden	- In beginning DRGs where connected to the American health care system which is not to popular in Sweden. - The attitudes concerning DRGs are in general more positive today after having diversified the use of DRGs. - Nowadays, many actors recognize the need of payment of activities even within a public system.
The Netherlands	- Market and increased competition should involve less waiting lists - This enhanced competition will also lead to new players on the healthcare market, innovation, entrepreneurship and a new way of negotiating between insurers and providers - Expensive and complex system (e.g. 29.000 DBCs lead to 600 homogeneous cost groups) - Some fear that the introduction of market activity will generate pressure on quality, solidarity and freedom of choice (the last thing especially if insurers should gain huge market power and insured do not change easily from insurer). - Hospitals are positive about the fact that DBCs enhance negotiations on price and quality of services delivered.

The answers should be carefully handled considering who answered to the questionnaire. This gives either official or personal views. It is also clear that the overall healthcare professionals have seldom an exact understanding of the healthcare systems. They are now certainly more aware than they were20 years ago and they now understand that it will stay.

1.5. TIMETABLE OF THE IMPLEMENTATION OF DRGs

1.5.1. Original timetable



	Date of decision concerning DRGs	Date of introducing DRGs	Date of introducing DRGs for financial use	Deadline for the implementation process of DRGs
Austria	- Between 1985 and 1987 different hospital financing systems were tested - The decision to develop an Austrian DRG system was taken in 1987	- 1989 for documentation of diagnoses - 1993 for documentation of procedures - 1995 and 1996 for pilot projects in two Federal States - 1997 for general use of DRGs for hospital financing for all non-profit acute hospitals - 2002: DRGs are obliged for all for-profit short stay hospitals for reimbursement of socially insured patients.	- 1997	- 1997
Belgium	- The Minister of Health, together with the Ministry of Health, decided in 1985 to begin an experimental registration of DRGs in Belgian university hospitals. - In 1987, this initiative has been enlarged to 40 general hospitals.	- 1990: the DRG-registration is compulsory for all Belgian acute care hospitals.	- 1994: the Ministry used DRG-data from 1991 to calculate the a posteriori correction for the first time.	- From 1994 until 2002, the now-called "old financing" has been in charge. This kind of structural financing was featured by a so-called normative budget that was calculated on number of beds and occupancy of these beds. Afterwards, a correction on DRG-criteria took place. - Nowadays, we are in a kind of transition between this old system and the new financing method, which is called the "activity financing" and has been introduced in mid 2002. - By the beginning of the new system, it was written in the law that the transition between old and new system should be completed by 1/7/2005.
Denmark	- 1995	- 1996	- 2000	- There is no deadline; the system is improved every year.

	Date of decision concerning DRGs	Date of introducing DRGs	Date of introducing DRGs for financial use	Deadline for the implementation process of DRGs
England	- Not known	- 1994	- 2003	- 2008
Wales	- Casemix recording was introduced in the 1990s, initially to support the commissioner/ provider split.	- 1994	- DRGs/HRGs have never been formally used in Wales for direct financial use. They are occasionally used to compare the efficiency of providers, and there may be situations where providers and commissioners use the efficiency indicators to inform contract negotiations.	
Finland		- 1996	- 1997 for the first hospital regions	
France	- 1986	- 1989	- 1993 for global budget adaptation - 2004 for prospective payment	- 2012
Germany	- 2000	- 2003: first year with a voluntary introduction - From 2004 all hospitals (except psychiatric hospitals and departments) have to balance their accounts with DRGs, but under the general framework of budget neutrality and individual base rates.	- 2005 (first effects on the revenues of the hospitals)	- From 2009 there will be uniform base rates on state level.
Italy	- 1992	- 1995	- January first, 1995	- The end of December 1997.
Portugal	- 1987	- 1990	- 1990 (for third party payers)	
Spain	- The decisions ranged from 1992 in Catalonia to 1996 in other areas.	- Validation research took place in the late 80s and in the early 90s a group of hospitals started to use them for performance monitoring	- It was in Catalonia in 1996 when a new financing system was adopted	- This can be considered ended in the mid 90' although uses vary form region to region.

	Date of decision concerning DRGs	Date of introducing DRGs	Date of introducing DRGs for financial use	Deadline for the implementation process of DRGs
Sweden	- The implementation of DRGs in Sweden first started in Stockholm County. The decision was taken in 1991-1992. - The Region of Västra Götaland introduced DRG in 1993. - Other counties started to use DRGs in the late 90s.	- 1992 in Stockholm	- 1992 in Stockholm	- 1992 in Stockholm.
Switzerland			- 2002 in two Cantons (Vaud & Zurich) - Swiss DRG should be introduced in the whole country by 2008	- The use of Swiss DRG should be fulfilled by 2010 for the whole country
The Netherlands	- 2000	- In the second half of 2004 a process has started that has resulted in full registration and declaration based on health products from 1 January 2005 and onwards.	- First of January 2005	- Not determined yet

1.5.2. The kind of DRG-variant currently used in your country

With the exception of Spain all countries are using one DRG-variant. But those variants are almost always different from one another.

	Number of DRG-variants currently in use	Kind of grouper software currently in use	Reason for choosing the specific (multiple) DRG-tool(s) or developing an own variant	Responsible organism for updating the (different) DRG applications
Austria	One (Austrian classification system)	Austrian Grouper with 843 groups	Studies showed that several American hospital financing systems, including DRG, did not work for Austrian hospitals. As a result, Austria developed its own system.	A team of experts, consisting of physicians, economists, statisticians, IT experts on behalf of the Federal Health Agency
Belgium	One: APR-DRG	ICD-9-CM, 15th version from 3M	Belgium is too small to develop an own grouper. For that reason, an existing tool has been implemented	The federal Ministry of Health
Denmark	One: DkDRG. DkDRG consists of two parts: a grouping system for inpatient treatment and another for outpatients. Both somatic and psychiatric patients.	There are two kinds of grouper software are. The first tool is a SAS-application which is used for controlling purposes and comparison with the other grouping system. The latter grouper software comes from an Swedish firm and has to do the production of DRGs.	The reason for developing an own variant was that Danish clinical practice and cost structures had to be reflected at maximum in the system. It was the only way to get DRG-financing accepted by doctors and hospital managers	The DRG-office at the National Board of Health.
England	One: HRG	Grouper V3.5 Report Generator V3.5 Episode to Spell Converter 3.1 (NHSIA)	To enable casemix grouping for benchmarking and comparisons between English providers.	National Health Service Information Authority (NHSIA)
Wales	One: HRG - version 3.5	HRG - version 3.5 grouper	Wales attempts to follow England's lead on casemix grouping to enable benchmarking and comparisons between English and Welsh providers.	The Department of Health in England leads on the maintenance of the HRG casemix grouper

	Number of DRG-variants currently in use	Kind of grouper software currently in use	Reason for choosing the specific (multiple) DRG-tool(s) or developing an own variant	Responsible organism for updating the (different) DRG applications
Finland	One: NordDRG	Different software providers are entitled to offer their products if they prove that their software is following the NordDRG specification Most hospital trusts use the software of the company "Datawell"	Because of lack of comparability between the Nordic countries that all used ICD-10 and NOMESKO Classification of Surgical Procedures for coding purposes, a joint project was started to create a common DRG system. A second reason was to be able to have a transparent system which the Nordic countries could develop and change themselves.	For Finland, the Association of Local and Regional Authorities is member of the steering committee of the Nordic Centre for Classifications in Healthcare. The Nordic Centre is in charge of updating NordDRGs.
France	One: GHM	National specific software with approximately 800 groups. 10th release is planned for 2006 (CIM-10-CM)	Taking into account the specificity of the French clinical practice and cost structure. One day stay is also incorporated within GHM which is not the case in the original DRG-classification.	ATIH (agence technique sur l'information hospitalière) which cooperates with a specific commission of experts
Germany	One: G-DRG	Yearly, the grouper specification is updated. The dedicated software tools are offered by several private firms which are certified by the DRG-Institute	G-DRGs are a variant of the Australian AR-DRGs. They are adapted to the German situation by cost calculations in a sample of hospitals. The reason for choosing to make an own system based on AR-DRG was the fact that the Australian system is of the most developed generation, represents complications and co morbidities and is associated with low royalties	The German DRG-Institute. This institute was founded by the self-government which is a cooperation between the hospital federation and the insurance funds.

	Number of DRG-variants currently in use	Kind of grouper software currently in use	Reason for choosing the specific (multiple) DRG-tool(s) or developing an own variant	Responsible organism for updating the (different) DRG applications
Italy	On national level, HCFA 10th revision is in use. Because of federal devolution, different versions of HCFA/CMS DRG are being utilized. Few regions apply HCFA 10th version, most use HCFA (USA, FY 1997) and few are employing CMS 19th. Starting from January 1st 2006, nationwide, as well on national as on regional level, CMS 19th will be applied. A small number of regions use also APR-DRG, but not for financing purposes. The goal of APR-DRGs is the evaluation of appropriateness of hospital utilisation.	3M software grouper	The decision to adopt HCFA DRGs to an Italian variant was based that Italy collects the same administrative data as Medicare does in US.	At national level, a central office which is situated within the ministry of health has some responsibilities. Besides, on regional level has each region its own office which can be situated in the local health department or in special agencies that are responsible for health policy and management. At least, there exists also a national clearinghouse where national and regional governments meet each other in order to make agreements on healthcare delivery and financing.
Portugal	One: HCFA 16	3M Case-mix Expert	We decided to adopt the American version, adapted to the Portuguese reality.	The Institute of Financial and Information Management (IGIF).

	Number of DRG-variants currently in use	Kind of grouper software currently in use	Reason for choosing the specific (multiple) DRG-tool(s) or developing an own variant	Responsible organism for updating the (different) DRG applications
Spain	In Spain there are currently two DRG groupers in use, the AP-DRG (versión 21.0) and CMS-DRG (versión 22.0). The AP-DRG was established as the official grouper to be used at national level in 1996. However, the regions of Catalonia, Valencia and Canary Islands started before the use of HCFA-DRG around 1994. Canary Islands moved to AP-DRG as the official grouper to be used in 2004, Valencia has started to use AP-DRG in 2006 and Catalonia has planned to move also to AP-DRG in 2007.	The AP-DRG grouper software is directly and only delivered by 3M while there are other providers for CMS-DRG.	There was a decision to use a DRG grouper already available in the market because validation studies performed in the late 80' showed an acceptable performance in the Spanish hospital context. Otherwise, the data needed to develop a Spanish version of DRG were not available at that time. MBDS in hospitals were available in the 80' only in a few organizations and were extended in the 90'.At this time, MBDS had become compulsory for every public hospital, being this obligation extended, a few years after, to private hospitals and clinics as well. (Royal decree as legislation) HCFA-DRG grouper was chosen in Catalonia because it had a more extensive use in US for payment. As it is explained below, Catalonia has a different model of hospital services purchasing and payment, with a direct influence of DRG system in the relative amount of money that a hospital receive for delivering hospital care. AP-DRG was chosen at national level mainly due to its higher clinical precision of patient grouping. Since the most important applications of DRG were efficiency evaluation and budget case-mix adjustment with no direct application to payment, AP-DRG grouper were considered more explanatory by the central level.	Updating of AP-DRG grouper is provided by 3M (regular US versions).

	Number of DRG-variants currently in use	Kind of grouper software currently in use	Reason for choosing the specific (multiple) DRG-tool(s) or developing an own variant	Responsible organism for updating the (different) DRG applications
Sweden	One: NordDRG	Two companies are licensed to offer the grouper software. The groupers are available as interactive single-case groupers or as a batch grouper.	Because of lack of comparability between the Nordic countries that all used ICD-10 and NOMESKO Classification of Surgical Procedures for coding purposes, a joint project was started to create a common DRG system. A second reason was to be able to have a transparent system which the Nordic countries could develop and change themselves.	The CPK, the centre for patient classification systems, is responsible for the Swedish version of the grouper, both for the development and the maintenance. The Nordic Centre is in charge of updating NordDRGs and the logic behind the grouping system.
Switzerland	One: AP-DRG Version 12	3M Casemix Expert	A version adapted to the diagnosis and procedure classifications used in Switzerland (ICD-10 and ICD-9-CM vol. 3) is readily available	3M in collaboration with the Swiss AP-DRG association.
The Netherlands	One: DBC	DBC-grouper software	The Dutch government wanted to develop a tool which gave essentially insight in the complete care pathway for each hospital patient, including outpatient treatments, day treatments and rehabilitation. DBCs are based on (medical) process description instead of patient classification (which is the case with DRGs).	The foundation "DBC-onderhoud" is an initiative of all major healthcare players in the Netherlands: the hospitals, the insurers, the physicians, the patient organisations, ... and the main function of this foundation is supplying (online) help towards users and user groups of the DBC-system. A scientific advisory board has to support the operation of "DBC-onderhoud".

2. FINANCIAL USE OF DRGs

As there are still countries not using DRGs, there are countries using DRGs but not for a direct financial purpose. And there are even countries using it for very limited reasons (transfer of patients within the country) and some a little bit more, at least differently within the country. This adds to the complexity and one has to be careful when reading that country X is using DRGs as a financial tool, since this might differ geographical, in quantity, etc..

2.1. PRECISE GOALS IN THE FINANCIAL USE OF DRGs

2.1.1. Financing of hospitals before introducing DRGs

	FINANCING OF HOSPITALS BEFORE INTRODUCING DRGS
Austria	- Lump sum per patient and per day, irrespective of the purpose of the hospital stay
Belgium	- Budgeting envelopes based on structural parameters such as beds - A bonus or malus could be gained for hospitals with shorter or longer stays than the national average.
Denmark	- Block budgeting
England	- The financing system for hospitals has not changed by introducing HRGs. - HRGs have evolved, making it difficult to determine what the finance system before HRGs was. In the early 1990's the Government introduced a split between provider and purchaser organisations. Purchasers or Commissioners contracted for activity on a block contract (cost and volume type arrangements). HRGs were developed to refine the currency of contracting. Commissioning organisations have themselves undergone transition and now both purchase and provide activity: HRGs have become the basis of monitoring performance of providers.
Wales	- DRGs have not been introduced in Wales as a financing tool. - Hospitals trusts receive income from commissioners based on local service agreements. These agreements may specify activity by either specialty, or in some cases by Healthcare Resource Group (HRG). - In many cases, the activity is only used as a broad indicator of performance, and payments are made on a block basis.
Finland	- Hospitals were funded by negotiated budgets - The cost of hospital resources was divided by municipalities based on the use of the services. They calculated their prices on average costs in function of bed days and visits - State funding for major investments
France	- Global budgets for not for profit hospitals (public as well as private) - Different prices per day for the for profit hospitals with payments per procedure for doctors

	FINANCING OF HOSPITALS BEFORE INTRODUCING DRGS
Germany	- Negotiated budgets charged by per diem rates and on a small scale by case-based and procedure-based flat rates
Italy	- The basis was a retrospective system that was related to real resource consumption - A "per diem" fee was paid to private players - A full cost coverage fee was paid to public hospitals - These two financing modalities were not related to volume or typology of the services provided, neither on the level of effectiveness reached by the individual providers
Portugal	- Until 1981 cost reimbursement - Afterwards, financing was based on efficiency criteria, production, with different prices for central and community hospitals which took into account the specificity of hospitals, length of stay and occupancy rates
Spain	
Sweden	- Global budgeting system
Switzerland	- Per diem rates
The Netherlands	- Hospitals had their costs reimbursed by the highly regulated FB (Function-oriented Budgeting) system, which is essentially a system of supply regulation and external budgeting. - Hospitals and medical specialists negotiated with local health insurance companies on the need for medical specialists and on performance agreements. This enables health insurers to have an influence on the level of the budget and on the care to be delivered. - Once the budget had been set, the hospital charges (in many instances based on uniform national -charges) for the 'products' actually supplied but, whatever the level of activity, the originally agreed budget cannot be exceeded.

2.1.2. Official goals of financial use of DRGs

What were the different goals to introduce the DRG-system to finance hospitals? With the very important decentralisation of healthcare Finland and Sweden, individual local authorities (counties in Sweden and municipalities in Finland) are not all using DRGs as a financial tool. In Sweden when it is used the expressed goals is to improve productivity/efficiency, to increase transparency in the hospital sector and to create a "market" with purchasers and providers so that financial risk are shared. With this limit, for all other countries the main purpose was to establish a prospective financing system.

	Was it to create a prospective financing system with fixed prices for hospital care?
Austria	- Yes
Belgium	- Yes, the government wanted to evolve from an a posteriori budget correction based on AP-DRGs towards a prospective financing method on basis of real hospital activity. This real activity is measured on basis of APR-DRGs.
Denmark	- Yes
England	- Yes, its intention is a finance system with fixed prices throughout the country so that all providers will be paid the same. - These national prices are adjusted by a Market Forces Factor (MFF), which relates to pay rates and land and building values for each organisation. Each provider has an MFF.
France	- Yes
Germany	- Yes
Italy	- Yes
Portugal	- Yes
Spain	- Yes in those regions that have adopted DRGs as a financing system have mostly applied a blended DRG budgeting system: introducing DRGs to adjust a percentage of the budget leaving the rest on traditional basis (like a per diem-equivalent). The percentage based on DRG has increased over time. - Most of the Autonomous regions have regulated official fees based in DRGs for processes, in order to pay private sector activities that are financed by public providers. These fees are published in their corresponding regional Official Bulletins. These tariffs are mainly for contracts with the private sector and use to finance waiting lists reduction plans for surgical processes and non surgical hospital stays for acute and non complex processes admitted to hospital, mainly during overbooking due to situational peaks of diseases. Also, some main private hospitals are marginally working for the public sector and can even have a health area assigned to them, being, and the inpatient activity prospectively paid also through DRGs, although with top amounts of activity.
The Netherlands	- Yes - For DBCs on list A, the Healthcare Tariff Board/ Healthcare Authority in formation (CTG/ZAio) issues fixed tariffs for DBCs that hospitals may charge to health insurers and patients. - For DBCs on list B, the charge for healthcare services is equal to DBC production times the price of each DBC. The maximum production and the price of each DBC result from negotiations between hospitals and health insurers. Health insurers may employ different DBC prices for different hospitals. Likewise, hospitals may negotiate different prices for the same DBC with different health insurers.

There are several other goals expressed but it can be underlined that transparency and efficiency are purposes shared by a majority of countries.

	OTHER EXPRESSED GOALS OF THE NEW FINANCING SYSTEM?
Austria	- To increase transparency in the health sector (data for monitoring, planning and steering, comparisons between hospitals, regional comparisons) - To increase efficiency and effectiveness (shortening of length of stay, structural changes, reduction of hospital beds, reduction of unnecessary multiple procedures) - To skip the old financing system (lump sum per day per patient) - Reduction of increased rates of hospital cost
Belgium	- The same activity should be reimbursed with the same fee in every hospital in Belgium. - Switch from AP-DRGs toward APR-DRGs because they are clinically more homogenous
Denmark	- Higher activity - Reduce waiting lists - Increase productivity - Transparency in the cost structures of the hospitals: knowing the marginal costs etc.
England	- To provide plurality of provision so that Commissioners can get patients treated both within existing NHS providers and those in the private/independent sector. - Another goal is to make it easier for funding to follow the patient so that theoretically they can be treated anywhere in the country for the same price. - The policy is also about reducing waiting lists by utilising spare capacity outside of local hospitals.
France	- Harmonization of public and private financing system
Germany	- the expectance of more transparency and fairer remuneration in Hospital financing, - the creation of incentives to economical performance delivery, - the raise of efficiency in the utilisation of resources in the hospitals, - the promotion of efficient hospitals - the reduction of uneconomical capacities
Italy	- There also was a need to differentiate tariffs according to different level of care provided, and to other differences related to provider settings (teaching hospital, research hospital, general hospital, specialized hospital etc). - There was little knowledge on hospital product and productivity. The use of DRG system for hospital financing becomes an essential measure for planning and controlling healthcare delivery according to health needs.
Portugal	- Objectivity and rationality to setting budgets - To increase hospital activity of total discharges - To increase case-mix and decrease length of stay - Monitoring and measuring hospital activity acquiring health statistics - To increase transparency in the health sector - To increase efficiency and effectiveness

	Other expressed goals of the new financing system?
Spain	- In some regions a DRG pricing system has been adopted for other purposes, for example to deliver a "shadow" bill to patients. In others the yearly objectives are set based on DRG and some payments (managers and doctors incentives for example) are paid based on achievement
The Netherlands	- Improve productivity/efficiency - Increase transparency in the hospital sector - Create a "market" with purchasers and providers - Benchmarking

2.1.3. Transition between old and new system as defined by the official timetable

	Was there a transition period between the old financing system and the DRG-based hospital financing and if yes how long	(Technical) procedure to cope with the transition
Austria	- No transition period	- There were some years of parallel hypothetical calculations simulating the new system while the old system was still in operation to compare the outcomes - The Federal States' Health Funds were given some flexibility in the decision about the total amount of money distributed via the DRG-system
Belgium	- Yes, originally three years (from 1/7/2002 until 1/7/2005)	- In short, during the transition period, a comparison between old and new budget was being made. The difference between both should be implemented gradually. So, the first year, only 33% of the difference between old and new budget was taken into account and given as a bonus or malus with regard to the old budget.
Denmark	- Yes, it has been a slowly increasing part of the budget that is financed using the system. From 2000 (5 %) to 2007 (50 %)	- The regions have different models including a mix of block budget and activity based financing.

	Was there a transition period between the old financing system and the DRG-based hospital financing and if yes how long	(Technical) procedure to cope with the transition
England	- Yes, there is a transitional period up to 2008 for all acute providers. - It is unknown how this will affect providers such as Mental Health. - 5 Years	- At present the Acute Sector is experiencing this transition and is trying to master the differences. - A providers budget will be based on a mixture of the old and new as the new as some aspects of care are not financed through set tariffs at the present time.
Finland	- No set rules exist. The state committee has recommended using DRGs universally as a hospital reimbursement tool but the actual implementation is in the hands of local authorities. - The tendency is towards the DRG financing but no time fixed table exist. - From first use to the latest more than 10 years	- Budgeting today is and can be made based on resources, production (DRGs) or clients. - All hospitals have the technical capacity and the Minimum Basic Data Set on place (the nation wide collection of MBDS concerning all discharged patients started in Finland already 1967).
France	- Yes; From 2004 to 2012	- For the private for profit hospitals: Correction factors between "Ancien chiffre d'affaires/ nouveau chiffre d'affaires" (to be translated as "turnover in old system/ turnover in new system") - for hospitals: a decrease of the part of global budget and increase of the part of "GHM BUDGET"
Germany	- Yes, there will be a convergence phase from 2005 to 2008	- The individual base rates are adapted with yearly percentage rates to uniform base rates on state level.
Italy	- Yes - Three years (1995-1997). Before the transition period started, there has been a two year trial period ruled by the Ministry of Health (1993-1994)	- The transition period through final DRG implementation was financed according to a mix of the new and old financing system. - Hospitals were guaranteed for 80% of the old budget, while the remaining 20% would be financed as adjustment with DRG tariffs only if the volume of services provided would reach established amount. - In addition to DRG reimbursement public hospitals might also receive funds for special functions because nor were they allowed to receive extra funds in order to carry on special programs of care.
Portugal	- Yes, in 1990, for third party payers. - In 1997, DRG resource allocation model was introduced in NHS public hospitals. - Since 2003, a contract based on prospective payment according DRGs (contract with public and private hospitals).	- Until 2003, Hospital budget was a mix of the new and old system. - From that year on, hospital production started to be paid on a full DRG basis. Additionally, and for a limited period, hospitals receive an amount to cover differences between what they get paid for production and costs, until they match each other.

	Was there a transition period between the old financing system and the DRG-based hospital financing and if yes how long	(Technical) procedure to cope with the transition
Spain	- In some regions the old financing system was maintained while a parallel budget based on DRG was given to managers in order to progressively adapt to the future financing system. In some regions there are not any DRG-based funding system yet, while in others these have already been for several years. - Not determined: in Catalonia for example the system started in 1996 where a blended budget has advanced from a 5% DRG based budget at first implementation to a 25% recently. - In some other regions has not yet started as a funding mechanism	- The transition was based in enlarging the percentage of the budget affected by DRGs.
Sweden	- The answer to this question is different in different counties. - Today the coming model for reimbursement of all parts of the healthcare sector is a mixed model, with global budgets, prospective payment systems, retrospective payment systems and payment of results (achieved goals) within the same system.	- It was done by adjusting the global budget part of the financing model.
Switzerland	- Yes, there is a transition period in cantons where AP-DRGs have been introduced. - At least 2 years	- Mix of old and new financing rules
The Netherlands	- Yes, because of phased introduction of DBCs since 2005 N - But the duration is not yet defined - System of Function-oriented Budgeting which are paid towards hospitals on basis of DBCs on list A shall not be quitted before 2008.	- From January 2005 the hospital care market will be divided into two segments. - Competition will be introduced for the so called segment B, for segment A the market will remain more centrally controlled. So health insurers and hospitals are free to negotiate segment B health care products in terms of price, volume and quality. This segment currently covers 10% of the total hospital budget. For the remaining health care products (segment A) the prices and budgets are still centrally determined (= the old system).

2.1.4. Possible changes of timetable and their motivations

Only half of the countries have respected the original timetable. The others have reported some delays, mainly due to technical reasons.

	CHANGES OF TIMETABLE AND THEIR MOTIVATIONS
Austria	- The involved parties did respect the original timetable; however the period of discussion, decision, development and testing was remarkably long (mid eighties until 1997)
Belgium	- The objective was to come to 100% application of new budget within three year. - Nevertheless, on 1/7/2005 the new budget applies for 60% which means that the old budget still counts for 40%. After the first year, in 2003, the application was reduced to 20% because many hospitals experienced unexpected results (e.g. impact from APR-DRG in stead of AP-DRG) and seemed to be poor prepared. - It was meant that the new budget finally should be introduced definitely by 1/7/2006 but this also seams not to be sure anymore. The reason is the abolition of a parameter which has resulted in some non negligible shifts in budget for certain hospitals.
Denmark	- The involved parties respected the timetables
England	- The timetable has changed as it was expected that emergency care would be included from April 2005. However, a major exercise took place in 2004 and is being replicated this year, which has moved the original timetable. - The goal of 2008 still remains.
France	- No changes reported
Germany	- The convergence phase was extended by the legislator from 2 to 4 years because of: o insufficient development status of the DRG-system o intention to give the hospitals more time to adapt to the new financing system
Italy	- There was no change in the original timetable. o The first part of DRG implementation was strictly related to the national level of the Italian NHS o The second part of the implementation process was mainly related to the Regional context. o National DRGs tariffs and weights could be adjusted at a regional level according to epidemiological or organizational matters.
Portugal	- No changes are reported.
Switzerland	- Some delays are reported. This was due to technical reasons (e.g. calculation of cost-weights to be improved) and political reasons (e.g. fears on the part of some sickness funds).
The Netherlands	- Because of the complexity of the system, the formal introduction of the registration of DBCs, which had to begin on 1 January 2003, was postponed until July 2004.

2.1.5. Implementation of the DRG-system

In a minority of countries, DRGs financing systems are nationwide equivalent; while in the others there are clear local variants. Some regions have adopted special rules, different softwares. There can be a voluntary use of DRGs; different DRGs tariffs decided by regional authorities, etc.

	Basis of the DRG-financing system and possible differences between local variants of the implemented DRG-system
Austria	- The weights of the DRGs are nationwide equivalent - The value of the weights differs due to different budgets in the Federal States
Belgium	- DRG-system is based on length of stay - There are no local variants of the DRG-system in use.
Denmark	- At national level, the financing is based on standard fixed prices. - At local level prices can vary. - Different economic incentives are used in order to realise local priorities
England	- In 2003 prices were related to 15 HRGs, in 2004 to 48 HRGs and in 2005 to all HRGs. - At present there are fixed prices for all HRGs but not all secondary care providers are funded this way - Mental Health is really based on local negotiation as to whether fixed national prices are used or locally determined prices. - Some Specialist services are paid for on a local basis
Finland	- There is no fixed price DRG financing. - The use is voluntary and needs a licence. All regions are not using it for reimbursement. - Of the 21 hospital districts 8 are using DRG-financing and 10 apply DRGs for other purposes - The penetration rate of NordDRG system today is about 80% of all inpatient cases. - The only DRG system in use is NordDRG
France	- There is no local variant - Only an additional budget for outermost regions as well as for Paris and its region
Germany	- There is the same DRG-system for the whole country. However the uniform base rates to which the individual base rates of the hospitals converge until 2009 are defined on state level.
Italy	- The tariff system currently in use for DRG is based on national standards that can be modified by each regional government according to local needs. - Starting January first 2006, because of a national agreement set within the National Clearinghouse, all regions will be using the CMS 19th revision (USA FY 2002). - Differences among regions depend mainly on two factors: o Grouping software in use (HCFA 10, HCFA 14 and CMS 19); o Changes within national tariff decided at a regional level.

	Basis of the DRG-financing system and possible differences between local variants of the implemented DRG-system
Portugal	- There is a standard DRG fixed price. - Prices are adjusted according to hospital structure, training, investigation and technology differentiation in the NHS net.
Spain	- All the regions use their own rules and systems. - Nevertheless from the national point of view, there is a funding system (cohesion fund) supported by the Ministry of Health that compensates, partially, the inpatient health care given among communities to patients that belong to another regions. Up to nowadays, these compensation has been approximately 40 % of a fee, for each DRG. These fees are periodically updated and published within a Royal Decree. At the current moment, these fees are being updated and the percentage of coverage might shift to an 80 %. - Invoicing to other European countries is also based on this Royal Decree, being common for the whole country. - All regions use DRG in some policies and all for monitoring
Sweden	- There are local prices down to hospital level. - There are also local DRG-weights in some counties because of both technical and ideological reasons. - The major variant is that hospitals use the same weight set in and between the counties but that the prices per DRG are different for each hospital. - 2 counties do not use DRGs at all.
Switzerland	- Since 2005 APDRGs are used or being introduced in several cantons, but not in the whole country. - Only APDRGs are used, although there exist some exception for MIPP groups in a few hospitals
The Netherlands	- DBCs on list A use national tariffs that apply to all hospitals. - DBCs on list B have prices that differ from hospital to hospital

2.1.6. Who is accountable for the regulation on a DRG-based financing system?

	Accountability for regulation on DRG-financing
Austria	- The Federal State's Health Funds is responsible for the DRG-regulation - The Federal Health Agency is engaged in continuous comparable monitoring
Belgium	- The Federal minister and the Ministry of health
Denmark	- The ministry of health at national level: - The regions at local level
England	- The Department of Health - Finance Section
Finland	- Hospital regions (trusts) and municipalities
France	- The Ministry of health
Germany	- The self-government is accountable for the introduction and regulation concerning DRG-financing. - In the case that an agreement is not reached the German government disposes of the possibility of an execution by substitution.
Italy	- There are three main actors that are accountable for DRG-financing. o At a national level the Italian Ministry for Health, whose role is to provide guidance to the whole NHS. o At regional level, each region is allowed to introduce modifications to national regulations according to local needs. o The third actor, as mentioned, is a National Clearinghouse (Conferenza Stato Regioni), whose role is to set agreement among the National Government and Regions in order to copy with the recent federal regulation.
Portugal	- The Institute of Financial and Information Management (IGIF), is a personalized Service of the Ministry of Health which is responsible for studies, orientation, evaluation and execution of the information systems and the financing of the hospitals.
Spain	- Each Regional Health Service
Sweden	- The County Councils.
Switzerland	- Cantonal authorities are accountable for the introduction and regulation of DRG-based hospital financing.
The Netherlands	- The Ministry of Health, Welfare and Sports

2.2. WHICH HOSPITALS AND ACTIVITIES ARE CONCERNED AND/OR EXCLUDED IN THE DRG-FINANCING?

Since some activities like mental health can be delivered in special institutions or in general hospital, two questions were asked : differences between made between hospitals and differences made between activities.

In almost all countries DRG-financing is only used in the acute care sector. There are limited exceptions when psychiatry and rehabilitation are included.

	Are there differences in the way DRGs are used in different types of hospitals to finance them?	Does the DRG financing system reimburse all kind of hospital activities or are some specific topics financed another way
Austria	- Yes, hospital financing based on DRGs is applied only for acute hospitals. - At the same time, the Federal States and their Health Funds have some flexibility to adjust the weights according to the role of a hospital o A "hospital factor" can be applied for major hospitals, for hospitals with special services, for hospitals operating in a special regional context, ... o hospital factors reach a maximum of 1.3 in one case of a central hospital with university clinics. - But the weights of the DRGs are the same for all and DRGs based documentation is obligatory for all hospitals (incl. rehabilitation centres and long term hospitals)	- The DRG financing system reimburses all kind of activities referring to inpatients (incl. day cases). - Ambulatory care as well as the activities of rehabilitation centres and long-term hospitals are not yet reimbursed DRG-based yet. - Research and teaching are not included
Belgium	- Yes, DRG-financing is only used for acute care in general and university hospitals. - But, it was one of the major objectives of the new financing, which was introduced in 2002, to reward the identical activity identically, whether it is performed in a general or a university hospital.	- The DRG-based financing focuses on hospitalisation care (inliers and outliers) and chirurgical day cases. - Some specific issues, such as medical imaging, clinical biology and medical materials, are partly reimbursed by the DRG-system. - Intensive care is paid by a specific system that calculates an expected length of stay in intensive care units per pathology. - At least, also urgencies are to a certain extend financed by DRG-activity. Consequently, following activities are reimbursed another way: o ambulatory care (fee for service) o non chirurgical daycases (fixed fees) o operating room activities (time and activity driven financing) o rehabilitation (fixed budgets) o psychiatrics (fixed budgets)
Denmark	- Yes, psychiatric hospitals are for the moment excluded from the DRG-system. There are being developed new psychiatric groups	- All somatic activity is included.

	Are there differences in the way DRGs are used in different types of hospitals to finance them?	Does the DRG financing system reimburse all kind of hospital activities or are some specific topics financed another way
England	- Yes, at present HRGs exist mainly for the acute sector of secondary care. - But in areas such as Mental Health/Learning Difficulties HRGs do not exist but working groups are trying to gain an insight into their development and use.	- Only HRGs relating to Secondary Care are reimbursed. - All areas that do not have HRGs i.e. Mental Health are excluded.
Finland	- Yes, generally psychiatric care is excluded from DRG financing. - But all specialised hospitals within one region belong to the same organisation and Outpatient DRGs exists	- Different hospital regions are using different DRG reimbursement exclusion rules (outliers). - Investment expenditures are included in DRG prices but different regions have different rules what they include or exclude into the DRG financing. - Only Teaching and Research is financed separately from state budget.
France	- Yes, GHM-financing is only used for acute care hospitals	- GHM are used for inpatients and day cases for following specialities: o Medicine o Surgery o obstetrics
Germany	- Yes, psychiatric and rehabilitation hospitals are excluded from the DRG system.	- Psychiatric and ambulatory care are excluded. - Temporarily some areas of inpatient care which are not yet represented appropriately in the DRG system are financed individually - There exist several types of supplements.
Italy	- Yes, regions apply discounted tariffs for the reimbursement of care according to different types of hospitals. - In addition, regional tariffs may vary according to case mix complexity, which provides extra funds for high specialty providers (high case mix providers). - Another parameter used in order to differentiate tariffs among providers is the provider dimension. - Yes, rehabilitation centre and nursing homes are excluded.	- DRGs system finances all inpatient care which are related to hospital stay. - Day Hospitals are paid using a special tariff that uses DRG. - There also are tariffs for a one day stay and for hospital stay longer than the ordinary (outlier). - Rehabilitation in Acute Care Hospitals is classified by using DRG, but reimbursement of care is based on a per diem tariff according to the actual length of stay. - There is a fee for service reimbursement for all other services that are not provided within the hospital stay regimen. - A different system is used for financing special function as emergency network, rare disease, transplants and similar. The system in use for financing special function is based on standard cost.
Portugal	- Yes, psychiatric and rehabilitation hospitals are excluded from the DRG system..	- DRG financing system is used for all acute in-patient care and ambulatory surgery.

	ARE THERE DIFFERENCES IN THE WAY DRGS ARE USED IN DIFFERENT TYPES OF HOSPITALS TO FINANCE THEM?	DOES THE DRG FINANCING SYSTEM REIMBURSE ALL KIND OF HOSPITAL ACTIVITIES OR ARE SOME SPECIFIC TOPICS FINANCED ANOTHER WAY
Spain	- Yes, specialised hospitals are excluded (psychiatric, rehabilitation ...)	- Only inpatient and Major Ambulatory Surgery in acute hospitals are funded based on DRG
Sweden	- Yes, DRGs have only been used for somatic care in Sweden. - Both acute care and planned care have been included. - No County has used DRGs for psychiatry yet. This might change in a near future since we have developed the NordDRG system to comprise also psychiatric inpatients. - The new psychiatric groups have been implemented in the system 2005. - Rehabilitation is another ongoing work in the Nordic centre; DRGs is not used for rehabilitation yet. - The use of DRGs has been quite similar across hospitals regardless teaching or rural hospitals. - Teaching hospitals have had somewhat more exceptions from the DRG list, e.g. fee-for-service prices for unusual and costly treatments.	- Costs for outliers are not included. - Normally burn injuries are also not included. - In some counties specific regional care is excluded. - Some unusual and expensive drugs/materials might also be excluded and reimbursed separately. - The exclusion list varies between counties. - Rehabilitation is normally not included.
Switzerland	- No, there is no difference in the cost-weights used across all hospitals - The base rate is higher for teaching hospitals. - Ambulatory care is excluded	- APDRGs are used to finance only acute care hospital stays (psychiatric, rehabilitation and long term care facilities are excluded, as well as ambulatory care). - A reimbursement formula is used for the payment of low, high and very high outliers. - Operating room and intensive care activities are not separately taken into account.
The Netherlands	- Yes, the DBC-system is only used for acute care hospitals	- DBCs include inpatient and outpatient care to medical specialists, which means that GP, dental care and paramedical care are not in the DBC-system - Rehabilitative care provided in hospitals is covered by the DBC case-mix reimbursement system - Specialized rehabilitation centres were involved in the entire DBC preparation path, but introduction of DBC based reimbursement system was postponed. - Intramural mental health will be incorporated in the DBC casemix system soon. - Laboratory and imaging services performed as part of inpatient or outpatient specialist treatment are covered by the DBC reimbursement system.

It was also important to identify if differences were made between hospitals with different legal status: public, private not for profit and for profit. Half of of the country make a difference while the others do not.

	ARE THERE DIFFERENCES IN THE WAY DRGs ARE USED ACCORDING TO THE LEGAL STATUS OF THE HOSPITAL
Austria	- No
Belgium	- Yes, with the exception of military hospital.
Denmark	- Yes, the public hospitals uses the common national DRG-system - The private hospitals uses a negotiated pricing system based on DRGs.
England	- No, however, Foundation Trusts have a legal right to apply HRGs across all activity types
Finland	- No, the public hospitals are managed like non profit (communal) enterprises by the counties
France	- Yes, there are different national tariffs for the for profit and the not for profit hospitals - The tariffs of not for profit hospitals can be multiplied by a geographical correction factor.. - The tariffs of for profit hospitals are multiplied by each hospital's individual correction factor.
Germany	- No, there are no differences made according to the legal status of the hospitals.
Italy	- No, theoretically there is no substantial difference between public and private hospital's financing. - Public hospitals receive special funds in order to cope with "public functions" such as blood supply, transplants, emergency, rare disease, and similar. - Special funds include capital assets or ad hoc programs related to the National Health Plan
Portugal	- No
Spain	- Private hospitals in general do not use DRGs except some if the Administration buys services from them. - In 2003 a process was started by Insurance Companies to make it compulsory for private hospitals to send MBDS data items for their inpatients which is still not in place. This is a first step to be able to use DRGs in a later stadium. - Some Hospitals that work for foreigner or international insurance companies (hospitals in the coast for example) use DRG as they are paid based on DRG.
Sweden	- No
Switzerland	- No, currently no difference is made.
The Netherlands	- No

2.3. DRG WEIGHTS AND PRICING

2.3.1. DRG weights

	DRG-system working with service weights versus DRG-prices based on costs
Austria	- The DRG-system is based on service weights calculated from the real costs
Belgium	- DRGs are used to redistribute national budgets. Redistribution is organised on previous DRG-activities. The gap of time experienced is about 2 or 3 years.
Denmark	- The DRG-system is using weights calculated on direct costs.
England	- HRG prices are based on previous years costs uplifted for inflation. Therefore full cost accounting applies. - There is also a weighting system where Finished Consultant Episodes are converted into Spells of care to enable activity to be grouped. - There is some trimming of data, which could relate to length of stay.
Finland	- If in a hospital no costing is made by patients the national weights can be used. - Weights can be used also as a starting point to develop individual DRG based prices
France	- There is scale of GHMs which is deducted from the relative weight of each "GHM"; the relative position of each GHM is based on national costs studies
Germany	- The calculation of the DRG-system works with a full cost accounting instead of service weights. The case-related cost-data are provided by a yearly sample of hospitals.
Italy	- DRG tariffs are based on cost measures within a selected group of hospital. - In order to measure costs there have been experimental projects that were able to determine "all inclusive" tariffs. Consequently, tariffs in Italy include also reimbursement for personnel, and drugs. - The tariffs are obtained by adding together all costs of services delivered (e.g. Lab tests, x-ray and other imaging tests, surgical procedure etc). This cost was added with a quota of overhead costs, excluding special function costs which are financed according to standard cost of care program.
Portugal	- The DRG-system works with Maryland service weights adapted to our reality according to the patient treated, length-of-stay and costs by service.
Spain	- The estimated DRG cost are based on historical costs and using US DRG weights or a national adaptation.
Sweden	- The national weights are based on the national case costing ("bottom-up" costing approach) database which comprises 30% of all inpatients in Sweden. We have just started to collect case costing data for outpatient care, so weights for day surgery are also based on "bottom-up" costing data.
Switzerland	- The DRGs system is based on service weights
The Netherlands	- The introduction of the DBC case-mix system involved the adoption of a uniform product costing model to calculate unit costs of DBCs. The use of this cost-accounting model is obligatory for all hospitals in the Netherlands. With the introduction of this model, parties aimed to realize that unit cost calculations were performed in a similar way in all Dutch hospitals.

DRGs weights are generally based on costs and in some countries on cost and activity. England is the only country using activity based weight.

	ARE THE DRG-WEIGHTS BASED ON INCOME, COST OR ACTIVITY (PATHOLOGY, LENGTH OF STAY …) OR A COMBINATION OF THESE ELEMENTS?
Austria	- The DRG-weights are based on average actual costs for the procedures and the length of stay
Belgium	- The discrepancy between DRGs is based on activity: a different length of stay is calculated per APR-DRG, degree of severity and groups of patients' age.
Denmark	- The DRG-weights are based on costs. The DRG-weights for an actual year are based on the hospitals cost of activity two years earlier. ABC-analyses are generally used as a costing methodology.
England	- Any weights are related to activity.
Finland	- The DRG-weights are based on costs. ABC is generally used as a costing methodology
France	- The DRG-weights are based on costs
Germany	- The DRG-weights are based on costs
Italy	- The DRG-weights are based on cost and activity.
Portugal	- The DRG-weights are based on costs, activity (number of patients and length of stay)
Spain	- The national DRG weights adaptation uses length of stay as proxy of general costs (including salaries) and service statistics and cost derived from a study in a group of hospitals created voluntarily to do that work.
Sweden	- The DRG-weights are based on costs
Switzerland	- The DRG-weights are based on cost and activity.
The Netherlands	- The DRG-weights are based on full costs methodology

	WHO HAS THE RESPONSIBILITY FOR: o CALIBRATING THE DRG-WEIGHTS ? o KEEPING THE WEIGHTS UP-TO-DATE? o MAINTENANCE OF THE SYSTEM?
Austria	- Team of experts on behalf of the Federal Health Agency - The maintenance of the system is continuously done by the same team of experts on behalf of the Federal Health Agency. o The system is adjusted every year o Calculation of the cost weights is adjusted every few (5-7) years. o The main goals of the further development of the system are agreed upon in the already mentioned statutory agreements between Federal government and Federal States. o The Federal Health Agency is responsible for realizing further development; the team of experts prepares the steps for the further development of the DRG-system and for decision making.
Belgium	- The federal ministry of Health. - Concerning maintenance the Belgian DRG-system is based on the grouper software of 3M. o If new versions come out and the Ministry of Health, with the advice of the sector, judges it the moment to switch to a newer version, then Belgium will go to a new DRG-system. o With the introduction of the new financing in 2002, the hospitals were obliged to use APR-DRGs instead of AP-DRGs. o The way the average length of stay per APR-DRG, Severity and ageing group is calculated is decided by the ministry of health after advice of the sector and has not to do with the grouper software of 3M.
Denmark	- The DRG-unit at the National Board of heath in close cooperation with the counties and the hospitals. - They are also accountable for the maintenance of the system
England	- HRG weightings are self-adjusting, being based on prior year actual activity and cost figures: weights therefore reflect a recent historic but annually updating basis. - About the maintenance of the DRG-system, HRGs are broken down further after discussion within the Department of Health. o This is based upon increased knowledge with the agreement of Clinicians. o It is the intention that HRGs are broken down further in terms of patient/care pathways. This work is ongoing.
Wales	- The Welsh Assembly Government works closely with NHS finance teams to agree consistent costing methodologies. - The maintenance of HRGs is undertaken by the NHS in England, led by the Department of Health, which Wales follows.
Finland	- Hospital regions economic departments - Updating is organised on Nordic level both concerning primary code sets and DRG specification. - Cost weight are calculated based on the patient level cost information from Helsinki metropolitan area and from some other hospital regions
France	- The Agence de traitement de l'information hospitalière which conducts national cost studies and reviews the international literature

	Who has the responsibility for: o calibrating the DRG-weights ? o keeping the weights up-to-date? o maintenance of the system?
Germany	- The self-government founded the DRG institute which develops every year the catalogue with the DRG definitions and calculates the corresponding cost weights. - The institute also initialises necessary increments of the diagnostic and procedure codes. - A public institute (DIMDI) is concerned with the maintenance of the diagnostic and procedure codes.
Italy	- The Ministry of Health, Conference of Regions and Ministry of Economy - At a national level, the DRG system was last updated in 1997 and since then tariffs have not been updated too. As a consequence, given the abnormal differences registered among regional administrations during the last years, and also given the numerous solicitation for updating the system, the DRG system and tariffs will be updated every two years beginning in 2005. - There also is an interregional agreement (Tariffa Unica Convenzionale, TUC), which is used among regions in order to deal with patients asking care to providers located in a different region. - The main coordinator of the maintenance and development process at a national level is the Ministry of Health, whose role is to foster collaborations among regions and to set new directions for the whole NHS.
Portugal	- IGIF with the participation of a team of experts - The system is up-dated every two years - the costs weights and the trim points are adjusted
Spain	- As a voluntary group of hospitals makes studies on the evolution of the costs and the weights, there is no official body or position responsible for this work.
Sweden	- The CPK produces national prospective weights for NordDRG (in- and outpatients) on a yearly basis. - It is not mandatory to use the national weight-sets; there are also local weights in use in the counties. - There is an aim that in the future all counties will use the same weights. - The Centre for Patient Classification systems (CPK) has the responsibility for the maintenance and development of the Swedish version of NordDRG-system.
Switzerland	- Currently the association APDRG Suisse takes care of the maintenance of the APDRGs (collaboration with 3M for the annual upgrade of the grouper, calculation of cost-weights, etc.). - It is planned that a Swiss Casemix Office will be created for the maintenance of the future Swiss DRGs.
The Netherlands	- "DBC-onderhoud" - CTG/Zaio: Healthcare Tariff Board/ Healthcare Authority in formation (College Tarieven Gezondheidszorg/ ZorgAutoriteit in oprichting)

As in European hospitals most hospital doctors are salaried, their wages are included. However in some cases doctors get a fee for services and then in that case this is not included.

	Are all health professionals fees included in the DRG-weights or is there a separate billing system	Are there besides other costs that are reimbursed based on fee for service in stead of via cost weights? Which ones and why?
Austria	- Health professionals are employees of the hospitals and therefore their salaries are included.	- No
Belgium	- The Belgian DRG-financing includes almost all nursing activities for hospitalisation units. Besides, doctors' fees are reimbursed fee for service. - The paramedics' fees are financed by the hospital budget or fee for service, dependently from their status within the hospital. Here also, you can't find a DRG-driven remuneration	- No
Denmark	- There is no separate billing at hospital level	- No
England	- All Health Professionals costs are part of HRG costs. -	- Yes, GP provided services remain on a fee for service basis. Where patient pathways are split between providers, services may be provided on a fee for service basis, negotiated between providers (e.g. rehab elements).
Finland	- All Health Professionals costs are incorporated in the DRG-system	- No
France	- In not for profit and public hospitals all health professionals costs are incorporated in the GHM-system - In for profit hospitals, doctors' fees are not included in the GHM-tariffs.	- Yes, very expensive drugs and implants are paid via a mark-up above the GHM-prices.
Germany	- Health professionals' fees are not included. Salaries of employees are included.	- Yes, additional fees for expansive services, because they would otherwise decrease the homogeneity of costs in the DRGs
Italy	- All personnel expenses are covered by DRG tariffs.	- There is just a limited amount of activities that are paid on a fee for service or by a standard cost. Those activities are the one that require specific evaluation of programs and of cost utilization review.
Portugal	- DRG-Financing includes all health professional costs - There is no separate billing except if the patient chooses the doctor on a private basis. If so, the bill concerning the doctor fee is charged directly to the patient.	- Unusual and expensive treatments are not paid according to DRG. With the new version of DRG (AP-21) will include these procedures.

	Are all health professionals fees included in the DRG-weights or is there a separate billing system	Are there besides other costs that are reimbursed based on fee for service in stead of via cost weights? Which ones and why?
Spain	- Doctors in public hospitals are salaried and the funding systems include these expenses.	- Outpatient visits, emergencies and other hospital services are funded based in other parameters or pricing systems
Sweden	- Health professionals are included - In Sweden the vast majority of health professionals are employed by the hospitals.	- Unusual and expensive treatments which can not be described in a proper way in the DRG-system, like burns or special treatments at the teaching hospitals
Switzerland	- Doctors' and paramedics' fees are included in the DRG-financing. - All other professional groups' fees are also included	- No
The Netherlands	- All Health Professionals costs are incorporated in the DBC-system	- No

2.3.2. Pricing

	How is the calculation of prices per DRG done?	Relationship between service weights and prices	Basis of different local prices	Regulation of number of treated cases and relationship with the prices of DRGs
Austria	- The pricing system is based on points and is evaluated and fixed ex post in light of treatments occurred each year. - There are only little differences between ex ante and ex post prices.	- The service weights are the average actual costs per service of the representative selected hospitals - 1 DRG-point is equivalent to 1 EURO - This price is presently based on costs from 1999 - The next calculation will be based on costs of 2006	- The basis of the value for 1 DRG-point depends on the budget in the Federal States.	- The budget for the DRG is fixed, the value of the DRG-points depends on the budget divided by the total sum of DRG -points.
Belgium (continuation see next page)	- In Belgium, there are no prices per DRG. - It was namely the explicit objective of the new financing system to introduce activity driven hospital budgets, which are calculated on basis of the hospital's casemix.	- None.	- There exist no local differences in Belgium.	- The national hospital budget is closed. Only a fraction can give reason to perceive budget exceeds. - In case, a linear payback is urged from the hospital sector.

	How is the calculation of prices per DRG done?	Relationship between service weights and prices	Basis of different local prices	Regulation of number of treated cases and relationship with the prices of DRGs
Belgium (continuation)	- The reason for not having DRG-prices is that one wanted to avoid side-effects such as cream-skimming.			
Denmark	- The DRG-weights for an actual year are based on the hospitals cost of activity two years earlier.		- Based on national average.	- Using ceilings in the budget - after the hospitals have reached a certain activity they do not get more money.
England	- All costs identified to each HRG, divided by activity recorded to the HRG and completed for each individual provider. - This information is then aggregated up at a national level to obtain the national price.	- Spell converter gives a price per spell rather than FCE for Inpatients.	- Prices are calculated as mentioned in the first column but national aggregating has not occurred.	- Local organisations take different measures to keep budget on track. - Waiting Lists
Finland	- The prices per DRG are calculated with help of patient based cost accounting.			
France	- Yearly, a "National Objective for Hospital Expenditure", is fixed. On basis of the hospitals' activity level of the previous year, tariffs per GHM are calculated.	- The tariffs/prices and cost weights are based on the same scale	- National tariffs for not for profit hospitals can be adjusted with the geographical correction factor. o Paris & its region: + 7% o Corsican island: + 5% o Outermost regions: + 25 to 30% - National tariffs of for profit hospitals are adjusted with the individual hospital correction factor	- If hospitals' activity growth endangers the respect of the "National Objective for Hospital Expenditure", tariffs should be lowered automatically.

	How is the calculation of prices per DRG done?	Relationship between service weights and prices	Basis of different local prices	Regulation of number of treated cases and relationship with the prices of DRGs
Germany	- The cost weights per DRG are calculated from the average case-related costs in the sample of hospitals. - This cost weights are uniform on national level.	- The price per DRG results from the multiplication of its cost weight with the hospital's base rate.		- Additional cases which were not provided within the budget are only partially reimbursed. - The economy of scale associated with an increasing number of treated cases has also to be considered in the yearly base rate negotiations on state level.
Italy	- Prices have been calculated by using cost of services in a group of hospitals that tested DRGs before their official introduction in 1995. - However, national tariffs actually used are the one determined in 1997. - Tariffs are calculated by the assignment of a DRG per case, using discharge data which are processed with a grouping software (DRG-grouper).	- There is no relation between the two values, in Italy usually we don't use DRG-weights.	- The basis for local prices is national tariffs. At a regional level tariffs are modulated according to case mix complexity, volume treated, availability of services within the regional network, public/private network distribution relationship.	- Tariffs also represent the global budget allowed for the episode of care according to homogeneous diagnosis groups. - Different regions adopt different measures. o A measure that is widely spread among regions is to fix a maximum budget for the whole regional healthcare system. Then at the end of the year tariffs get discounted according to the volume of service globally provided within the region. o Another system is to fix a maximum budget that providers can fill in by using DRG and fee for services claims. When the budget is reached they continue to provide care with no extra budget or with a discounted budget according to availability of funds at a regional level.

	How is the calculation of prices per DRG done?	Relationship between service weights and prices	Basis of different local prices	Regulation of number of treated cases and relationship with the prices of DRGs
Portugal	- Cost information is available at the cost centre level. - The US Maryland Service Weights are used in combination with cost and length-of-stay information from Portuguese hospitals to determine the relative costs of each of the services that comprise total inpatient costs by DRG.	- They are used to distribute the total costs for inpatient care per service and DRG.	- No local variants	- IGIF contracts directly with each hospital a quantity of in-patients. - If the hospital produces more than what has been established, IGIF pays a percentage of the price that has been contracted for each in-patient and ambulatory surgery, until a maximum of 10% above the contracted production.
Spain	- At regional level last year's costs for the hospitals are adjusted by DRGs, using US or national weights, after excluding the estimated cost for non-DRG related activities (outpatients, emergencies...			- Hospitals having a health area assigned, which activity is financed through DRGs, usually have a top amount of processes to be reimbursed. Exceeding this quantity, means less or no reimbursement.
Sweden	- It is up to every county council to decide. - Most common is to use the average real cost for DRG-weights in a hospital from last year. The average cost is adjusted by the budgeted increases and decreases for expected costs next year and sometimes also by an estimated increase in productivity (about 1%). Hereafter the pricelist can be established for the hospital. This is normally done for all the hospitals. - The DRG-weights are always the same for all hospitals in the county.			- We have different methods in different counties. The county purchases and the volume is settled in negotiations with the hospitals. - Some counties have a ceiling for expenditures and the hospital has to face the loss if they treat to many patients. - In other counties it could be a stepwise shift of reasonability and a shared risk when the budget exceeds.

	How is the calculation of prices per DRG done?	Relationship between service weights and prices	Basis of different local prices	Regulation of number of treated cases and relationship with the prices of DRGs
Switzerland				
The Netherlands	- For DBCs on list A, the Healthcare Tariff Board/ Healthcare Authority in formation (CTG/ZAio) issues fixed tariffs for DBCs that hospitals may charge to health insurers and patients. Concerning these list A DBCs, the national fixed DBC-rate is a technique to liquidate the so-called allowable budget. This budget is calculated, taking into account several structural parameters: o the hospital's adherent population o the type of facilities present o the number of beds o production parameters such as the number of bed days and outpatients visits. - The maximum production and the price of each DBC on list B result from negotiations between hospitals and health insurers.	- For each DBC on list A, the tariff for the hospital cost component is calculated as the average use of a healthcare service times the median unit cost of a service, summed over all healthcare services. The calculation of the honorarium component is based on time studies. For each DBC, the 'normal time' of specialist involvement has been determined and validated. - For DBCs on list B, the relationship between prices and cost is function of the negotiation power of insurers and providers-	- These tariffs for DBCs on list A apply to all hospitals.	- In the current situation, reimbursement of list A DBCs only serves as a vehicle to transfer money (= the hospital's allowable budget) from health insurers to hospitals and medical specialists. The level of production is negotiated with insurers, and the result is an input into the calculation of the hospital budget. If the entire yield of DBC reimbursement exceeds or remains below the allowable budget, differences are compensated by a 'closing tariff' in the next year. - The maximum production and the price of each DBC on list B result from negotiations between hospitals and health insurers. As a result, prices may also vary with the size of production and, for instance, parties may agree upon a lower or higher DBC price if production exceeds a predetermined figure.

2.4. WHAT IS COVERED BY DRG-FINANCING BESIDES CARE AND HEALTH PROFESSIONALS?

Teaching, research and innovation have a separate source of funding in most countries. But some have however decided to introduce it.

Apart form this rather common aspect, there is a huge diversity in terms of what is financed and what is not. Drugs can be excluded, outpatient can be included, rare diseases might be excluded, etc.

	Teaching, research and innovation	Financing of special types of services and general interest activities	Outliers
Austria	- Teaching, research and innovation is not covered by the DRG and is financed by other sources.	- Daycases (day care, day surgery, etc), drugs, medical devices are included in the DRG-system - Outpatients are not yet included - paediatrics, rare diseases acute psychiatry, emergency, intensive care and resuscitations are included in the DRG system - Financing of other general interest activities is covered by the hospital owners and/or the Federal States and sometimes they are covered by separate financial means for projects.	- Outliers are included in the DRG-system but there exist no special rules for.
Belgium	- The education of doctors, in fact the training they have to follow in the hospital, is covered by the hospital budget. The same is true for research. - However, this budget is largely reserved for university and semi-university hospitals. - There is no real remuneration for the cost of doctor trainees within small hospitals. - Training, education and research are not financed by DRGs, but fixed as a mark-up above the hospital's clinical budget. - Nursing education and training is financed by the ministry of education. A hospital doesn't receive money for nursing trainees.	- Chirurgical daycases are already paid by DRGs. As a consequence, there are specific rules to consider pathology as day surgery and to calculate a day surgery budget. Above, some hospitalised care can be requalified as day surgery where certain intentions are met. - Concerning drugs, models are proposed and simulated to introduce a fixed fee budget for drugs in hospitalisation environments. This budget will be calculated on basis of DRGs. - Some medical materials are paid by the hospital budget which is calculated on DRGs. - Emergency, paediatrics, intensive care, outliers are all (partly) paid via DRGs. - General interest activities are not paid by a DRG-tool	- Outliers are financed by a DRG-logic. - Hospitalisation outliers are defined in terms of length of stay, as well on the lower as upper side of the distribution. - Outliers are paid by their real length of stay and not by a standardised/accepted/justified length of stay.

	Teaching, research and innovation	Financing of special types of services and general interest activities	Outliers
Denmark	- Education and internal financed research is included in the DRG pricing system.	- As a major rule: all operating costs are included in the prices. - Daycases, rehabilitation, outpatients are part of the general system. - Paediatrics, rare diseases acute psychiatry, emergency, intensive care and resuscitations are included in the DRG system	- Outliers are also part of the general system. - There is a extra payment for each bed day outside the normal length of stay for each DRG-group - Outliers are only defined and otherwise reimbursed at the high end of the distribution. No special calculation for small outliers.
England	- Separate funding for teaching: HRGs reflect the non-teaching element of service.	- Outpatients have separate HRG's - Drugs are part of HRG costs - Medical devices are part of HRG costs - HRG's exist already for emergency care. - Day Surgery have own rates, Day care is mainly non acute and doesn't have an HRG yet, but one is being worked towards. - Rehabilitation might be introduced in HRGs if care pathways are further broken down. - There are a number of high cost drugs, medical devices and certain other products that have been excluded form HRG's. Some examples are Implantable Cardioverter Defibrillators, bespoke prosthesis. - No provision is made for general interest activities, other than they may be reflected in the historic cost base for determining HRG's in subsequent years.	- Under HRG's after a certain trim point there is additional funding on a daily basis. - Each individual HRG has a trim point.
Finland	- Teaching and research is financed separately through government budget. - However that is not covering the full cost of T&R and therefore, university teaching hospitals have to smuggle part of that into the DRG prices making them sometimes uncompetitive. - The actual cost of T&R for teaching hospitals is, on the average, 14% of total costs. The state reimbursement covers only 8% (on the average).	- Hospital based drug therapy and prosthesis are included in DRG prices - The government is willing to introduce a DRG-tool for short stay, rehabilitation and outpatients. - Besides the government and the industry (pharmaceutical etc.) finances separately research projects. - That financing must be reported and be fully transparent. - Industry's share has increased.	- Outliers are not reimbursed through a DRG-system

	TEACHING, RESEARCH AND INNOVATION	FINANCING OF SPECIAL TYPES OF SERVICES AND GENERAL INTEREST ACTIVITIES	OUTLIERS
France	- Financed on lump sum basis	- GHM are restricted to the field of Medicine, surgery and obstetrics, including daycases. - Drugs and medical devices, except if they are on a list of very expensive and innovative products, are incorporated in the GHM-system. - All fixed cost (e.g. real estate amortisation, interest expenses, wages, ...) are included. - In addition to GHM financing, for neonatology, reanimation, intensive care and continuous monitoring, an complementary per diem payment can be charged. - Outpatient activities are not included - Fee for service payment for dialysis and radiotherapies - Public interest missions such as urgencies, recourse, organ banks, care to specific populations, mobile medical teams, therapeutic screening, ... are financed by lump sums.	- The rules for financing outliers within the GHM-system are based on length of stay. - They apply to high and low end of the distribution
Germany	- The costs of education of nursing staff etc. are financed by surcharges on the DRGs. - Education and research in university hospitals are financed outside the general system of hospital financing.	- In general, all activities necessarily linked with the treatment of inpatients are taken into account of the DRG-related cost weights. - Drugs and medical devices are included in the DRG-related cost weights. In some cases they are financed by additional fees. - Day surgery is financed by an ambulatory care reimbursement system. - It's intended to include the reimbursement of day cases in the DRG-system. - Rehabilitation and outpatients are not designed to be financed by DRGs.	- The rules for financing outliers within the DRG-system are based on length of stay. - They apply to high and low end of the distribution.
Italy (continuation see next page)	- Teaching, research and innovation is not included in DRG. The activities are covered by specific grants which are appointed also by other Ministries.	- DRGs are also used for day cases classification. However, day cases are reimbursed by special tariffs, which are associated to each DRG group. - Drugs used within the activities of care are included in the DRG tariff.	- There is a daily tariff specific for each DRG, which is used for financing days of inpatient stay for outliers - As per short "in hospital stay" (from zero to one day in-hospital stay), the DRG specific tariff is the one used for day hospital or day surgery.

	Teaching, research and innovation	Financing of special types of services and general interest activities	Outliers
Italy (continuation)		- All medical devices must be covered by DRG tariffs. In some cases, such as orthopaedic prosthesis, pace makers, defibrillator and similar, there also are specific reimbursements. - Concerning rehabilitation, DRG are used only for classification purposes. Payment remain on a per diem basis, in fact long-term in-hospital stay for rehabilitation is financed according to a MDC specific per diem tariff. - In addition to ordinary services, which are reimbursed with DRG, public hospitals receive also extra funds according to specifically assigned functions. Extra functions are financed according to the standard cost of the program. Special functions include the following activities: o screening programs o rare disease management o emergency medicine o experimental care programs - Transplants	
Portugal	- Teaching, research and innovation are included in DRG, but are supposed to be paid separately from next year on.	- DRG are also used for day surgery and some day care (chemotherapy, haemodialysis, etc). - We are currently working on a Prospective Payment System for Inpatient Rehabilitation which is similar to the DRG logic and the Resource Utilization Groups (RUG), for post acute care. - In addition to ordinary services, which are reimbursed by DRG, public hospitals receive also extra funds according to specifically assigned activities: o transplants o rare diseases treatment o screening	- Short stay cases are partial reimbursed (part of the DRG price). - The DRG price is paid between a low and a maximum trim. - The days above the maximum trim are paid on a per diem basis.

	TEACHING, RESEARCH AND INNOVATION	FINANCING OF SPECIAL TYPES OF SERVICES AND GENERAL INTEREST ACTIVITIES	OUTLIERS
Spain	- In some regions the DRG cost is estimated on hospital level and then calculated differently for teaching hospitals. - In others there are other budget components that finance the installed structures and research. - Teaching is paid independently. A lot of teaching hospitals have made important efforts to make the revenue and cost for research more clearly identifiable.	- Daycases, outpatients, drugs, rehabilitation nor medical devices are included in the DRG-system - there are some experiences of relating personnel incentives to the achievement of objectives set by DRG statistics or indicators	- Only in some regions they are taken into account and only for high length of stay outliers
Sweden	- The cost for education, development end research (R&D) is not covered by DRGs. - The majority of the R&D costs are covered by grants from the government. - Most counties also give local grants to their hospitals for R&D.	- The NordDRG-O groups (within the NordDRG system) are developed to deal with day cases - From 2006 Sweden will have groups for all outpatients visits (not primary care) in the NordDRG system - Drugs used in in-patient settings are included in the DRG-weights. Drugs outpatient visits (drugs on prescription) are not included. - Medical devises are included but not handicap devises that patients uses in their homes - Special burn units are also not included. - Other sorts of activities are covered by special project money	- The national DRG-weights are based on individual patient related costs. The outlier limits are also based on individual patient costs. - In addition we also calculate outlier limits based on length of stay as a service to those hospitals that don't have case costing (or individual patient related costs) yet. - The rules for outliers apply only on the high end of the distribution. For the low end we only exclude cases with too low costs.
Switzerland	- It is covered by a higher base rate and a mark-up above the hospital budget.	- Rehabilitation is not covered by a DRG-based reimbursement (some projects to introduce rehabilitation-specific DRGs are underway).Short stays are not covered by a DRG-based reimbursement. - Outpatient visits and treatments are not covered by a DRG-based reimbursement. - Participation in scientific projects is covered by special research and teaching subsidies.	
The Netherlands	- Not included.	- All operating costs are included in the fee. - All activities are covered by DBCs.	- Prices of DBCs on the list A are calculated on basis of a median in stead of a mean. Consequently, the prices are less biased by outliers.

2.5. CAPITAL COSTS

How is the cost of infrastructure, important medical equipment and installations, communication systems or informatics covered?

	FINANCING OF THE CAPITAL COSTS
Austria	- Equivalents of consumption of fixed capital are included in the calculations of the DRG-weights
Belgium	- The cost of infrastructure is paid by a budget. This budget is due to individual negotiations between hospital and Ministry of Health. - Important medical equipment and installations are in most cases financed by surgeons and hospital. Sometimes, there is also remuneration from the government within the hospital budget. - Communication systems' and informatics' budgets are based on historical budgets.
Denmark	- It is financed outside the DRG-system
England	- The revenue consequences of capital expenditure are part of the HRGs as capital charges are part of the revenue element of budgets.
Finland	- All investment cost are included in DRG financing. There is no (any more) a direct investment support coming from the state
France	- All the costs are included but the length of damping of funded capital is not standardised
Germany	- The federal states generally cover the costs of infrastructure, important medical equipment and other equipment investments by subsidies
Italy	- DRG tariffs include reimbursement for all resources used during the process of care including equipment, personnel, drugs, room and board. However, some capital asset investments are financed according to specific programs strictly related to public functions and services.
Portugal	- With specific financing
Spain	- Not included in the DRG-system
Sweden	- All those costs are included in the DRG-system
Switzerland	- Currently investments are not included in the DRG-based reimbursement
The Netherlands	- All kinds of equipment are covered by DBCs, whether they are on list A or list B. - List B DBCs cover also the cost of capital.

2.6. PERCENTAGE OF HOSPITAL INCOME

What percentage of total hospital resources is DRG-driven? An answer to this question would have given an insight of the different components of hospital resources and of the impact of each source on total hospital turnover. It is however very difficult to get figures. One reason is the diversity linked to the decentralised used of DRGs. In any case the diversity of what is included or not makes even more difficult to compare results when they exist.

	Nationwide versus locally/ regionally differentiated implementation of DRG-system	Percentage of total hospital resources that is DRG-driven
Austria	National	- Approximately two thirds of total hospital resources are DRG driven
Belgium	National	- In 2004, 39% of a hospital's resources come from the ministry of health. This is the so-called "budget of financial means". From this budget, between 40 or 50% is DRG-driven. As a result, we estimate the impact of DRG on a hospital's resources on 16%.
Denmark	Local	- Between 20 and 70 pct. depending of the solution in the different regions
England	National	- For Acute Secondary care, relates to approximately 70%
Finland	Local	- It is difficult to say since it varies a lot. It can be estimated to be 50 %
France	National	- During the transition phases this part will increases from 10% in 2004, 25% in 2005, 50% in 2008 to 100% in 2012. This are figures on national level for the not for profit hospitals knowing that the use of GHM is restricted to the field of Medicine, surgery and obstetrics. As a result, it's difficult to give a percentage per hospital because non-GHM activities also influence the turnover. - The for profit hospitals are already paid 100% on basis of T2A (tarification à l'activité = GHM-financing) since 2005.
Germany	National	- More than 90 per cent of operating costs for inpatient care except of psychiatric care is DRG-driven.
Italy	Local	- There is no such updated study in Italy that is able to give a quick answer to this question given. - Private hospitals are mainly financed by DRG, but there is no data available to say what the percentage on the overall budget is. - On the other side public hospitals are financed in part because of services provided by DRG, but also in part for public functions mentioned. - Then, there may also be differences related to payers (government, insurance, out of pocket etc) and geographical location.
Portugal	National	- Approximately two thirds of total hospital resources

	Nationwide versus locally/ regionally differentiated implementation of DRG-system	Percentage of total hospital resources that is DRG-driven
Spain	Local	
Sweden	Local	- From almost 100 to 20% for those hospitals that are reimbursed by DRGs.
Switzerland	Local	- The percentage varies from hospital to hospital (from a few percents to more than fifty percent).
The Netherlands	National	- DBCs on list A count for 90% of hospitals' expenses - DBCs on list B cover approximately 10% of total hospital expenses.

2.7. OTHER SPECIFIC QUESTIONS

2.7.1. Non-financial applications of a DRG-system that is used for financing hospitals

As presented in the first part of this report, DRGs have not always been created for financial reasons. This shows in the use that some country still have or have discovered of DRGs as instruments of management, benchmarking or health statistics.

	Other applications of DRGs than financial
Austria	- The data collected for DRG-applications are also a major source for health statistics as well as for monitoring, planning, steering and decision making concerning the health care system
Belgium	- The use of DRGs for other purposes was one of the original objectives when introducing DRGs in 1994. - Nowadays, the emphasis is totally on financing.
Denmark	- It is used in health information systems. - It is updated daily and used heavily in the local management of the economy in some counties.
England	- There is a link to Programme Budgeting, which is in the early stages of development. This provides information across 23 categories of health expenditure. This provides a broader analysis of epidemiology and impact on health spending.
Finland	- We do have a nationwide benchmarking system operated by the Research and Development Centre for Health and Social Affaires. All hospital regions are included and they pay the cost of that system. - The results are communicated trough Internet. - No other hospital statistical system exists in the country.
France	- Yes
Germany	- Currently no
Italy	- DRG are being used in association with staging tools in order to evaluate appropriateness of care setting. - In addition regions are using DRG data in order to evaluate outcomes of care.
Portugal	- Statistical analysis, morbidity studies and quality utilization reviews, using the Centralised DRG data base with administrative and clinical information at the patient level available. - Tools to hospital managers that enable better understanding production and improve communication with physicians. - More successful establishment and monitoring of objectives and targets.
Spain	- Is the current basis for hospital statistics and the indicator for hospital evaluation in all regions. DRGs are commonly used for benchmarking hospital efficiency, quality and appropriateness

	Other applications of DRGs than financial
Sweden	- Yes
Switzerland	- DRGs are also used for health statistics.
The Netherlands	- The DBC data will offer direct insight in the cost of the therapy chosen. This will increase the awareness of staff and management with respect to costs and medical content. - Decreasing variation between physicians for same pathology - In terms of quality the DBC methodology offers the opportunity to link indicators and determine protocols. - DBC data offer the possibility for benchmarking. Benchmarking of business economics as well as care-aspects. - At local level the DBC methodology provides an instrument for capacity planning. - The introduction of the DBC methodology has brought along a boost in the information and communication technology in hospitals (investments and use). Especially the introduction of the EPR (electronic patient record) has been stimulated. - Epidemiological studies

2.7.2. The future of the current DRG-system

	Ambition of DRG-financing
Austria	- The extension of DRGs and DRG based financing systems to other sectors of health care is politically agreed - Future DRG-projects include: o improved calculation guidelines o scoring-rules for aftercare o patient transfer o relocation and re-admissions o ambulatory DRG-grouping and episodes of care o the introduction of a financing system for outpatient treatment by lump-sums similar to DRGs is politically agreed - Presently the work on the tools for appropriate documentation and the negotiations on the implementation of the documentation is in progress, pilots on diagnosis and procedure documentation in the outpatient acute sector (hospitals as well as doctors in free practice) will start in 2006, nationwide documentation is planned to be introduced in 2007.
Belgium	- In the future, the adaptation coefficient of the new financing system will go to 100% while nowadays the rate is 60%. So the impact of DRGs will increase in the near future - It is expected that by mid 2006, there will be a hospitalisation drug budget based on DRGs.
Denmark	- The DRG-implications are expected to be extended during the next years. We expect that the psychiatric area will be included in a couple of years.

	Ambition of DRG-financing
England	- There is a wish to extend HRG's and its use in financing. - Extension is planned into further Secondary providers of care other than Acute (e.g. Mental Health) and also primary care.
Finland	- A project concerning an ambulant grouper has just finished.
France	- Normally, by 2012 a 100% GHM-financing for not for profit hospitals should be realised. - Convergence of GHM-tariffs between for profit and not for profit hospitals by 2012 - Incorporation of more drugs and implants in the tariffs - The government has the intention to introduce T2A for mental health and rehabilitation
Germany	- The DRG system is considered as a learning system with increasing precision in reproducing the real costs of hospital services within the yearly analysis's of case-related cost data. Therefore the intention is to extend the DRG-based reimbursement.
Italy	- At national level there is an ongoing project called NHS, 'bricks' project in which all regions are involved. The project is working in order to update all the major components of the DRG system including tariffs, cost weights, coding system, control systems over coding and appropriateness of care setting selection. - Projects for the future include the implementation of specific classification systems to evaluate outcome over the continuum of care and over time. - The main focus for the near future is to look at appropriateness of care by selecting the right setting for the delivery of care.
Portugal	- Studies will be made to evaluate a system that covers all hospital production, namely the International Refined DRG - There is a wish to evolve to a capitation financing system.
Spain	- There are plans for integrating all health services management on a territorial basis and consequently initial plans for funding the services on a capitation basis are being formulated in different regions. - The need for ambulatory hospital activities have been growing with the increasing volume of those activities. Doctors claim for them as well as these activities did not appear in the DRG statistics. The interest is growing in the Primary Health Care as well as the information systems implanted during the last years allows to register clinical data.
Sweden	- A project concerning an ambulant grouper has just finished. - There is a continuous evaluation of the system and changes are made in the counties every year.
Switzerland	- It is planned that the use of DRGs be extended to all Swiss hospitals within the next 3 to 5 years. - No major project has been launched to introduce DRGs outside the field of acute somatic care.
The Netherlands	- Improving the system and data collection - Structural incorporation of costs for building, education and outpatient medication in DBC-logic - Funding fully based on DBCs in stead of DBCs on list A which serve as liquidation vehicle for 90% of the hospital budget - Implementation in mental health - Extending DBCs to primary care - Enlargement number of DBCs with free and negotiable prices

2.7.3. Systems and mechanisms for preventing overuse of hospital care

Except for Portugal, overuse does not seem to be a risk for most countries, at a least they do not consider gate keeping as a tool to prevent it.

	Gatekeeping and undesired use of hospital resources
Austria	- Gate keeping has not been a major issue in Austria until recently but is becoming a topic in connection with recent work on disease management (e.g. diabetics), case management, interface management between health care sectors and the aim to reach a more integrated health care system
Belgium	- No gatekeeping in Belgium. - There exist incentives to consult firstly a general practitioner before going to specialist doctors but this is not obliged or sanctioned.
Denmark	- The gate keepers hardly knows about the DRG-system
England	- GP's and PCT's undertake demand management initiatives
Finland	- Some experiments have been done.
France	
Germany	- The insurance companies are allowed to inspect the necessity of inpatient care in selected cases by specialized teams.
Italy	- Gate keeping in Italy was introduced at the end of nineties, but it is starting in 2001 that there has been a major change in role and functions. In Italy, despite to what happen in other Countries, there is no denial of care, and the role of gatekeeper is similar to the one of a case manager. - According to different roles, Local Health Units and Regional Government monitor appropriateness of care, by considering the whole amount of cases treated and by suggesting specific regimen (day surgery or day hospital instead of ordinary stay) for patient treatment. - Limits to number of cases and to selection of procedures are set by using tools such as AEP (Appropriateness Evaluation Protocol) and staging systems (APR-DRG, Disease Staging). - Non appropriate utilization of hospital utilization is penalized according defined criteria and by using price cuts.
Portugal	- Gatekeeping is a relevant issue in the Portuguese NHS. - The articulation between the primary care and the hospitals is not ideal - This concern has resulted in different measures to improve interface management between health care sectors and to guarantee integrated health care.
Spain	
Sweden	- There is no problem of overuse
Switzerland	- No. Gatekeeping is almost inexistent in Switzerland.
The Netherlands	- Insurers and hospitals negotiate the level of production. - Insurers work with so-called "preferred provider policies". This means that if patients want to gave 100% freedom of choice when they need to be hospitalised, they have to pay a higher premium then in case they should be treated in the insurer's preferred hospital.

2.8. IMPACT OF DRG INTRODUCTION (PAST AND PRESENT)

	IMPACT OF DRG-INTRODUCTION IN VIEW OF FINANCING HOSPITALS FOR ... o HOSPITALS o HEALTH AUTHORITIES o PATIENTS o HOSPITAL FINANCING ORGANISATIONS o TAXPAYERS
Austria	- Hospitals became more cost consciousness and showed more economically driven behaviour concerning e.g. investment decisions and decisions on the range of services offered - The government became more transparency of hospital activities, more information for planning, monitoring and steering of health care - No major differences for the patients were reported - More and better information on what financiers (insurance companies) pay for and better comparison - Taxpayers profited from an slower increase of hospital costs than before introduction of the system
Belgium	- The hospitals were forced towards decreasing length of stay. - For the government the follow-up of the registration system concerning hospital activities and the detection of potential fraud ask lots of efforts. - Due to decreasing length of stay, the patient has to go sooner home. This implies that patients has to recur on home care etc. to recover totally. - Concerning hospital financing organisations the introduction of the new financing in 2002 introduced a new way of payments between public insurance companies and hospitals has been introduced. In stead of paying an average amount per day per patient, monthly payments have been introduced. - Since 2002, the national hospital budget has been closed which means that this budget is better controllable. So budget overspends do not have to be paid any longer by taxpayers.
Denmark	- The hospital activity increased. The economic incentives was aim at the goal and it worked. - About the hospital financing organisations, it is striking that the private part of the sector gained an increased market share.
England	- Due to the recent introduction of HRGs for financing the system, a lot of influences still need to be examined. - About hospital behaviour, there are concerns that up coding may be occurring. However, individual providers have recognised the need for more accurate coding of activity to enable costs to be recovered.
Finland	- The introduction of DRGs resulted for hospitals in higher transparency on their activities the productivity has become high when compared with other Nordic countries - NordDRG have extensively used by the authorities as health service research instruments when analysing hospital performance. These research projects have shown e.g. that theoretical savings potential in hospital care is about 1.1-1.6 billion FIM meaning about 5% of total hospital expenditures. The results also confirm that in the last 10 years there has been a 3% annual increase in hospital efficiency. - No important influences for the patients are reported. - Since the beginning of 2005 private insurance companies have to pay hospitals (public or private) for the costs of treatments caused because of traffic and occupational accident. The services are defined based on DRG. These treatments are also contracted

	IMPACT OF DRG-INTRODUCTION IN VIEW OF FINANCING HOSPITALS FOR ... o HOSPITALS o HEALTH AUTHORITIES o PATIENTS o HOSPITAL FINANCING ORGANISATIONS o TAXPAYERS
France	- The government has conducted different reforms the last years; in particular the reform of the national health insurance with the definition of a National Objective for Hospital Expenditure which introduced price / volume regulation - A reorganisation of the billing mechanism: hospital may bill immediately towards insurers and will get paid at the same time. - The share of public insurances has increased - A commission (Comité d'évaluation de la mise en œuvre de la réforme de la Tarification à l'activité) has been installed which has following objectives and instructions : o Evaluation of the impact of the reforms on hospital activity and the healthcare supply o Evaluation of the efficiency of the reforms o Evaluation of the quality of care and the accessibility of healthcare in France
Germany	- Due to the recent introduction of DRGs, a lot of influences still need to be examined. - The DRG financing system has different impacts on the insurance companies according to their community of policyholders.
Italy	- For hospitals, the introduction of DRGs meant a financial risk which has immediate effect on private organizations and a more gradual impact on publicly owned providers. This has resulted in following effects: o cost of service provided has fallen o reduction of average length of stay o renewed attention to type and number of routine exams o reduction of number of beds o increase of other settings alternative to inpatient stay. - The introduction of hospital case-mix tools gave health policy maker a better view on healthcare management. As a result, the ability of planning and controlling expenditure within healthcare sector improved. Consequences were: o overall healthcare expenditure has risen o introduction of gate keeper roles for evaluating care needs - For patients the reorganization of hospitals offer better management for waiting list, increased accessibility, but it also brings changes within habits regarding out of pocket contributions such as tickets and inside hospital private activity of physicians. - Introduction of DRG opens a new road to health insurance plans. As per effect of a more clear definition of the services provided, insurance plan can provide additional coverage for services that are not included within the national health services such as dental healthcare, plastic surgery, alternative medicine and similar. - In general DRGs introduction fostered a better control on healthcare budget and consequently as per effect of the stabilization of resource consumption, there is a positive effect on tax payers (progressive tax reduction).

	Impact of DRG-introduction in view of financing hospitals for ... o HOSPITALS o HEALTH AUTHORITIES o PATIENTS o HOSPITAL FINANCING ORGANISATIONS o TAXPAYERS
Portugal	- Hospitals are more concerned about length of stay and about the hospital production itself. - Government uses the DRG-financing system used for a better planning of the contracted healthcare services. - For the patient, it is interesting that DRG financing systems induces more production. - For the organisations that fund the hospitals, there is a more adequate distribution of the resources available.
Spain	- It had a quite remarkable impact on reducing length of stay at the introduction - At the introductory point the government expected that it would diminish the rate of yearly budget increase s - Concerning patient care some shifts among different care settings were produced, noteworthy increasing the use of ambulatory surgery
Sweden	- Hospitals realised an increase in productivity and more services were performed. - Concerning effects for authorities, there are important differences between the counties. Stockholm had a problem in the beginning with the use of DRGs to control total costs. This is under control now. In general the hospitals (with some exceptions) that are using DRGs have better control over their activities and a lower cost per DRG-point than the hospitals that don't use the system. - For patients, the introduction of the DRG-system has reduced the waiting lists.
Switzerland	- For hospitals, DRGs means better communication between managers and clinicians. - For the authorities there is a better insight in the way resources are allocated and used (more transparency). - There is also an experience that a change in the way insurance claims can be monitored and verified is obtained.
The Netherlands	- The DBC data will offer direct insight in the cost of the therapy chosen. This will increase the awareness of staff and management with respect to costs and medical content. - The authorities are hoping for decreasing variation between physicians for same pathology - DBC data offer the possibility for benchmarking. Benchmarking of business economics as well as care-aspects. - At local level the DBC methodology provides an instrument for capacity planning - The introduction of the DBC methodology has brought along a boost in the information and communication technology in hospitals (investments and use). Especially the introduction of the EPR (electronic patient record) has been stimulated.

2.9. QUALITY OF CARE

Most countries have indicators of quality of coding and ways to monitor potential risks. But few have linked it to their overall quality of care system (when it exist). Except Italy none of them have been able observe changes inequality of care either because it is too early or they have no indicators to do so.

	Link between quality indicators, control, sanctions, accessibility and DRG-financing	Link between quality assurance tool and DRG based healthcare production?	Observation of changes in quality of care
Austria	- Yes, indicators for quality are gained and control is carried out by comprehensive plausibility checks and random samples comparing documentation with patients' records - Sanctions are carried out by not reimbursing hospital stays which are documented incompletely or incorrectly or for treatment which the hospital is not authorized to supply - accessibility has not been affected yet	- The observance of quality standards presuppose reimbursement of certain treatment (e.g. intensive care, stroke units, certain kinds of psychiatric care, geriatric and palliative care et al.)	- No
Belgium	- Yes, there is a system of "flash lighting". This means that when a certain number of indicators are too many times scored within the DRG-registration, some alert is going on. - These alerts cause personal inspections of the hospital. On that moment, the scored registrations will be compared with the "medical files" of the patient in order to detect fraud. - If fraud can be proven significantly, then a penalisation of 10% of the hospital budget is due.	- No.	- No information or studies available on this topic
Denmark	- No	- No	- No information available
England	- The HRG prices are reviewed by the DOH Finance team to enable average prices to be created. Any anomalies (i.e. large outliers) are asked to review their submitted information. This could be due to issues on finance or activity. There is a form of benchmarking.	- No	- No information available.

	LINK BETWEEN QUALITY INDICATORS, CONTROL, SANCTIONS, ACCESSIBILITY AND DRG-FINANCING	LINK BETWEEN QUALITY ASSURANCE TOOL AND DRG BASED HEALTHCARE PRODUCTION?	OBSERVATION OF CHANGES IN QUALITY OF CARE
Finland		- No quality indicators in connection to DRGs	- No
France	- Yes, there is an assessment commission of "T2A" to survey the adverse effects of this reform; but the works of this commission is only at the beginning	- No	- Not, there are no exhaustive data
Germany	- Yes, special quality check programs have been developed since some years.	- No	- No, because of their development status it is not possible to assess the influence of DRG-financing on quality of care.
Italy	- Yes, case-mix index and other specific measures are used both for financing and evaluation purposes, and also for epidemiological reasons. - At present time there is an ongoing national project, called NHS 'bricks' project which is shaping a set of national indicators that will be available for benchmarking through the NHS, defining a new information system in the web of the National & Regional Healthcare Institutions.	- Yes, there are at national and also at regional level projects and experiences of quality assurance tools. During last ten years each Region introduced tools according to local orientation and needs	- Yes, the effect on quality of care is overall positive. While at beginning it could be true the motto "quicker and sicker", nowadays it is possible to say that there is a positive effect on quality of care. - A series of tools introduced in order to cope with DRG financial risk (clinical pathways, utilization review, guidelines, etc) improved management of side effects, reduced medical errors and iatrogenic infections. - The fast peace of care delivery fostered by DRGs promotes a total quality approach for both coping with financial risk, and also because of a more customer relationship orientation of healthcare delivery.
Portugal (continuation see next page)	- Yes, in order to obtain some measure of the hospital's level of quality of care, specific indicators were identified which have a fairly clear connection with positive or negative patient health status. Indicators for quality are used for benchmarking and reported to the hospitals. - Performance and quality feedback reports and internal and external data auditing are tools that have been developed to help hospitals	- No	- No information or studies available on this topic

	Link between quality indicators, control, sanctions, accessibility and DRG-financing	Link between quality assurance tool and DRG based healthcare production?	Observation of changes in quality of care
Portugal (continuation)	respond to the system's incentives while supporting IGIF in its payer role. - Internal and external hospital audits are carried on a regular basis since 1995. - Accessibility has not been affected.		
Spain	- Yes, as DRGs are more extensive and commonly used all over the country for performance and quality monitoring a large contribution to the knowledge on hospital outputs has been achieved	- Objectives and monitoring in some quality aspects are based on DRG	- None
Sweden	- Not directly - Most hospitals contribute to the national quality registers and are also reporting to the national waiting time database. - Sanctions are decided in each county separately. In some counties financing model a part of the money is taken (about 2%) out of DRG-payments to also pay by results or achieved goals.	- No	- No, not documented.
Switzerland	- Yes, a few indicators are used (e.g. readmissions, nosocomial infections and patient satisfaction).	- Indicators are introduced, such as coding error rates, readmission rates, nosocomial infection rates and level of patient satisfaction.	-
The Netherlands	- Yes, in terms of quality the DBC methodology offers the opportunity to link indicators and determine protocols		- Because of recent introduction of the system, no evidence is available

2.10. POSSIBLE ADVERSE EFFECTS OF A DRG-SYSTEM

	ADVERSE VERSUS POSITIVE EFFECTS OF DRG-FINANCING
Austria	- There are tendencies for up coding, therefore the funding organisations implemented data quality procedures based on statistical methods and by comparing the DRG data with the patients' records - Systematically organized splitting (readmissions, transfers etc) for financial reasons is detected in some cases; work on solutions of these problems is in progress - Reducing the length of stay was one of the goals for implementing DRGs; to minimize problems caused by too short lengths of stay there are moderate limits for minimum length of stay and scoring rules for cases discharged earlier concerning documentation - There are many reasons for increased stress by staff; of course there was additional work during implementation of the DRG-system and there still is additional work Documentation had been introduced long before implementation of the system, therefore there was enough experience gained until the system was implemented. As a result nowadays coding quality is quite good - Health statistics became more reliable
Belgium	- Up coding and down coding exist but are a rather marginal phenomenon. - Down coding is more frequently experienced than up coding. - Systematically organized splitting for financial reasons are doubted but it can't be proven. For that reason, a unique patient identification will be introduced in the DRG-registration. - There is a downward pressure on length of stay, but this is not leading to too short lengths of stay. - No systematic selection of patients for financial reasons, because there are no DRG-prices in Belgium but a redistribution system of a closed national budget.
Denmark	- Up coding or down coding for financial reasons happens but it is not common. - There has been a tradition of coding in the Danish health care sector since 1977. That gives good coding quality - Systematically organized splitting (readmissions, transfers etc) for financial reasons happens but it is about very limited numbers. - Downward pressure on length of stay: the introduction of DRGs supported a process that was already happening - Systematic selection of patients for financial reasons (cherry picking, cream skimming) is a marginal phenomenon.
England	- There is anecdotal evidence that up coding may be occurring but as the initiative is still new there is no firm evidence. Also PCTs have a right to check and dispute activity based invoices. There is at present a 'Code of Conduct' out to consultation to police/monitor up coding. - Lack of experience leading to bad coding quality - It is actually hoped that this policy will lead to better coding. - No evidence at present systematically organized splitting of hospital stays but it is hoped that HRGs can be split based on Care pathways. - There is anecdotal evidence about too short length of stays but no research based information. - There is no research based evidence to support the statements about cherry picking at present. However, one view is that this is what is expected of Independent Providers, but not proven.

	Adverse versus positive effects of DRG-financing
Finland	- No research done on up coding or down coding practices - In Finland we have a long tradition in medical coding but still quality may vary - There is a tendency towards less reliable health statistics - DRG creep in Finland. One natural test can be found when comparing three different University hospitals. Helsinki University Hospital uses NordDRG for reimbursement, Turku University Hospital uses DRG only for internal management and finally the Oulu University Hospital has developed its own service definition system based on individual decisions of physicians about the right group. This kind of a system seems to produce a much lower rate of complicated cases and the number of encounters in complicated groups tends to be higher in Helsinki. For instance, in the case of deliveries the complication rate in Helsinki is 20% and 5% in Oulu. However, Helsinki is also a centre, where the most severe cases are treated. Therefore, confirmation of these results needs further research. - The average length of stay is low in acute care hospitals (3,6 days in surgical departments, 5,8 on the average)
France	- Due to the recent introduction of the new system, it's difficult to answer to this question. However at the end of the first year the observed increase of activities was important and so it would possible to think that one part of this increase was due to "DRG Creep" - The French ministry of health is aware of potential problems such as DRG creep, patient selection, reduced quality of care because of trends within hospital to chase costs, ... and for that reason a commission has been installed. On the other hand, the ministry thinks that GHM-financing also can induce some positive effects such as better coding quality and the introduction to develop certain activities (chirurgical daycases) and reduce other types of activity.
Germany	- By and by the coding standards in the hospitals will improve. There are applied sanctions against upcoding: o visits by specialized teams of the insurance companies o a hospital has to pay back a budgetary surplus in the case of it is caused by an overall higher degree of patient-related severity codes than preliminarily negotiated with the insurance companies. - The health statistics of the Federal Statistical Office are not yet based on DRGs. - The regulations for the accounting of DRGs include special rules for combining readmissions with the previous admission to one DRG-related case. Transferred patients have a reduction of their cost weights. - Possible too short lengths of stay are checked by specialized teams of the insurance companies.
Italy (continuation see next page)	- Lack of specific coding experience, in general, is not a problem any more. However there is a difference between private and public hospitals. While private hospitals tend to an up coding behaviour, public hospitals pay less attention to coding matters. - The Ministry of Health, but also Regions and numerous scientific associations are provided with guideline for coding, discussion forums and all other instruments for improvement of coding quality. - At present time there are reliable health statistics at least for the last five to six years. - Of course the first temptation of healthcare providers upon DRGs introduction is to split processes of care with a multiplication effects on the number of episodes of care and similar effects regard transfers and readmission. During the years both at a national level and also at a regional level there has been a specific regulation direct to disincentive those kind of behaviour by cutting tariffs and by giving specific indication for care setting delivery of recognized procedures. - After a ten year experience it is possible to say that DRG-introduction fosters changes in the way care is provided by differentiating the network delivery. As a result, shorter lengths of stay are captured by other healthcare initiatives. - High patients turn over within wards results in a difficult relationship between patient, relatives and personnel. Because of a short length of stay, there is little time for communicating that result in increased stress by staff and doctors.

	ADVERSE VERSUS POSITIVE EFFECTS OF DRG-FINANCING
Italy (continuation)	- Reduction within the average length of stay and the shifting from inpatient stay to day care settings result in a different resource allocation, but it does not mean that there is a disturbance of care supply. A positive effect of DRG on the overall process of care regards the shifting of the focus from the amount of services provided (number of lab tests, number of imaging procedures, etc) to the care value provided to patients by using available services. - Selection of patients is a natural effect of DRGs, and it is not necessarily to consider it as a side effect or undesirable product of DRGs. However, the selection process, as it happens in Italy, need governance otherwise it will foster opportunistic behaviour by private for profit hospitals. Above, patient selection mechanisms are regulated by plans of the local administrations.
Portugal	- Adverse effects: up coding and down coding, systematically organized splitting and patient selection but internal and external hospital audits are carried on a regular basis since 1995 to prevent adverse effects. - Positive aspects: pressure on length-of-stay, quality of coding and national data base available with administrative and clinical information
Spain	- Concerning upcoding or down coding for financial reasons it is witnessed that the number of diagnosis per case has increased a lot during those years being now more than 4,5. The regions where the DRG systems has been more applied and used have the more exhaustive data. In some regions and at national level there are periodically external coding validation processes - After the expected and uncalculated learning during the first years the coding quality has become stable and reliable - Health statistics have become more reliable - There is no evidence for systematically organized splitting (readmissions, transfers etc) for financial reasons. - The reduced offer of nursing home or mid stay beds did not allow a reduced length of stay
Sweden	- We have had very few cases of up-coding. We still have a problem with down coding (not due to the financial system, more due to tradition). So we encourage hospitals to do better coding with more registered secondary diagnoses per case. - The coding quality can improve in Sweden. We are working on giving medical secretaries education in coding so they can do a bigger part of the work and also to introduce more coding in physicians education. The County Councils also do case record audits in order to find incorrect coding. - There has been a major reduction in length of stay over the last decade due to a number of reasons but also due to the use of DRGs. Counties that use DRGs tend to have shorter length of stay then others. If the present length of stay is too short or not is a question people will disagree upon. Most will say that it is positive for the patients with short length of stay. A short length of stay shows that the process works and that the patient is well informed. The criticism against short length of stay is mostly that elderly people are sent back to their homes to early in the process. - Cherry picking does not happen within public hospitals; to some degree it does within private providers in Stockholm. - When introducing the DRG-system the increase in volume made the costs exceed the global budget.
Switzerland	- Evaluation studies conducted so far showed neither upcoding nor down coding. - Hospitals are now hiring well-trained coders. - Health statistics are becoming more reliable (hospital stays are better documented and coded). - Readmissions rate are monitored to make sure stays are not split for financial reasons. - Outliers are reimbursed according to a special formula and their rate is monitored. - Length of stay is decreasing, but there is no evidence for an increase in premature discharges. - Occupational stress of health professionals is not directly linked with the introduction of DRGs. - So far selection of patients has not been observed (outlier payment policies are adopted to lower the risk of patient selection).

Adverse versus positive effects of DRG-financing

The Netherlands

- The ministry of health stresses that DBCs have some unique aspects:
  - o Episode management approach with description of the medical process
  - o Applicable for all hospitals activities (including outpatient and day care)
  - o Remuneration of medical specialists is included
  - o Registration during the health care process by clinicians
- On the other hand, the DBC-system possibly can induce some adverse effects
  - o The introduction of the system can have effects on the costs
  - o The system triggers for production but does in itself not protect for over consumption
  - o Earnings management: how to supervise that a medical specialist will register the correct DBC now he directly benefits from the kind of DBC he assigns (=DBC-creep)?
- Due to recent introduction of the system, no scientific data on this topic is available

2.11. OBSTACLES EXPERIENCED DURING THE DRG-IMPLEMENTATION PROCESS AS A FINANCING TOOL

Only a limited number of countries seemed to experienced obstacles in implementing DRGs. For the others, a wide range of different issues have been identified: difficulty of adoption in particular by physicians, lack of knowledge, unrealistic expectations, software…

	Obstacles during implementation of DRG-system	Incentives and arguments to get the change towards DRGs accepted
Austria	- No obstacles reported	
Belgium	- By the introduction of the new financing system in 2002, some hospitals experienced substantial differences between their old and new budget. They had to adapt their way of doing in order to score better on the newly used criterions.	- Slowing down the introduction of 100% DRG-driven financing
Denmark	- No obstacles reported	-
England	- Concerning the adaptation of the financial system some areas are more advanced in their understanding of the system and how it works. This causes problems for those not fully involved in the process. - In terms of HRG implementation there were some problems as some clinicians were not sure about the classifications and may say that they have not felt fully engaged in the process. In terms of this becoming a vehicle for financing healthcare there has been much debate and discussion as to the practicality.	- For financing the system the fact that it would not fully implemented and that there was a phased transition can be seen as an incentive. For example: putting back of non-elective HRG tariff funding till 2006. - It is all linked to patient choice and plurality of provision. Without changes in the financial system linked to HRGs these policies will be difficult to be successfully implemented
Finland	- A very long full implementation phase.	- The pressure to continue with DRGs came from the purchaser side after dividing purchasing from production.
France	- The most important problem is the convergence of price in private and public hospital	- The most important argument was the financial use of GHM
Germany	- No, there did not emerge severe obstacles by introducing the DRG-system.	- No special incentives were given.
Italy (continuation see next page)	- Implementation and adaptation of the new DRG-related information systems demanded major changes both on technical side and on organizations. - A main problem was to have people accept the shifting from a retrospective to a prospective system. - There were two main challenges that might have delayed the implementation of the DRG system in Italy. o On one hand, private hospitals did not like to get paid on a per service	- The introduction of internal market, with a limited competition among providers - The definition of budget on a more objective basis.

	Obstacles during implementation of DRG-system	Incentives and arguments to get the change towards DRGs accepted
Italy (continuation)	basis because it was less convenient than a per diem basis financing methodology. o On the other hand, public hospitals did not spent too much effort for implementing DRGs, because they felt they could get the some global budget they get paid before (as it actually happened).	
Portugal	- No obstacles reported	- It was a government decision implemented in all NHS hospitals as well as in private hospital providing care to the NHS.
Spain	- There was opposition from some groups at the beginning but without much influence	- Integration of the remarks of the doctors' groups in the regular feedback and statistics
Sweden	- In the beginning there was discussion whether the system was fair or not. - In the early 90s many doctors were opposed to DRGs. Also many politicians disliked activity based funding. This has changed now and most actors are in favour of activity based funding to some degree. - Most people had in the beginning very little knowledge about DRGs, how they worked and what the system could be used for. This lack of knowledge was a problem. Many actors had also unrealistic expectations of the benefits of the system, for example that it would save a lot of money.	- As time went by we got better knowledge and realistic expectations, to see the good and bad of the system. That gave and acceptance for the system. - The use of cost outliers gave better acceptance. - The enlargement of the system to embrace both outpatient care and psychiatry is also a positive thing.
Switzerland	- The main obstacles relate to the fear of the payers that healthcare expenses would rise and the fear of the providers that resources will be diminished. - The major technical problems were caused by the quality of the data used to compute cost-weights (coding and cost data), which was initially very bad, and the need to adapt the APDRG classification to the Swiss environment (additional Swiss Payment Groups were created).	- Allocation of resources will be more equitable, costs will be more transparent, benchmarking between hospitals will finally be possible
Tne Netherlands	- Problems with software that hospitals need for the declaration (= input) and the validation of DBCs - Hospitals have difficulties calculating their real costs for the health products they deliver and that are gathered in the national database (= DBC information system) - The patient bill shows costs for treatments which patients didn't receive but are charged because of the methodology of the "mean or median cost for that kind of DBC". - Complexity of the system (29.000 DBCs gathered in 600 homogeneous cost groups)	- Introduction of market principles in healthcare (managed competition) leads to competition on the insurance market. As a result, premiums will lower and more efficient contracting will be realized. This needs to lead to shorter waiting lists. - Hospitals will be paid for their performed activity in stead of being paid via a fixed budget - Less government regulation - Freedom of choice for patients

CONCLUSION

	PRO AND CONS OF A DRG-SYSTEM
Austria	- The original goals set before the introduction of the DRG-system have been reached except that the relations and co-ordination with the other healthcare sectors did not become more transparent due to a lack of comparable documentation; however it is politically agreed upon and there is already work in progress to extend the DRG system to other health care sectors - The system of DRG-financing financial is endurable for the hospital sector and the healthcare authorities - The prime cost for developing and implementing DRGs is acceptable. - DRGs do increase transparency in hospital activities. - The new system is accepted by the hospitals. - The system is accepted by the different health professionals in acute hospitals; the extension to all sectors is politically agreed upon and applicability is in discussion presently and will be tested from next year - The documentation needed had been spread among hospitals long before the system became in use. The development of IT tools took less than one year; occasional problems had been minimized during the already mentioned pilot projects; therefore technical implementation was possible in a very short time (less than a year) - The DRG-system caused more transparency, more cost consciousness, more efficiency, more day care and structural changes. - Further developments of the DRG-system should be focusing on documentation and financing of sickness episodes irrespective of where and in/by how many health care institutions/providers patients are treated
Belgium	- From the goals as been set in 1994, only the objective of "financing hospitals" has been reached. - The system of DRG-financing financial endurable for the hospital sector and the healthcare authorities in your country. - For the government, the prime cost was double: firstly, they had to buy every hospital a 3M-grouper. Secondly, they had to finance for each hospital a team of persons that would do the DRG-coding. This cost is surely acceptable. Unfortunately, the prime cost for the hospitals is a lot more important. As coding quality influences that much their financing, they can't afford to have too little staff for coding. The personnel paid by the government is not enough, so much hospitals need additional staff which is a yearly and substantial cost. - The government has an insight in each hospital's casemix by now. So transparency has increased. - The new system has been accepted by the hospitals. - As the system is only valid for the acute care sector, their health professionals generally agree with the DRG-system although most physicians worry about their "therapeutic freedom". - In 1987, the first pilots begun a DRG-registration. In 1990, the registration was obliged for all acute care hospitals. In 1994, the first financial consequences, on basis of 1991-registrations, were introduced. So, one can argument that the technical implementation took 5 years. - Concerning their internal organisation, hospitals need to monitor closely their patients' length of stay in order to avoid penalisation. - Some people wonder whether their should be installed an under limit concerning length of stay. They want to stop the "rat race" where all hospitals always try harder to reduce patients' length of stay.

	Pro and Cons of a DRG-system
Denmark	- The DRG-system has been accepted and is used as an information system, a pricing instrument and a financing tool. So, the original objectives are reached. - Since DRG-financing is widely used, it can not be other than the system is financial endurable for the hospital sector and the healthcare authorities. - The prime cost for developing and implementing DRGs was done rather cheap. - DRGs do increase transparency in hospital activities - In many cases it is used in the local handling of the hospitals. So the system is certainly accepted by the hospitals. - An DRG-system has not been developed for the psychiatric care yet, but it will because it has been accepted and used to get positive results in the somatic areas, acute, ambulatory and day care etc. - In the first version the technical implementation took about 2 ½ years. - The introduction of the DRG-system has given an incentive to shift towards more ambulatory and day care activity. - The DRGs have given an attention to economics at the hospitals. - It is many times suggested to get a better description of the actual costs of the treatment of the patients in the different groups for in- and outpatient treatment with the view of a future version of the DRGs. - Concerning further changes to DRG-based financing, there has to be developments and changes every 5-7 years to make sure that the system is not running aground
England	- In identifying costs for different HRG's, the original objectives have been reached. However, it is too early to state regarding the financing element. - Whether the system of DRG-financing financial is endurable for the hospital sector and the healthcare authorities in your country will not be known till further in the future. - The prime drivers are to increase capacity, provide plurality of providers (to support patient choice) and to provide a platform for driving efficiency and good practice. If these are achieved then the cost would be acceptable. - It is the aim that DRGs increase transparency in hospital activities and in the long term this has to be the situation. Both Commissioners and Providers now have a common language in which to debate patient care episodes. - The use of HRG's is accepted. The use of HRG's for financial purposes is still a matter for debate and evidence research. As HRG's are still not established for all Secondary Care then the system is not fully agreed. - About technical implementation of the system, the transitional path as it stands is from 2003-2008. However, there is still a lack of clarity surrounding those areas of care, which at present do not have HRG's i.e. Mental Health, and what will be any transitional path for them. - The experience of the system is too new to offer any research-based evidence in relation to finance and impact on the way inpatient care, outpatient care is organised on a daily basis. - It is often suggested that to make HRG's meaningful there is much debate about breaking down care into pathways so that incentives are in place to treat patients in appropriate settings. This is to stop inappropriate referrals but also allow the costs of diagnostic tests to be done in other settings. - There are changes needed: to continue the refinement process (as exemplified by the development of Version 4) and to address issues in Mental Health and Ambulance Sectors (there are big issues in both that remain unresolved).
Wales	- Not applicable

	Pro and Cons of a DRG-system
Finland	- The original goals as set before the introduction of the DRG-system have been reached. - The technical implementation of the system caused no problems at all and need only Some days. - The system of DRG-financing financial is endurable for the hospital sector and the health care authorities. - Concerning prime cost, it is stated that all costs were very low and divided between five countries. - The acceptance of DRG runs gradually and needs a long implementation period. - There has become a lot more transparency in hospital activities. - Opinions of healthcare professionals about DRGs vary. DRG is however extensively used for internal management of hospitals. Special software for that purpose was developed in Finland in 90's (Linnakko). This happens also today in Sweden and Norway. - A further step within DRGs is about the updating of the grouping logic.
France	- GHM has certainly increased transparency in hospital activities - The new system has been accepted by the hospitals, although some difficulties had to be overcome. - In the future, GHM possibly will be extended towards psychiatrics and rehabilitation. - The technical implementation of the system took between 5 and 10 years; it depends from the sector and the use - Concerning the most quoted suggestions in France with respect to useful changes for GHM-financing are: o Ethic and deontological problem; o care accessibility for patients; o the choice of patients by hospital and certainly private hospital(clinics)
Germany	- It is too early to give a profound overview of major pro and cons of G-DRGs. - The prime costs for developing the system were acceptable. - Concerning the technical implementation period, the first German DRG-system was published in September 2002. At the end of 2004 most of the hospitals applied the DRG-system.
Italy	- The original goals set before the introduction of the DRG-system have been reached - The system of DRG-financing financial is endurable for the hospital sector and the healthcare authorities - The prime cost for developing and implementing DRGs is acceptable. - Transparency on hospital activities has been increased. - The DRG-system has not completely been accepted by the hospitals. - Concerning new areas to apply DRGs, they can be applied to several sectors of care according to their structure, but there are a few activities that cannot be developed using DRGs. - It took three years for the test and for the development of cost weighs and tariffs. - Introduction of DRG decreased length of stay and shifted a large amount of cases from hospital stay to outpatient facility. - Concerning the internal organisation of hospitals, DRGs pushed them to a managerial revolution, paying attention to cost utilization and quality. As per effect of the healthcare reform of the nineties, there has been a major change in the way care is organized. Starting with a drastic reduction of the number of level of the hierarchy (from three to one), and ending with a new departmental organization, the DRG "revolution" brought major changes both on financing and on the way services are provided. - It is widely suggested to set up an Office on ICD-9-CM at Central level (Ministry) and DRG which could improve both the coding system and the grouping software in order to adapt the system to the Italian situation. - The main need for further changes regard the utilization of APR-DRG (or similar systems) which can be useful for staging disease and because of that to address the appropriateness of care issues.

	Pro and Cons of a DRG-system
Portugal	- The original goals set before the introduction of the DRG-system have been reached - The system of DRG-financing is endurable for the hospital sector and the healthcare authorities - Transparency on hospital activities has been increased. - The DRG-system has been accepted by the hospitals. - Portugal believes that the DRG-system is an acute care system and consequently it can be used only for acute care and some day cases. - The technical implementation of the system lasted 3 years. - Concerning the impact on the way inpatient care, outpatient care is organised on a daily basis by DRG, there seems to be a bigger concern about the patient length of stay. - DRG financing system enables better hospital production knowledge. - Portuguese hospitals suggest that the DRG financing system should consider more day cases. - Further changes of the DRG-based financing should focus on an inpatient and outpatient precise cost accounting. - At least, there is a want to use a system which includes outpatient treatments (IR-DRG).
Spain	- Probably some 70% of the original goals set before the introduction of the DRG-system been reached - Probably a new wave of changes can appear in the near future being a lot of comments and discussions around capitation although some system to fix the hospital budget will be needed as well - The prime cost for developing and implementing DRGs was acceptable - DRGs do increase the knowledge and transparency both in the administration and hospital - The DRG-system is accepted by the hospitals? - The applicability of DRGs remains only in the acute inpatient sector, other case mix systems are needed for other settings - The period needed for technical implementation of the system coincided or followed immediately the MBDS implementation being this later most painful than DRG implementation when MBDS was already in place - The introduction of the DRG-system increased the pressure on alternative less intensive settings (day hospital, ambulatory surgery) but it is perceived as a good move - DRGs have increased productivity although the budgeting system was established in a way that did not allow to be paid for any amount of activity - concerning the most quoted suggestions in Spain with respect to useful changes due to the introduction of DRG-financing is that money is a powerful tool to make thinks change .In the regions where a hospital DRG funding has been implemented, data quality, hospital statistics and the use of information for management have advanced notably
Sweden (continuation see next page)	- The original objectives are realised. As a result, Sweden has seen a rise in productivity, transparency in hospitals activities, the creation of a common "language" between professionals and administrators, a financing system that focus on hospitals activities instead of organization, a description of performance in a better way and the realisation of a tool for benchmarking. - The system of DRG-financing financial is endurable for the hospital sector and the healthcare authorities - The prime cost for developing and implementing DRGs is acceptable. - Transparency on hospital activities has been increased. - The DRG-system has been accepted by the hospitals - Most health professionals accept the system. In psychiatry DRGs have not been accepted until this year when we implemented 26 new groups for psychiatry. It is not yet accepted for financing in psychiatric care, more as a tool to describe performance.

	PRO AND CONS OF A DRG-SYSTEM
Sweden (continuation)	- The technical implementation of the system was quite different in different hospitals - The introduction of the DRG-system had not directly (but maybe indirectly) an impact on the way inpatient care, outpatient care is organised on a daily basis. - It is commonly suggested that there should be dealt with cost outliers and to get new groups when the new drugs/devices or new technology come in use. - About the needs for further changes to DRG-based it seems that the biggest question is how to keep the right insensitive in the financing model and at the same time have a cost control.
Switzerland	- The original goals set before the introduction of the DRG-system have been reached - The system of DRG-financing is financial endurable for the hospital sector and the healthcare authorities - The prime cost for developing and implementing DRGs is acceptable because costs are shared by the concerned parties (mainly hospitals, cantons and insurers). - Concerning the acceptance of a DRG-system all parties agree that there is a need for Swiss DRGs. - Transparency on hospital activities has been increased. - Feelings and appreciation about DRGs do vary among health care professionals, but the introduction of DRGs is generally accepted. - At least 5 years are needed to fully implement a DRG-based hospital financing system. - The impact of DRGs on the way inpatient and outpatient care is daily organised results in a better discharge planning and an improved coordination of care. Additionally a clearer distinction is made between acute care and rehabilitation. - Hospitals are better aware of the way costs are generated, and there is better communication between clinicians and managers. - DRG-financing has to be extended to all hospitals and Swiss-specific DRGs have to be developed (on the basis of existing DRGs, e.g. G-DRGs or IR-DRGs).
The Netherlands	- Concerning DBCs on list B, the original goals set before the introduction of DBCs seem to have been reached. - The healthcare authorities keep on determining a national hospital budget which cannot be exceed. From that point of view, the system is endurable for the government. - Concerning the prime cost of developing the DBC-system and methodology, it is believed that this was rather expensive and complex. - Transparency in hospital activities has increased - The DBC-system has been accepted by hospitals and insurers - The DBC-system has been accepted by most healthcare professionals. - The DBC-system can possibly be extended towards mental health, primary care, rehabilitation - The technical implementation started at full force in 2000 until beginning 2005. Nevertheless, major technical improvements are due. - Hospitals are better aware of their costs, especially because they have to negotiate DBC-prices. There also has been a boost in the investment and use of ICT.

HOPE
European Hospital and Healthcare Federation
Bld. Auguste Reyers 207-209
BE - 1030 Brussels
Tel +32 2 742 13 20
Fax +32 2 742 13 25
E-mail sg@hope.be
www.hope.be