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# **EU-China Social Security Reform Co-operation Project for The People's Republic of China**

*Comparative Study on European policies -  
France and Chinese hospital payment mechanism*

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## Abbreviations:

ANAES	Agence Nationale de l'Accréditation et de l'Evaluation en Sante
ARH	Agence Régionale de l'hospitalisation
ATIH	Technical Agency for Hospital Information
BMI	Basic Medical Insurance
CCAM	Common Classification Actes Médicaux
CDAM	Catalogue des Actes Médicaux
CEPP	Centre d'études secteur public et secteur privé
CEPS	Comite Economique des Produits de Sante
CHEI	China Health Economic Institute
CHIRA	China Health Insurance Research Association
CNAMTS	Caisse Nationale d'Assurance Maladie des Travailleurs Salaries
CMU	Couverture maladie universelle complémentaire
CPS	Carte des Professionnels de Sante
CT	Computer Tomographie
DHOS	Direction de l'Hospitalisation et de l'Organisation des Soins
DRG	Diagnosis Related Groups
GBP	Great Britain Pound
GDP	Gross Domestic Production
GHMs	Groupes Homogènes de Malades
HAS	Haute Autorité de Sante
HIS	Hospital Information System

ICDs	International Classification of Diseases
LSSB	Labour and Social Security Bureau
MoH	Ministry of Health
MoLSS	Ministry of Labour and Social Security
NDRC	National Development and Reform Commission
NGAP	Nomenclature Générale des Actes Professionnels
PLSSB	Provincial Labour and Social Security Bureau
PERNNS	Pole d'Expertise et de Référence National des Nomenclatures de la Sante
PHSP	Population Hôpital dans le Secteur Public
PMSI	Le Programme de Médicalisation du Système d'Information
PTF	Project Task Force
RCMS	Rural Cooperative Medical System
SIA	Social Insurance Agency
SIAC	Social Insurance Administration Center
T2A	Tarifcation a l'activité
TCM	Traditional Chinese Medicine
TORs	Terms of References
UNCAM	Union Nationale des Caisse d'Assurance Maladie

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# **Comparative study European DRG Systems and Chinese hospital payment mechanism embedded in the health care reform**

The aim of the report is to compare selected European member states with China and identify problems and lessons learned during the development and implementation of a DRG case-based payment method.

In particular the study should enlighten the differences between the Provincial, Municipal and other Basic Medical Insurance Schemes in China and compare the Chinese system with selected European countries at the primary stage. As a result the main stakeholders receive a tool to steer into an appropriate DRG development which includes the aspect of social fairness (poverty, disability or vulnerability). The side effect could be a process of unification and standardization of the Medical Insurance System and the Healthcare System through the introduction of the DRG System.

There are various reason introducing DRG's or case payments methods in the healthcare market like cost containment, improve quality of service, complaints of patients or the missing incentives for providers mentioned by Medical Insurance Funds, Health Care Authorities, Patients and Hospitals. There is a grown common interest in the healthcare system which has to be satisfied by new mechanism and regulation.

However, the government of China like the Ministry of Health and the Ministry of Labour and Social Security wants to introduce the DRG payment mechanism on the healthcare market and the medical insurance system. The introduction and calculation of the DRG single case payment have an influence on the hospital finance system which is financed through out the public budget, medical insurance funds – Fee for Service and the patients – Co-payments at the current stage.

The secondary effect of the study highlights the necessity of major reform processes in the fields of the health insurance system and the new funding structure of the hospitals in France in the public and private sector.

The French healthcare system before 1996 bearing resemblance to the Chinese healthcare system, which we compared and we have identified the following subjects:

- Both governments identified the urgent needs to change the healthcare delivery system
- Both government identified the requirements to change the funding method of the providers in particular the hospitals
- Both governments identified the necessity to increase the coverage through the public medical insurance
- Both governments identified the demand of the provider to increase the quality of healthcare services

The government in France decided to implement the health care reform in several steps and try to avoid unbalancing the provider and purchaser. The pilot project of DRG's adjusted the payment method as a first step because the traditional reimbursement system delivered the wrong incentives on behalf of the public hospitals. The second step covered the equality of the public and private hospitals financed under the global budget per hospital and regional budget under the Regional Health Authority (ARH). Meanwhile the reform introduced the reorganization of the medical insurance system and increased through that the coverage of population and the funding of the budgets country wide.

The French sample could be very useful for the health care reform in China in a way to divide the reform process into smaller steps embedded in the vision of the harmonious society.

However, we also concentrated the study finding in the field of the DRG's reform and implementation which shows the Chinese authorities the complexity of the reimbursement system. The idea of the incremental DRG reform development and implementation is very useful for the Chinese system and therefore we would suggest doing it in a similar way which considers the following aspects:

The process of developing a case-based hospital payment mechanism includes seven steps – Source: Cashin, et al. 2005, which can be implemented simultaneously:

1. Developing case grouping criteria;

2. Calculating group weights;
3. Calculating the base rate;
4. Developing additional payment parameters;
5. Designing the information system;
6. Designing the billing system;
7. Refining the case grouping.

While case grouping criteria being developed, some cost analysis should be initiated to calculate variation in recourse intensity across cases to inform the definition of the groups. The average cost per case within each group is recalculated after the groups are defined and refined as more data become available during the implementation. The development of the billing system can start simultaneously with the design of the payment system

Lessons learned from the French Health Care Reform “Hospital 2007”, that there was a strong position and will of the government including the majority of the authorities within the health care system to change the traditional structure and invest in the future structure of the health care system. As a result the state increased their health care spending on GDP and overhauled even Germany. The primary target was to renew the system and increase the funding. The DRG implementation wasn't used as tool of cost containment of the public budget but it was used to increase the quality of services and create equality between the public and private hospitals. Efficiency of the services increased during the implementation, further effects were the downsizing of the number of hospitals, partly a reduction of physicians within the hospitals, a reduction in admissions of patients and reduction of the average length of stay.

Nevertheless the Chinese government may look in similar ways on their reform and may reconsider the funding method of the public hospitals to increase the efficiency of the hospitals and realize a higher health output of the population.

## Funding and Structure

In 1996 the French parliament adopted a relatively comprehensive reform on the health care sector. The main part of the reform entered into force in 1997 and 1998.

Before the reform the French health care sector had a relatively complex funding structure. The reasons for this are historical. The French health care had roots in a system of health insurance societies not unlike the German system. In 1945 this system was given certain new universal characteristics by General de Gaulle's government. The result was relatively complex health insurance system that made health insurance mandatory for persons in employment. In this way a marginal group of among others the unemployed were left to benefit from health insurance funded by public means, In addition there was supplementing private health insurance, which accounted for 27% of total health care spending. In 1993 87% of the French population had taken out such a supplementing private health insurance.

In order to introduce a funding reform it was necessary to change the French constitution so that the parliament was given powers to adopt an overall yearly budget for the health care sector. Following this the budgets of the individual regions depend on the composition of the population and the needs for health care calculated on this basis. These are expressed via a needs indicator (Standardised Mortality

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<sup>1</sup> de Pouvourville, Gerard (1992): France: The Introduction of Case-base Hospital Management in: Kimberley, J.R. et. Al. (eds.): The Migration of Managerial Innovation. San Francisco: Jossey-Bass Publishers.

Rodrigues, Jean-Marie (1996): The French Connection in: The Eight Case mix Conference in Australia, Case mix and Change – International Perspectives, Sydney 16-18 September 1996: Conference Proceedings, pp. 365-370

Rodrigues, Jean-Marie et al. (1998): France as a Case Study for the Use of DRG's like French Case mix in Hospital Budgeting: Inequities and Efficiencies among French Hospitals. Paper presented at Spoleto Summer School, 15-19 June 1998

Ministère du Travail et des Affaires Sociales (1996): Méthode de Calcul des Dotations Régionales 1997 pour le secteur Public

Ratio, regional case mix index and cross regional population migration), "Population Hospitable dans le Secteur Public" (PHSP).

On the one hand this meant the abandoning of previous practise under which considerable variations could be seen between standards and service levels in the individual regions. There are, for instance, almost three times as many hospital physicians per capita in the region Ile-de-France (Paris) as in Bourgogne.

For the first time in French legislation it is formally stressed in the health care reform from 1996 that the large interregional differences pose a problem. The regional budgets, which the PSHP indicator makes dependent on the needs of the population in the individual regions, provide concrete opportunity for narrowing the variations that exist at present.

The regional health care budgets will also be further specified as regards concrete types of care (24-hour care and ambulatory care).

The reform has made the French health care sector less complex. The reform shifts the source of funding away from the health insurance societies to income taxes, and today the French health care sector provides universal coverage to the population by a specific solidarity health insurance for people under a ceiling of earning (Couverture maladie universelle complémentaire - CMU). Every person who has lived in France for three months is now entitled to reimbursement of health care costs. Thus the health care sector in Western Europe than it did before.

The French health care sector comprises a considerable private and commercial branch. This private and commercial branch accounts for 1/5 of the hospital beds, 1/3 of bed days and 40% of acute inpatients.

Before the reform the French government made use of budgetary constraints which through the government's local representation were aimed directly at the public hospitals. The private hospitals, however, were not covered by this regulation. They were funded by the local branches of the health insurance societies without government interference. Thus the funding of public and private hospitals went along separate paths.

As from 1998 there is one overall health care budget for each region. Thus the private hospitals are also included in the financial management scheme which formerly only concerned the public hospitals. The total health care budget is administrated by a single regional authority (Agence Régionale de l'Hospitalisation) directly under the French government and social security (GIP).

Responsibility for securing minimum clinical standards and service level in the health care sector was not clearly placed before. The 1996 Healthcare reform has set a mandatory process of Accreditation managed by a national agency named ANAES (Agence Nationale de l'Accréditation et de l'Evaluation en Sante). The new regional organisations are receiving information about accreditation and responsibility for quality assurance now rests with these organisations.

## Case mix systems

Already in 1979 a French delegation visited Yale where the first DRG system was being developed at the time. At the end of 1981 a new director was appointed for the French hospital sector, Jean de Kervasdoue and he thought that the French health care sector needed swift and thorough reforms. Rather than start the development of a French system he looked to the results of the American DRG project under the leadership of Robert Fetter. De Kervasdoue organised a study tour to the USA in April 1982, and two months later the development of the French case mix system PMSI (Le Programme de Médicalisation du Système d'Information) was initiated.

The development of PSMI was organised under Jean-Marie Rodrigues, who was succeeded as project leader by Jean Salin in 1985. The work was somewhat difficult for lack of resources and the fact that no members of the project group worked full time on the project. Furthermore the system met with a certain opposition among medical staff for several reasons. One reason was that no clinical validation of the project was carried out until 1988, and another reason was that the reform was considered to be closely linked to De Kervasdoue's ideas about thorough of the hospital sector. But this opposition did not constitute a major obstacle to the development of the system that only required the participation of few hospitals.

The first step towards the implementation of the French case mix system was taken during the first 4 years of the project. At this stage case mix development was much characterised by the need for introductory clarifications. The starting difficulty was the lack of any national clinical data registration. Therefore one of the first steps was the introduction of a standardised national discharge record (RSS) and the development of common IT software for hospitals in 1985.

Another point was that very few hospitals were able to code the medical procedures (either with WHO ICPM or with the Swiss Veska coding system). It was necessary to develop a specific more updated coding system for procedures named CDAM first edited in 1985.

To begin with the project group collected inpatient data from 10 hospitals around and in Grenoble in Rhone-Alpes region whose registration systems could easily be adapted to the RSS standard including Veska coding procedures. The first analyses of the DRG system were made on the basis of these data in 1984.

The original starting point for the French case mix groupings was HCFA's DRG version 3 from 1985. In PSMI the DRG's were, however, modified to fit French conditions and coding systems (ICD9 and CDAM) and were called GHM's (Groupes Homogènes de Malades).

In 1986 it was possible to put into use an actual PC grouper for national patient data. This key was tested at five hospitals.

During the same time hospital DRG/GHM product based cost accounting guidelines were published by the department of health and a cost model was designed with the support of the Yale group and applied to the data of 2 hospitals from Rhone-Alpes region in 1985.

According to Jean-Marie Rodrigues and others the development of the French case mix system stalled. In the period 1986-94, Rodrigues mentions a number of reasons for this, among other things the lack of clear objectives, lack of under estimation of training needs, resistance to change and disagreement among interested parties, politics like the mayor's in the board of the hospitals (losing power) or physicians in the hospitals (keeps power in the hospital). But the project was not quite a standstill. Thus an order was issued in 1989 requesting the hospitals to introduce RSS for all public and private non-commercial hospitals. Following this RSS was implemented by these hospitals during 1989-91 and pilot tests done by private for profit hospitals.

In 1991 the project group mainly based on an organisation named PERNNS funded by the department of health published a manual which explained the system of the GHM groups. This meant that almost 10 years after the start of PMSI users now had access to a detailed description of the grouping method. The same year a new law makes mandatory for any hospital a medical record department named DIM and the production of RSS discharges and manpower was allocated to each hospital to produce the data.

1996 is the first year for which reliable patient data are available. The first year of use was 1997. This year the budget for acute 24-hour inpatient care was made dependent on GHM results. This is done by relating the case mix-calculated figure to the above mentioned needs indicators, PHSP. In this way concrete information is obtained about the situation in the individual regions as to available resources within the health care sector.

As from January 1<sup>st</sup> 1997 the latest version (version 4, the fifth version of the GHM system) was taken into use. This version contains altogether 512 GHM's and resembles the 12<sup>th</sup> version of the AP-DRG grouper and is based on ICD10 and CDAM coding systems: national cost weights by GHM data base is maintained and used to compute the case-mix index of each region and each hospital. Since the first of February 1997 PMSI covered the specialities medicine, surgery and obstetrics. As from January 1<sup>st</sup> 1998 pilot tests started for rehabilitation and mid term care and from January 2002 for psychiatry.

Sine 2001 an anonym unique identifier based linkage has been developed. Finally in 2002 a national agency named ATIH and based in Lyon was set to be the case-mix centre in charge of development and distribution of coding systems, groupers, accounting guidelines and model and processing of national data bases available to hospitals, researchers and even journalists.

The development of clinical information systems has taken place relatively late in France compared to other countries in Western Europe. Today only public hospitals in France register RSS electronically. Only 20% of privately practising doctors use electronic records. The plan set at the end of 1998 that all health care staff and all bodies in the health care sector have been required to produce sign, receive and process electronic patient records via the CPS card (Carte Professionnel de Sante), is restricted to the administrative data of the insured person Vitale card for private physicians outside hospital.

The main challenges to day (01.10.2002) are a case-mix issue and a funding issue:

- The case-mix issue is to know which grouper will be used in the coming years. Either an updating of the existing version 6 of GHM or a refined version named EfP performing better with data bases more populated with secondary diagnostics.
- The funding issue, an act passed 1999, is forecasting before 2004 a funding based on GHM for all the costs of any hospitals (public or private) related to activity excluding training, research, emergency and differences in socio economic status. The detailed definition is not yet approved but the shift in resource allocation will be very important from around 5% to around 50% of the total hospital funding.

The French government, elected in June 2002, has announced that both public and private hospitals should move to a prospective payment by activity (i.e. payment per DRG, complemented by payments for specific activities or missions, which would also be calculated according to the level of production measured through relevant units of account).

## **Policy idea 2002 - Reform of Hospital Payment System<sup>2</sup>**

The policy idea was first launched during the socialist Government who came in power 1991. In 1982, the Director of hospitals of the Ministry of Health, Jean de Kervasdoué, decided to implement the DRG information system in France. His idea was that this instrument should eventually complement the global budgeting reform, i.e. that it would be used to calculate the individual hospital budgets (until 1983, public hospitals were financed through a per diem rate, which was calculated to balance the hospital budget, thus there was retrospective payment of all incurred costs. In 1983, the per diem rate was replaced by a global budget, with the Ministry of Health fixing a tight constraint on the rate of growth of these budgets).

The reluctance of public hospitals to give information on hospital stays was rather strong during the first year. This was partly a reluctance of physicians to be accountable for their activity, and partly a fear that this information would be used to reduce the funding of hospitals.

It took some years before the information was collected exhaustively in all public hospitals. This was a whole process, including the implementation of information departments in every hospital, of a quality control process of the data provided, etc.

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<sup>2</sup> Couffinhal, Agnes; Reform of Hospital Payment System; Health Policy Monitor, April 2003

During 10 years the policy orientation changed several times between promoting the use of this information system as an internal instrument for hospitals and using it in a payment mechanism.

At the beginning of the 90s all public hospitals collected standardised data on hospital stays which were centralised. An experiment was conducted with a sample of private for profit hospitals to collect the same data. A financial incentive was given to furnish these data, and the quality control process was adapted to the specific organisation of these hospitals. From 1997 the data collection is exhaustive also in the private sector.

In the mid-nineties an experiment was conducted in an entire region (Languedoc-Roussillon): it involved the collection of DRG data from all public and private hospitals in the region, and a simulation of the results for each hospital of a DRG-payment system.

In the 1999 Act on universal coverage foresaw that beginning in 2000, experiments of DRG-based payments could be conducted in some regions during a five-year period, and a commission was nominated to design these experiments. But nothing had been implemented yet when the new Government came in power in 2002.

During all these years, a lot of technical work has been done, to adapt the classification to the French context, to build a relative index scale, for the public sector and the private sector, to provide evaluations of the extra costs linked to specific missions, to analyse cost variations among hospitals, etc. The technical aspects of this policy have thus been thoroughly covered.

The general aim of the reform is to remunerate all hospitals in a fair and efficient manner.

The extent to which it will enhance efficiency will depend on the capacity of hospitals to respond to these incentives, i.e. their ability to control costs. More autonomy for public hospital is the logical complementary policy to achieve this goal. The private for profit hospitals have more freedom of management, even if they have to comply with quality norms.

If it leads to more efficiency, the reform is not a priori a tool for cost-containment. On the opposite, it suppresses global budgeting for public hospitals, which has been a rather efficient tool for rationing if not for enhancing productivity. The incentive built in

the new payment system is an incentive to increase activity, to perform more procedures. It is basically a fee-for-service payment, even if the service is a complex process (a hospital stay for a specific case) and not a single item of this process. As we know, all payment mechanisms create particular incentives, and no single payment reconcile all incentives that one would like to build into the system (increasing productivity and quality while moderating overall costs).

In terms of cost-containment, the result will depend on the way this payment method will be combined with other tools, e.g. global budgets at the national or regional level. These aspects have not been clearly designed yet.

These payment mechanism do not either ensure quality in themselves. They might even create undesirable incentives in this respect, as it has been said before. These incentives have thus to be counterbalanced by appropriate monitoring tools.

Equity is another important goal embedded in this reform, at least in the sense of “equitable competition between providers”. All hospitals will have the same rules, will be rewarded for efficiency in the same way and will compete on the same basis to attract patients – provided that the extra costs linked to specific constraints or missions are correctly assessed and paid for. This is important in view of the current debates between the public and private for profit sectors.

The conception of equity underlying this policy is “allowing the same resources for the same activities”. Of course another conception is “allowing the same resources for the same needs”. The need-based formulas used in some countries to distribute the budgets among geographical zones (according to the size, age, morbidity and deprivation of the population) are in line with this conception. In France, it has been used so far to distribute the national budget for public hospitals among regions. The formula currently used for this distribution takes into account both needs (depending on the size, age structure and mortality of the regional population) and efficiency (measured by the relative cost index of the regional hospitals after controlling for the case mix). In the other sectors (private for profit hospitals and ambulatory care), which are paid fee-for-service, this is impossible.

Moving from global budgeting to prospective payment per case for public hospitals will probably lead to abandon this reference to need, unless these payments per case are regionally adjusted according to the relative situation of each region.

## Policy implementation 2003 – Regulation of hospital drugs<sup>3</sup>

A set of measures have been adopted to contain hospital drugs expenditures while guaranteeing accessibility to costly innovative drugs despite the implementation of the new method of financing hospitals on a per case basis. A price regulation scheme has been introduced to achieve the first objective and an exclusion of costly drugs from per case rates aims to meet the second one.

Problems related to retrocession have been identified for several years, long before the recent dramatic increase. There have been several attempts to reform retrocession. In 1992, an Act had forbidden retrocession while allowing some exceptions that were to be stated in decrees on the Council of State. These last never came out. Prior to the Social Security Funding Act for 2002 that have regularised the retrocession (without solving the problem of the list of drugs concerned), several administrative texts have tend to regulate the system. However, if the idea to shorten the list of the retrocession drugs is not new yet, the idea to regulate prices of these drugs is relatively new in policy papers. It challenges the principle of “freedom of prices” defined for hospitals drugs in 1987.

The price regulation of costly innovative products is also new. It is motivated by the sharp increase of expenditures that was challenging the sustainability of access to innovative treatments as well as access to alternative hospital care. The implementation of the new funding method gives an opportunity to institute new modalities of payment for these drugs (expenditures for other drugs are included in rates defined by DRG).

Recently, iatrogenic accidents as well as nosocomial infections and other medical incidents have been more and more publicised. However, despite a growing concern from policy makers to this phenomenon, efforts to improve prescription and delivering of drugs have mainly been local. The idea of introducing a financial incentive to promote good utilisation of drugs in hospitals is new in the national public debate.

It is difficult to know if the price regulation will allow cost-containment for very innovative drugs under monopoly, even if the Economic Committee is a bigger purchaser than isolated hospital or groups of hospitals.

The definition of a price ceiling should be likely to reduce inequalities in prices paid by hospitals.

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<sup>3</sup> Paris, Valerie (CREDES); Regulation of hospital drugs; Health Policy Monitor, April 2004

The impact of the financial incentive to promote a better utilisation of hospital drugs is difficult to imagine. We can only notice that Regional Hospital Agencies will have to be very strict to apply the principle of financial sanction in case of non compliance with the good practise agreements. And in the case of sanctions, the financial burden for the hospital will be high.

## **Policy 2005 – Common Classification of Medical Procedures<sup>4</sup>**

The French government and the Sickness Fund are introducing a new nomenclature of medical and technical procedures and services with the following general aims: to describe more precisely medical and technical procedures and services on a common basis both for hospital and ambulatory care; to recast the fee structure between specialists in private practise based on a nomenclature that is consistent and without financially adverse incentives.

The coexistence of two nomenclatures (one for ambulatory care, one for hospital care) as their respective default – The General Fee nomenclature, Nomenclature Générale des Actes Professionnelles (NGAP) is obsolete, incomplete, and without fee consistency; the Catalogue of Medical Procedures, Catalogue des Actes Médicaux (CDAM) is incomplete and heterogeneous – generates a need to move from classification tools to a management and cost containment instrument which facilitate consensus: the CCAM.

The CDAM was created in 1985 to give a rating to medical procedures and services in hospitals for the information computer system based on the creation of a Diagnosis Related Groups (DRGs) classification (Programme médicalise des système d'information, PSMI). Until now, this schedule has been used to classify hospital stays in French DRGs and to calculate “reference” cost for each DRG. Until 2005, public and most not-profit hospitals were paid on a global budget basis and procedures and services in private not-for-profit hospitals were paid on a per diem basis for “general services” and on a fee-for-service basis for specialists’ services. CDAM was thus not used to price hospital services.

The NGAP specifies the list of medical procedures and services which are reimbursable by the statutory health insurance funds when delivered by licensed

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<sup>4</sup> Mousques, Julien; Common Classification of Medical Procedures; Health Policy Monitor, April 2005

health professionals in private practise, whether in their own consulting rooms or in private for-profit hospitals, and the rate of reimbursement. For each medical procedure or service, the NGAP allocates an item, a coefficient and the key letter (varying according to the specialty of the professional involved) which give the rate of the service when multiplied by the current value of the key letter. The determines the professional fees of general practitioner, specialists, dentists, midwives, laboratory directors, physiotherapists, speech therapists, orthoptists, and chiropodists working in private practice. In private for-profit hospitals the NGAP is used to determine certain fixed charges (operating room.....). In public hospital and private not for profit hospitals the NGAP is used to classify and charge outpatient care.

Then in 1996 the Pole of Expertise and National Reference of Health Nomenclatures (Pole d'Expertise et de Reference National des Nomenclatures des Sante, PERNNS), the directorate of Hospitalisation and Health Care Organisation from the Ministry of Health (Direction de l'Hospitalisation et de l'Organisation des Soins, DHOS), the 'Nomenclature Section' of the General Scheme (Caisse Nationale d'Assurance Maladie des Travailleurs Salaries, CNAMTS), and some scientific societies and about 1,500 experts launched a project for the establishment of one new sole nomenclature which will replace the two existing medical activity classification system: the CCAM

As explain before there are two main stages in the development process of the CCAM:

- The technical stage with the construction of the nomenclature itself and the estimation of neutral fee parameters;
- The political stage, which define the fee.

The technical stage began 1996, and straightened until September 2004. It brings together state department, sickness fund and medical scientific societies. As a consequence, at this there is no institutional representation of physicians' union (even if at an individual level some physicians could be member both of scientific societies and union).

In any way there was a broad consensus among government, sickness fund and physicians' union representatives in order to consider that the development of the

CCAM enables to go through incompatible nomenclatures with many defaults (obsoleteness, incompleteness.....) and 10 years relationship deterioration between payers-providers regarding key-letter negotiation. There is one notable exception: the non involvement of physicians' union was source of criticism by them regarding the evaluation of practise cost of the technical CCAM.

The technical stage closing with a steering comity involved physicians' union in September 2004 during which the first financial consequences of the transition from NGAP to CCAM, under the general principle of constant budget, was communicated.

At the same time the political stage began (in July 2004) In order to define, or negotiate (between state, sickness fund and physicians' union) the fees.

At this time some cracks appeared and the implementation of the CCAM was postponed to 2005.

On one hand all the physicians are waiting for this reform of the CCAM the government asks to the sickness to delay its implementation in order to ensure the support of physicians' union during the implementation process of the 2004 Health Reform Act. On a second hand the physicians' union realize that the transition from NGAP to CCAM plan with constant budget generate a new financial hierarchy between specialities with some winner and loser (radiology, cardiology, radiotherapy and nuclear medicine).

As the negotiation of The National Agreement between physicians unions and the recently created Union of sickness funds was conducted last January, and the support of physicians to the reform was assured, a general agreement for the transition from NGAP to CCAM could be concluded in February 2005. This agreement specifies the following points:

- There is one year of observation and consultation and there is no loser for the time being (loosed specialities still be paid based on the NGAP);
- There is a gradual convergence to CCAM fees of 5-8 years;
- The transition to CCAM for winner specialities is supported by a new special budget of 180 million euros. Indeed the CCAM fee (based on a monetary conversion factor of 0,44 euros) was equal to:

**CCAM fee 2005= NGAP reference fee + (CCAM fee – NGAP reference)\* 33%**

## Policy implementation 2005 – Hospital payment reform<sup>5</sup>

The French government is introducing a new case-mix based prospective payment system for all providers with an aim to improve efficiency and harmonise prices and payment methods between the public and private sector.

The idea of using DRG-based instruments to control and finance hospital activity has already been on the reform agenda of several previous governments. The first attempts to introduce a DRG-based information system dates from the early 1980s. However, despite extensive research on technical issues, the actual data collection has not been started until 1996, after the government announcement that sending DRG statistics to regional hospital agencies was mandatory. Since 2000, data also collected exhaustively from private hospitals.

The policy orientation has changed several times from promoting the use of this information system as an internal instrument for hospitals to using it as a payment mechanism. But all these years helped to get over the initial reluctance of hospitals to provide information on medical activity and the development and harmonisation of information systems. In the past 10 years, a lot of technical work has been done, to adapt the DRG classification to French context, to build a relative index scale, to provide evaluation of the extra costs linked to specific missions, to analyse cost variation among hospitals, etc.

The current government (Minister of Health) announced its intention of changing the hospital system right after its election and has been quite persistent in the implementation. Several pilot projects began as early as 2003 in a number of regions and volunteer hospitals (about 60).

One of the challenges associated with the case-mix funding system is refining the formula through continuous assessment of changes in health technology and monitoring perverse effects of the funding system design. Coding bias may encourage providers to accept patients at the low-cost end of the case-based reimbursement category and rejecting others. From this point, it is reassuring that the Ministry of Health has put in place several instruments for monitoring and evaluation.

The extent to which it will enhance efficiency will also depend on the capacity of hospitals to respond to these incentives, or their room for manoeuvre. That is why the

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<sup>5</sup> Or, Zeynep; Hospital payment reform; Health Policy Monitor, March 2005

implementation and success of the reform concerning public hospital management (introducing new patient management categories, etc.) is equally important.

As to the issue of overall cost containment, the new system introduces national and regional level expenditure targets for social security concerning its acute care expenditure (public and private). As in many other countries, introduction of case mix funding may be accompanied by budget cuts, for which the providers are not prepared at all, already the target for 2005 aims to reduce the expenditure growth rate to 3.6% from 4.5% in 2004. Given that case-mix payment is an incentive for increasing productivity (medical activity), these targets risk being inefficient without setting hospital level caps and targets as done in some other countries.

Also, it is clear that administrative costs will be higher in the new system as monitoring reimbursement will require extensive management information on patient care and costs, and continuous evaluation of coding practices. Hospitals have an incentive to diagnose patients into highly paid case categories and code medical records to increase payments. Medical experts assigned by the social security fund will carry out regular investigations in those institutions who are cost outliers.

As it is, the new system does not provide incentive for quality; on the contrary it might create well-known undesirable effects (adverse selection, shorter stay, higher readmission rates, etc.). However in France, the introduction of the case-mix payment system seems to have increased the general awareness of quality of care issues. The Ministry of Health, in collaboration with the High health authority, launched in 2004 a project for collecting comparable data on quality of care in hospitals. The close monitoring of quality of care might counterbalance the perverse incentives and might help to improve quality.

Equity in this reform is defined as “equitable treatment of public and private providers”. Public providers express their doubts about the new system’s capacity to distribute resources according to needs. Also the system may promote discrimination against patient based on their pathologies and severity, if the rates are not adequately adjusted.

In 2003, the government launched an ambitious reform plan, known as "Hospital 2007" for improving overall efficiency and management within the hospital sector. The measure introduced not only modified the mode of financing public and private hospitals but also the rules of hospital sector planning and the governance of public hospitals.

The reform plan was presented by the government right after its election in 2002. However, the ideas were not new; several previous governments have prepared the ground for reforms in these directions (more autonomy in management and introduction of activity based payment). In a sense this government had the pragmatism and the positive climate to implement the already existing ideas. Several pilot projects and experimentations have been implemented as early as 2003 in a number of volunteer hospitals.

The first phase of the reform was launched with the edict of September 2003 (no 2003-850) which introduced 9 groups of measures to simplify the organisation and functioning of the hospitals system. In particular, this edict increased the regulatory powers of Regional hospital agencies for controlling both public and private hospitals, simplified the rules of planning in hospitals sector and introduced a multi-year commitment plan to generate hospital investment of 10 billion Euros until 2007.

At the end of 2003, parliament modified the law concerning the annual funding of social security (Loi 2003-1199 of 18 December) to integrate the activity based payment in the 2004 budget.

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<sup>6</sup> Ministry of Health dedicated site for Plan Hospital 2007

<sup>7</sup> Or, Zeynep; De Pourvoirville, G.; French hospital reforms: a new era of public-private competition?; Eurohealth, 2006, vol. 12, no. 3, 21-23

<sup>8</sup> Fitch ratings, Post-reform solvency of French public hospitals, December 2006

Finally in May 2005, the government passed a ruling (Ordinance 2005-406 of May 2<sup>nd</sup>) aimed at reforming public hospital governance. Specifically the role of the hospital director and the board of the directors have been redefined including more managerial responsibilities.

The implementation of hospital 2007, especially the introduction of a new financing regime for hospitals in France, will result in significant change in hospital behaviour and resource allocation. While the core measures introduced by the reforms are based on sound principles, there are a number of issues that need to be resolved if their expected impact to be achieved.

First, concerning the modernisation of hospitals, it is true that a lot of effort has focused on improving existing premises with certain hospitals being regrouped or upgraded. According to figures from the Ministry of Health there have been several hundred regroupings (mostly small facilities) or mergers of activities in the past 5 years. The investment expenditure has doubled between 2003 and 2005, reaching 8% of the total expenditure in 2005. The most vulnerable establishment in the private sector have disappeared or been absorbed by more solid ones and troubled public hospitals have undergone more complex restructuring. The Regional Health Authorities (RHAs) have specific budget resources for financing these restructuring programs. However there are some doubts about the financial sustainability of some of these investments since restructuring sometimes generates additional costs (the larger the hospitals, the higher the co-ordination costs) and technical maintenance costs could rise sharply because new buildings are more sophisticated and would require technical equipment and information systems which have been neglected to some extent.

Second, the introduction of an activity based payment (T2A) risks creating inflationary pressures with public hospitals growing to increase their revenues. In order to control hospital costs the state put into place two mechanism: first, to control activity volumes; and second, to control prices.

To control the hospital production volumes, there are two levers. First, the RHAs have to power to grant, withdraw or suspend authorisations fir public hospitals and healthcare professionals to practise. Second, under the new generation of regional health plans, the RHAs have to set quantified objectives determining the location of services and costly equipment as well as a framework of activity including length of stays, number of visits and surgical procedures. The RHAs conclude multi-year contracts with hospitals, defining objectives and means, such that hospitals will only get the funding if they achieve the agreed objectives.

As the macro level, there are national and regional level expenditure targets for social security concerning acute care expenditure (with separate targets for the

public and private sectors). It was announced (in a rather obscure way at the beginning) that if the actual growth in volume of activity produced exceeded the target, DRG prices would subsequently go down. In 2005, both public and private sectors exceeded their targets (by more than 3.5%) costing an additional 650 million Euros to the health insurance fund. The government decided to reduce GHS prices by 1% in 2006, as the rate of increase in activity is already higher than the targets set.

This type of regulatory mechanism is problematic. First, it introduces an element of uncertainty which makes it difficult for hospitals to foresee their revenues and develop a multi-year financial plan as required by the new budget procedure. Second, adjusting prices depending on the volume of activity assumes constant productivity gains without taking into account the type of activity produced. When this is not the case, depending on the impact of new technologies on costs, there is a risk of setting prices that are (progressively) not linked to cost at all. This might encourage health care facilities to concentrate on certain procedures and neglect the treatment of other pathologies.

Third, in terms of new hospital governance, while public hospitals now have obtained some freedom over their internal organisation (number of centres, departments, etc.), their autonomy is still strictly limited in other ways. The boards and executives of hospitals are still under the control of the Ministry of Health, and the RHAs. Resources allocation is still the result of a mixture of predefined rules and bureaucratic negotiations. Most of the management rules concerning recruitment, investment strategy and the use of new interventions are also set through this bureaucracy. One striking example of this is the fact that hospital managers still do not have the power to layoff staff, whether medical or non medical.

More generally, increasing competition between public and private hospitals is a major issue. The government's ultimate objective is to achieve a gradual convergence of the conditions under which hospital care is dispensed and financed in public and private sector. Increasingly public and private facilities are competing on an equal footing as the market regulation and access conditions are the same (through authorisations which are transferable from the public to private sector).

However, the new system means a higher risk for public hospitals and potentially can put them in difficulty. Public hospitals care is not a supply-side market, since it responds to demand of the local or regional level on which public hospitals have no control. Their financial health will depend on their ability to control costs rather than to manage the range of healthcare services offered. The private sector has more flexibility and ability to specialise; indeed their activities are highly concentrated on surgery, maternity care and some highly technical specialities unlike public facilities that have to provide a comprehensive package care (obligation of "service publique").

It is not clear yet how the government will deal with those public hospitals which are struggling to expand their services beyond those which are shunned by the private sector because of their poor returns.

## **ADVAMED (Advanced Medical Technology Association) evaluation of the reform process<sup>9</sup>**

French President Jacques Chirac reshuffled his cabinet in 2004 and named Philippe Douste-Blazy to be the Health Minister. Since then, Douste-Blazy has been working to modernize the health care system and redefine the governments' role in health care to make the system more efficient and less costly, while still maintaining high quality. The key aspects of this reform include the implementation of a new DRG-like hospital payment system, the increased use of generic drugs, and the modernisation of the health care insurance system.

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<sup>9</sup> DeMoor, Michelle; ADVAMED (Advanced Medical Technology Association) "ADVAMED France Medical Technology Issues CEO Tool KIT; January 2005

France spends 122 billion Euros, or 9.5% of GDP, on total health care expenditures for its population of around 60 million people. France's 7.6 billion Euro market for medical technology is the second largest market in Europe, behind Germany, and maintains 35,000 employees. In recent years, France has experienced significant budget deficits, with a 14 billion Euro deficit of the health care insurance system in 2004 and unemployment which has risen to nearly 10%.

### **French Health Care System**

France provides public health care for its 60 million residents. Roughly 75% of total health spending is public funded, 10% is paid for by supplementary insurance, and the remaining portion is paid directly by patients. Supplementary insurance has expanded greatly over the past decades to eliminate co-payments and now covers about 80% of the population. In 2000, France introduced universal health insurance to provide basic coverage for those who had been excluded from statutory health care insurance and provides free complementary insurance for the poor. France has had a dual hospital financing scheme in which public hospitals are funded through centralized global budgets that are allocated regionally while private hospitals have been funded on a fee-for-service basis within pre-determined budget parameters. However, France is beginning to implement a new DRG-like hospital payment system.

### **Health Technology Assessment**

Medical devices sold to private hospitals currently must undergo two-step coverage and payment process in which the French Medical Benefit Committee (CEPP) evaluates the medical benefit and the French Economics Committee (CEPS) establishes the price. This process replaces the old TIPS reimbursement process.

The manufacturer must file a product dossier with the Health Safety Agency's (AFSSAPS) Healthcare Products and Services Evaluation Commission (CEPP). The CEPP will determine whether a product is worthy of reimbursement and will provide a medical benefit rating. The Healthcare Products Economic Committee (CEPS), which is part of the Ministry of Health (the President of the CEPS reports to the Head of the DSS "Direction de la Sécurité Sociale") then reviews the dossier and the CEPP rating, and determines a reimbursement price. The whole process should take no more than six months, though it can take longer, such as happened with ICDs.

The two step process has been criticized for taking longer than the legally mandated timeline of 180 days and for decisions being made based on insufficient criteria. A

recent report assessing AFSSAPS criticized its lack of experts' independence, bad relationship with the Director General of Health "role creep" through expanding scope of projects, growth of funding outpacing capacity to implement projects, priority being given to traditional projects, a lack of information/communication, and ineffectiveness of the committee.

## **Health Care Reforms**

In recent years, the French health care system has been squeezed by budget deficits and the growth in aging population, with the number of people aged 75 and over expected to rise 3.8 million in 1990 to 6 million in 2020. Thus, the French Ministry of Health has announced a number of sweeping health care reforms to address these issues including a new DRG payment system, greater use of generic drugs, and modernisation of the health insurance system. Recent health legislation contained the following reforms:

- Introduction of a new coding system for implementation of a DRG-like hospital payment system.
- A five percent tax on medical device promotional activities with certain exemption, modelled after the pharmaceutical industry promotional tax.
- A physician prescription mandate to indicate when a medical device is being prescribed for an indication for which it is not approved.

## **New "DRG" System: Tarification a l'activité (T2A)**

The centrepiece of Frances' sweeping health care reform is the introduction of a new DRG-like hospital payment system called "Tarification a l'activité" (T2A) System in 2004-2005. The system will be comprised of "Groupes homogènes de séjour" (GHS) which are equivalent to DRGs and are based on the activity or procedure that is performed. DRG-style systems typically replace specific product payments with a general bundled payment for types of patient cases, which are grouped according to both diagnoses and procedures.

The French government has delayed the launch of the T2A system in private hospitals until March 1<sup>st</sup>, 2005 largely due to software issues. T2A will determine 100% of payment in private hospitals with a correcting coefficient calculated per hospital to address under funding / over funding. Public hospitals are being phased-in more slowly using a blended rate with their current global budget system at 10% increments through 2012. Public sector tariffs will include medical fees, while private sector tariffs will exclude medical fees but have an accompanying physician fee

schedule. Negotiations on this fee schedule have been contentious and have added to the T2A implementation delay for private hospitals.

An exclusion list containing 60 expensive devices not included in the T2A System will require companies to negotiate these prices separately, with both private and public hospitals being reimbursed based on national tariffs set by the French Economic Committee (CEPS). The exclusion list currently includes only cardiac implantable devices on the LPPR list (Liste des Produits et des Prestations Remboursables, formerly known as TIPS), a formulary pertaining to implantable and outpatient technology used in private hospitals. The exclusion list may be expanded in the future to include other products. The application of this exclusion list of cardiac implantable products to both public and private hospitals may mean a significant change in market prices for affected products.

Already, there are indications in the launch of GHS payments that both public and private hospital systems have significant problems in data collection with great variation between hospitals in reported costs. Nevertheless, France may be better positioned than other countries adopting DRG-style payment systems because France has long used a similar coding and case classification framework for auditing purposes. While healthcare activities will have fixed payments through the T2A system, general interest and public service projects (such as researches, teaching, etc.) will be paid out of the annual budget allocation, and specific activities such as emergency care will be paid through a mixed system of budget allocation and DRG fees.

Key implementation concerns for industry include the quality of pilot data, coding accuracy, consistency of updates, and incorporation of new technologies. As implementation proceeds, future activities will include political lobbying, media strategy and coalition development.

### **Health Insurance Reform**

The French government formed a special body (“Haut Conseil pour ‘l’avenir de l’Assurance Maladie”) to design the key elements of health insurance reform in France. The initial recommendations included: an increase in the Social Tax (“CSG”); reimbursement levels indexed on income; lowering of reimbursement when abuses are detected; and re-allocation of funding between Social Security and private insurances. It is expected that these measures will bring a balanced healthcare budget in 2007.

### **Price Cuts**

In summer 2004, the French Economic Committee for Health Products (CEPS) proposed a number of dramatic price cuts for a variety of medical devices including wound dressing, cardiac products (pacemaker and leads), diabetes products (pumps and disposables) and homecare products such as beds. These products are listed in Titles I and III of the Liste des Produits et des Prestations Remboursables (LPPR), the price list for private hospitals. The price cuts are part of the French governments' effort to raise 250 million euros from the medical device industry over the next three years.

Individual manufacturers and French industry associations submitted written comments to CEPS and held discussions with French officials throughout the fall of 2004. Industry awaits the official publication of the price cuts in early 2005, but is cautiously optimistic that the cuts may be scaled back from original proposal.

### **High Authority**

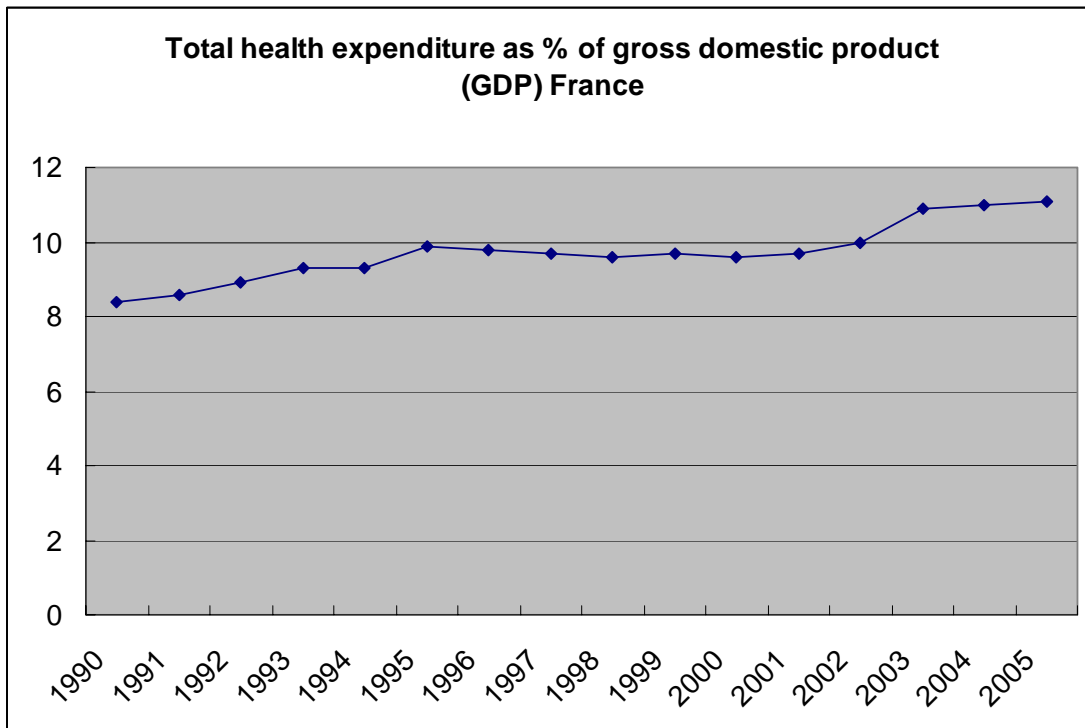
Effective January 1st, 2005, a new High Authority began overseeing the coordination of six technical assessment bodies which determines clinical benefit for medical devices and pharmaceuticals, including Medical Benefit Committee, CEPP. The six bodies will meet weekly to ensure coordination. A key benefit of this coordination will be the linking of medical devices with relevant medical procedures for approval and reimbursement. However, the role of UNCAM, the health insurers union, on the High Authority is not likely to benefit industry. Another potential concern is decreased transparency in decision-making due to overlapping and possibly conflicting interests of members of the High Authority and the technology assessment bodies.

- Industry is concerned that the T2A system is being implemented hastily, without adequate attention being paid to data collection and coding accuracy. Industry encourages close participation of industry representatives to ensure adequate payment levels at the outset and inclusion of mechanism for periodic review of prices.
- Further details also needed on the separate payment of significant medical technologies under the T2A system. Without industry's' input, it is unlikely that a fair and transparent process will be established.
- For some technologies, the existing two step coverage and payment process for products in private sector hospitals has been criticized by companies for taking longer than legally mandated timeline, for decisions being made on insufficient criteria, for being too pharmaceutical oriented, and for lacking medical technology representation on the two committees.

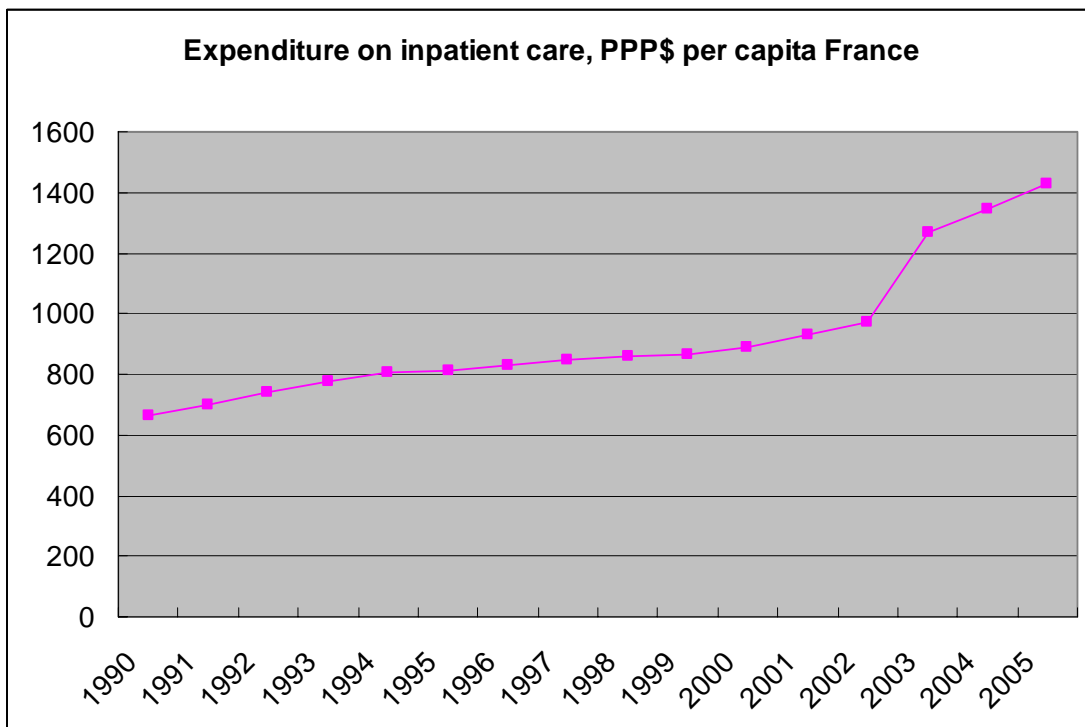
- All HTA processes in France should include medical technology representatives in the process, a transparent process with clearly defined criteria and timelines, timely decision-making, and should reward innovative technologies.

## **Health care expenditure of France and public share of inpatient care**

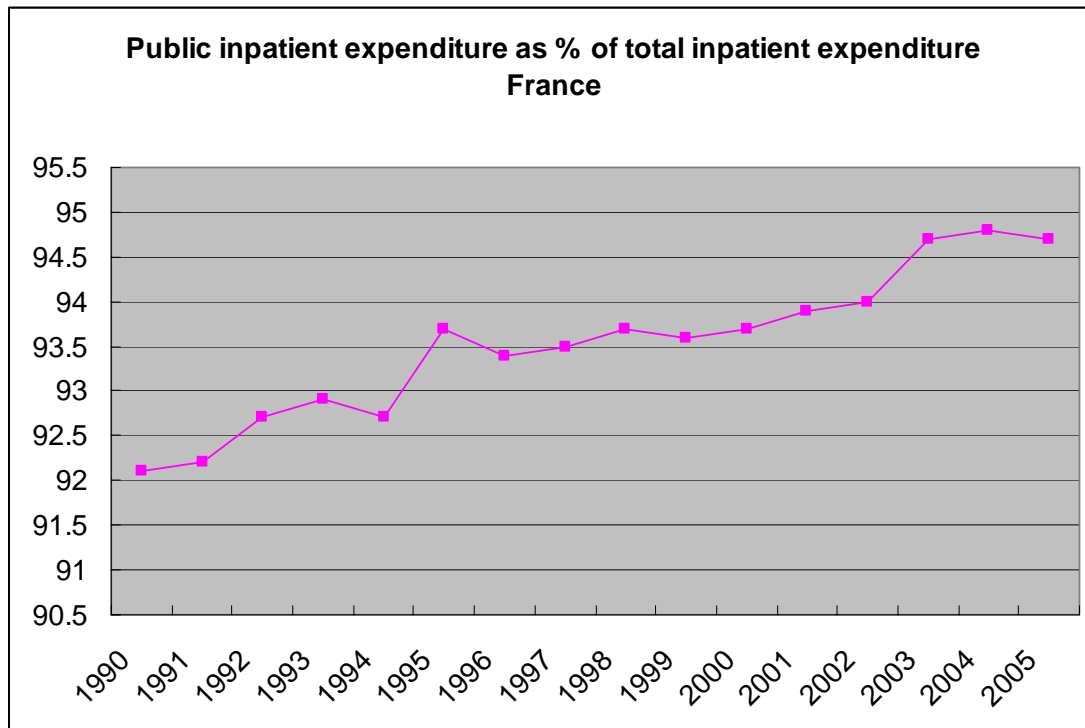
The total health expenditure as % of gross domestic product (GDP) in France shows that the expenditure growth from above 8% to more than 11% and France became one of the most expensive countries in health care. The introduction of DRG was not supposed to be a trigger of cost containment and reduction of hospital cost in France and the government decided to restructure the hospital system and invest in renewing the system. The main idea to use DRGs in France was to increase the efficiency of the hospital system and equalise the public and private funded hospitals. The increase of the total health expenditure isn't a failure of the DRG introduction because it was used in a supplement of the health care reform. (Pictures 1 to 3)



Picture 1 Total health expenditure as % of gross domestic product (GDP) France



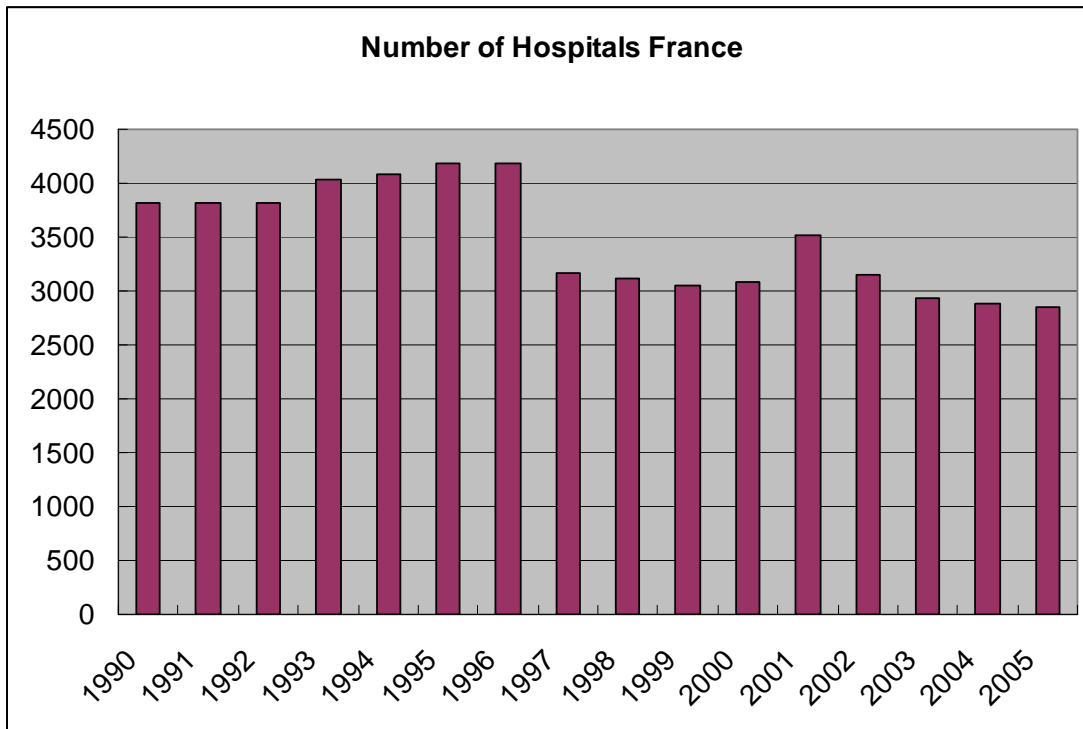
Picture 2 Expenditure on inpatient care, PPP\$ per capita France



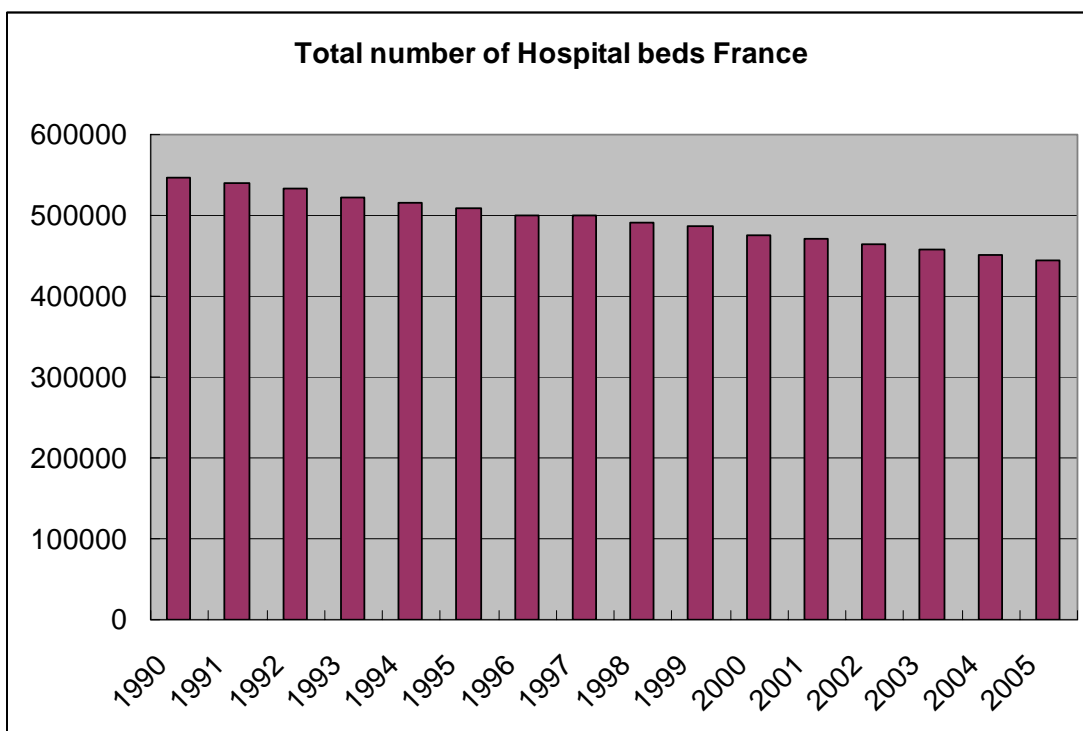
Picture 3 Public inpatient as % of total inpatient expenditure France

## Workload in the hospital sector in France

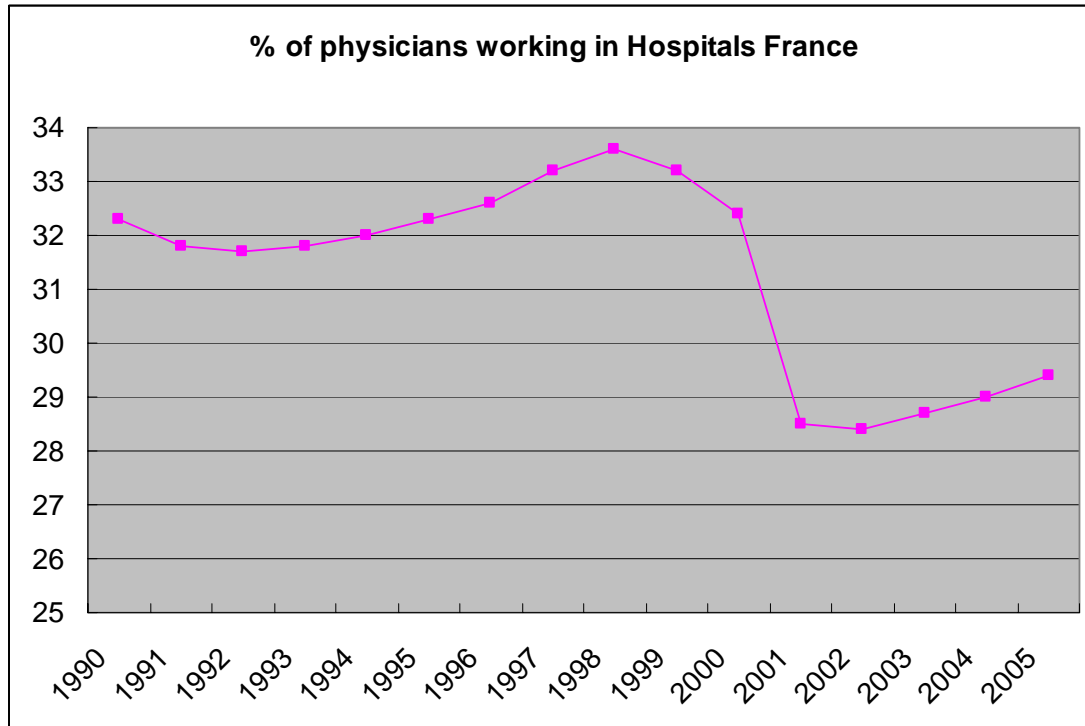
The workload in the hospital sector was subject of different measures based on the reform and as well in changes of the labour standard working hours. The government restructured the hospital system in France (Picture 4 and 5) based on the demand of the population. For example the country reduced the specialized maternity hospitals because on the reduction of pregnancies and births; reduction of hospitalisation in terms of long term care because those services could be provided by ambulant services. Besides the reduction of hospitals and beds France faced in the year 2003 an interesting paradox situation because the standard working of hospital staff has to be reduce down to 35 hours per week meanwhile the hospitals itself reduced the number of physicians (Picture 6). The hospitals managed to life with this problem to increase the efficiency of the work load which means rationalization. Therefore the medical procedures, guidelines and pathways were optimized. However, hospital and physicians realized to manage patient outside of the hospitals which might be an increase of ambulatory care costs.



Picture 4 Number of Hospitals France



Picture 5 Total number of Hospitals beds France



Picture 6 % of physicians working in Hospitals France

## Organization of health services and delivery systems China

In the 1980s – 1990s, market-oriented reforms may have improved efficiency in the health sector to a small degree, but negatively affected equity in access to health

<sup>10</sup> WHO; Country Health Information Profiles;  
[http://www.wpro.who.int/countries/chn/national\\_health\\_priorities.htm](http://www.wpro.who.int/countries/chn/national_health_priorities.htm)

care. The quality of care has improved in China's top urban hospitals. The cost of care across the country, however, has risen much faster than is justified on the grounds of effectiveness.

Local health departments and service providers are expected to generate a significant proportion of their own operating budgets from user-fees. The associated economic incentives have led to overprovision of specialized and expensive medicines for those who are able to pay, and under provision of public health services for those who cannot afford them. The rising fees limit the utilization of health care by the poor and low income population groups. This contributes to underutilization in many health facilities, including health centres and agencies associated with vertical programmes, such as family planning centres, which often compete with overlapping functions.

Regulation related to public health and delivery systems are underdeveloped and only weakly enforced and monitoring capacity is weak. Most health facilities lack a clinical governance system, and there are important regulatory gaps. For example, hospital accreditation is not linked to pricing compliance and comprehensive safety records, and doctors and health institutions are not constrained in their engagement in commercial incentive programmes.

## Health care financing

In 2007, the government announced significant increase in its financial contribution to rural health, recognizing that health care financing is at the heart of the problem of the rising cost of and limited access to health care. In the early 2000s, the government budget contribution to the delivery of public health and essential clinical health care was inadequate and inequitable. The Government covered only 17% of the total health expenditure, while people paid 54% directly out of pockets and the health insurance share was 29%. In particular, local governments, accounting for 90% of total government spending on health, were left without the required resources to deliver on their health responsibilities, creating 'unfunded mandates'. Resources were not target equitably or efficiently within and between provinces.

There are significant problems relating to the existing fee-for-service system. Providers are paid on the basis of fees for services, with their income derived from the revenue raised. As providers focus on providing profitable, rather than cost-effective, health services, overcharging, over diagnosis and the prescription of unnecessary medicines are common problems. As the 'purchaser' of care, individuals (rather than specialized institutions) are not in a strong position to judge the appropriateness, cost, efficiency and quality of care provided, due to their lack of knowledge and information.

Moreover, financial protection in access to health care remains inadequate. While population coverage under health security schemes has been increasingly rapidly, the extent of protection is often very limited. Reimbursement levels are low, and commonly needed outpatient services are often excluded from service benefit packages. This means that, despite being insured, patients still pay high medical costs from their own pocket.

## **Benefit Package of the Basic Medical Insurance (BMI)**

The nature of the benefit package is that the medical insurance system requires the definition of the coverage through the budget and contracts. It guarantees the access and entitlement to health care for the insured population which could be divided in:

- Outpatient care
- Inpatient care
- Long term care
- Rehabilitation
- Social healthcare

As well the DRG system requires a definition of which services are covered under the medical insurance regulations and contracts before the Chinese authorities define the DRG cases and diagnosis groups. As for now the Ministry of Labour and Social Security and the Ministry of Health would like to develop and implement a DRG case-based payment method and provide through that inpatient care to the population.

However, in doing so, the DRG system requires an additional definition within each group of diagnosis or at the level of the diagnosis and it is characterized by the individual services related to the medical pathway under the medical guidelines. Samples of that are

- Time of doctor, nurse or other medical personnel spend on the treatment of the diagnosis;
- Amount of drugs/medicines and medical consumables used by the patient during the treatment process;
- Usage of specific equipment like X-Ray, CT, etc.;
- Depreciation of equipment and building;
- Overhead (personnel and maintenance).

The current Chinese system is affected by the different financing sources and different benefit packages. The financing sources are governmental budgets for the

salaries of the hospital staff; the Fee-for-Service system mainly used by the medical insurance and the private out of pocket payments of the patients. The benefit package consists of three lists like services, drugs/medicines and equipment. Although the list a fairly detailed but there is a need to puzzle the services into a DRG system and the newly created package have to be confirmed between various stakeholder like the MoH, MoLSS, NDRC, etc and the provider – purchaser. It is utmost important that the Chinese authorities realize the interdependence between the benefit package and the medical pathways and medical guidelines.

## Medical Management of the Basic Medical Insurance

The health care and the medical insurance authorities of China needs to define and agree on common standards in terms of

- ICD coding
- Medical Records
- Medical Pathways
- Medical Guidelines
- HTA/EBM procedures
- Quality supervision system

Nevertheless the introduction of HTA and EBM might be new for the Medical Insurance system in China but in the future they should be included in the process. The Definition<sup>11, 12</sup> is:

Health technology assessment (HTA) is the systematic evaluation of the properties, effects and/or other impacts of health care technology. Its primary purpose is to provide objective information to support health care decisions and policy making at the local, regional, national and international levels.

Evidence-based medicine (EBM) is the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients. The practice of evidence-based medicine means integrating individual clinical expertise with the best available external clinical evidence from systematic research.

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<sup>11</sup> 79, cited as "from BMJ 1995;310:1122"]

<sup>12</sup> 79, cited as "from BMJ 1995;310:1122"]

The EBM consist in a process of systematically finding, appraising, and using contemporaneous research findings as the basis for clinical decisions. Evidence-based medicine asks questions, finds and appraises the relevant data, and harnesses that information for everyday clinical practice. Evidence-based medicine follows four steps: formulate a clear clinical question from a patient's problem; search the literature for relevant clinical articles; evaluate (critically appraise) the evidence for its validity and usefulness; implement useful findings in clinical practice. The term "evidence-based medicine" (no hyphen) was coined at McMaster Medical School in Canada in the 1980's to label this clinical learning strategy, which people at the school had been developing for over a decade.

The HTA and EBM are very common in the European member states like in example Nice Institute UK, Singh Institute Scotland, DIMDI Germany etc. All of those institutes have something in common and that is that they are finance by provider and purchaser or as well the government as an independent institution. The government in China namely MoLSS and MoH may consider this possibility of introduction of such an institute which independently in the decision of medical processes and their evidence. A system like this enables both Ministries to control the hospital sector in a better way and patient will be more satisfied in China.

## **Payment method of the Basic Medical Insurance**

The basic medical insurance setting up the deductible and ceiling lines which defines the participation of the insured on the health care costs. However, the co-payments do not effect the implementation of DRG but still regulates the access to healthcare which is a problem for people below the poverty line or just above it and people with chronically diseases.

The calculations of prices lie in the hands of the NDRC and its local bureaus. The medical insurance schemes, providers as well other healthcare authorities complaining about the situation because the state pricing do not meet the reality in terms of market prices. China needs to reconsider their pricing regime and have to accept that the current system leads into the wrong direction and provides wrong incentives to the providers.

The Fee-for-Service payments for hospitals used by the basic medical insurance for reimbursement and they wants to change this system because of the over usage of services.

The current budget-, accounting- and controlling system do not support the usage of DRGs and the respective ministries needs to agree on the necessary changes in the financial management. However, lessons described in the previous report have shown that is possible to integrate DRG into a budget system.

Perceptions of health systems abroad can become caricatures of what we wish to promote or avoid at countries. It is thus a risky venture to derive lessons from the French experience for health care reform in China. Nonetheless, we set tenth 10 propositions to provoke further debate.

First, the French experience demonstrates that it is possible to achieve universal coverage without a “single-payer” system and to do this, however, will still require a statutory framework and an active state that regulates NHI financing and provider reimbursement. Of course, French NHI was not designed from scratch as a pluralistic, multi-payer system providing universal coverage on the basis of occupational status. It is the outcome of socio-political struggles and clashes among trade unions, employers, physicians associations, and the state. This suggests that HI in China could similarly emerge from the patchwork accumulation of Basic Medical Insurance “Urban employees and retirees”, Basic Medical Insurance “Urban residents”, Governmental Medical Insurance “Public civil servants”, and Rural medical insurance scheme so long as we recognize the legitimate role of government in overseeing the rules and framework within which these actors operate.

Second, the evolution of French NHI demonstrates that it is possible to achieve the DRG system without a “big bang” reform, since this was accomplished in incremental stages beginning in 1985, with step by step project development in 1996, 1998, 2002, 2003, and finally in 2005. Of course, the DRG development of health insurance involved political battles at every stage. In China, since it is unlikely that the NPC will pass a health care reform in the year 2008 the DRG as an integrative Medical Insurance reimbursement system with incremental reform, China may first have to reject the “actuarial approach” of the health insurance system and then accept

piecemeal efforts that extend social insurance coverage to categorical groups beyond current beneficiaries of public programs.

Third, French experience demonstrates that universal coverage can be achieved without excluding private insurers from the supplementary insurance market. The thriving non-profit insurance sectors (mutuelles) as well as commercial companies (e.g., Axa) are evidence in support of this proposition. Nevertheless, so long as BMI and RMCS covers the insurance functions, why do not enrich the public funding of hospitals by the introduction of the private health insurer in providing useful services, on a contractual basis, under a National Health Insurance program?

Fourth, coverage of the remaining 1% of the uninsured in France suggests that national responsibility for entitlement is more equitable than delegating these decisions to local authorities. This lesson is consistent with the experience of Basic Medical Insurance in the urban area versus the Rural Medical Cooperative Scheme in the rural area in China, as exemplified by the differences among provinces, cities and counties in dealing with the uninsured.

Fifth, the French government reallocated the regional budgets through a global budget and restructured the NHI funding mechanism through taxation in combination with the traditional contribution collection. This lesson is consistent with the fact findings of Chinese researchers and their request to increase the budget for the Chinese hospitals to create sufficient financing sources on provider side and reduce the insufficient organized market orientation of hospitals in particular with a reduction of high out of pocket payment on behalf of the patients.

Sixth, the T2A DRG-case based payment mechanism in France wasn't a tool of cost containment rather than a tool to increase the efficiency of the hospitals and replaced the traditional Fee-for-Service system under the regional budgets which resulted in a over usage of uncontrolled fees. Still, China faces the problem of over usage of fees, the over prescription of drugs and over usage of services etc. The idea to define DRG's under a budgetary system is invitingly from the first point of view but needs a serious definition of the common healthcare system goals.

Seventh, the French health care authorities invest a lot in the implementation of the data driven information system. The final result was that the informational flows and database increased significantly during the implementation of the DRG system. The database in China is uncertain and based on the French lesson China needs to invest as well in the IT-infrastructure and the common database. The DRG pilot project in Beijing shows the same increasing requirements in terms of the database and standardising of medical information within the hospitals and medical insurance.

Eight, the accounting, calculation and pricing system have been revised during the French DRG case-based payment development and the hospitals implemented the new accounting system including calculation and pricing simultaneously with the DRG grouping and coding process. Lessons learned from that are, that the Chinese accounting system have to be revised completely and the calculation of prices through the NDRC needs to be reconsidered whether to use the power of the purchaser – provider negotiation or still using the current state price regulations but as well to calculate the price of service based on real market prices.

Ninth, the French government restructured the public hospital system like closing specialized maternity hospitals or others based on the medical demand of the population in following up the demographic changes. The Chinese hospital system has never been the subject to restructure their service activities or their organizational structure based on the real demand of the population in terms of medical treatment. Still, the health care reform is outstanding due to unknown reasons and political interests. However, the DRGs require changes within the hospital like information systems, accounting systems and medical guidelines etc.

Tenth, the introduction of DRGs in France was embedded in by several health care reform processes leaded by the vision that France will have one of the best health care systems over world. The lesson shows that all important stakeholders within the system agreed to support the reform and participated active during the implementation. China needs to reach a common agreement between the various stakeholders and last but not least needs to streamline the governmental activities of different Ministries to guarantee the success of the DRG development and implementation. This might be possible at the pilot or test stage at the level of provinces and cities were different stakeholders are directly under the control of the local governments.

Finally, and perhaps most important for China, the French experience suggests that it is possible to solve the problem of financing universal coverage before meeting the challenge of modernizing and reorganizing the health care system for the next two decades . China would do better to follow the French example in solving the tough entitlement issues before restructuring the entire health care system.

Keeping in mind the situation in China and the lessons learned from the French healthcare reform, the Chinese authorities still have a long way to go to develop and implement a DRG case-based payment mechanism. The Implementation of the

DRGs through the Basic Medical Insurance requires the following aspects to be covered:

The main stakeholder of such a type of project requires the involvement of the Ministry of Human Resources and Social Security (HRSS), the National Development and Reform Commission (NDRC), the Ministry of Health (MoH) and the Ministry of Finance (MoF). The piloting agencies may reflect the stakeholder position in their establishment of the Project team. The project team should be promoted actively by each of these local bureaus with regards to their fields.

The Chinese situation of the provinces various in terms of the ability to implement due to the financial situation, available human resources, ability of the personnel to understand the concept of DRG's etc. and it might occur the situation that the provinces going to use a minimum set of "simple" Case payments and more developed provinces use the sophisticated DRGs. The Chinese authorities should consider different types or level of case payment system which coexists in China. But a common IT Database is required to generate the necessary information between the public institutions.

An incremental implementation of the DRG case payment system will be the reality which requires a specific trainings and processes. The results could be disseminated through the usual public channels

The project supports the policy development through the next project years and a specific proposal has been elaborated within the annual work plan for 2008 to 2009.

## References:

de Pouvourville, Gerard (1992): France: The Introduction of Case-base Hospital Management in: Kimberley, J.R. et. Al. (eds.): The Migration of Managerial Innovation. San Francisco: Jossey-Bass Publishers.

Rodrigues, Jean-Marie (1996): The French Connection in: The Eight Case mix Conference in Australia, Case mix and Change – International Perspectives, Sydney 16-18 September 1996: Conference Proceedings, pp. 365-370

Rodrigues, Jean-Marie et al. (1998): France as a Case Study for the Use of DRG's like French Case mix in Hospital Budgeting: Inequities and Efficiencies among French Hospitals. Paper presented at Spoleto Summer School, 15-19 June 1998

Ministère du Travail et des Affaires Sociales (1996): Méthode de Calcul des Donations Régionales 1997 pour le secteur Public  
[http://www.sst.dk/upload/france\\_drg.pdf](http://www.sst.dk/upload/france_drg.pdf)

Couffinhal, Agnes; Reform of Hospital Payment System; Health Policy Monitor, April 2003  
<http://www.hpm.org/survey/fr/a/1/1>

Paris, Valerie (CREDES); Regulation of hospital drugs; Health Policy Monitor, April 2004  
<http://www.hpm.org/survey/fr/a/3/2>

Le médicament a l'hôpital, Rapport annuel au parlement sur la sécurité sociale, Septembre 2002, Cour des comptes, pp 368-382  
<http://www.ccomptes.fr/Cour-des-comptes/publications/rapports/secu2002/activites-hospitalieres-relation-avec-spoins%20ambulatories.pdf>

Le médicament a l'hôpital, Woronoff-Lemsi M.C., Grall J.Y., Monier B., Bastiani J. P., 2003 Ministère de la sante, 81 p.  
[http://www.sante.gouv.fr/htm/actu/med\\_hop/sommaire.htm](http://www.sante.gouv.fr/htm/actu/med_hop/sommaire.htm)

La rétrocession hospitalière : un passe-droit lucratif, La revue Prescrire, Novembre 2003, Tome 23, No. 244, pp. 779-780  
<http://www.prescrire.org/editoriaux/EDI22914.pdf>

La tarification a l'activité : modèle d'allocation des ressources et modalités de mise en œuvre, document de travail, Ministère de la sante : Mission Tarification a l'activité, August 2003

<http://www.rees-france.com/pdf/DOC%20T2A.pdf>

Project de Loi de financement de la sécurité sociale pour 2004, no 1106,  
dépose le 9 Octobre 2003, 19 Décembre 2003

<http://assemblee-nat.fr/12/projects/pl1106.asp>

LOI no 2003-1199 du 18 Décembre 2003 de financement de la sécurité  
sociale pour 2004, Journal officiel, 19 Décembre 2003

<http://www.legifrance.gouv.fr/WAspad/UnTexteDeJorf?numjo=SANX0300139>  
[L](#)

List of drugs excluded from payment per case, March 2004

[http://www.le-psmi.org/dossiers/tarifs\\_reference/annex6medic2.pdf](http://www.le-psmi.org/dossiers/tarifs_reference/annex6medic2.pdf)

La rétrocession hospitalière, un doublement des dispenses en trois ans, Point  
de conjoncture, CNAMTS, Mars 2004, No 23, pp 14-16

[http://www.ameli.fr/157/DOC/1340/article\\_pdf.html](http://www.ameli.fr/157/DOC/1340/article_pdf.html)

Accord cadre entre le Comité économique des produits de santé et les  
entreprises du médicament, 30 Mars 2004

<http://www.extranet.leem.org/UploadPublic/2004/Accord%20cadre%20du%2030%20mars%202004.doc>

Mousques, Julien; Common Classification of Medical Procedures; Health  
Policy Monitor, April 2005

<http://www.hpm.org/survey/fr/a5/2>

<http://www.ameli.fr/77/DOC/83/enquete.html>

<http://www.ccam.sante.fr/>

“Hospital 2007” plan announced by Ministry of Health

<http://www.sante.gouv.fr/htm/dossiers/hospital2007/>

La tarification à l'activité

<http://www.sante.gouv.fr/htm/dossiers/t2a/accueil.htm>

[http://www.ameli.fr/dl/Infos\\_TAA\\_0403.pdf](http://www.ameli.fr/dl/Infos_TAA_0403.pdf)

<http://www.urml-idf.org/urml/T2A/T2A0408.pdf>

Or, Zeynep; Hospital payment reform; Health Policy Monitor, March 2005

<http://www.hpm.org/survey/fr/a/5/4>

Ministry of Health dedicated site for Plan Hospital 2007

<http://www.sante.gouv.fr/htm/dossiers/hospital2007/>

<http://www.cadreredesante.com>

Or, Zeynep; De Pourvoirville, G.; French hospital reforms: a new era of public-private competition?; Eurohealth, 2006, vol. 12, no. 3, 21-23

<http://www.lse.ac.uk/>

Fitch ratings, Post-reform solvency of French public hospitals, December 2006

<http://www.fitchratings.com>

DeMoor, Michelle; ADVAMED (Advanced Medical Technology Association)  
“ADVAMED France Medical Technology Issues CEO Tool KIT; January 2005

<Http://www.advamed.org/NR/rdonlyres/4D7C6A0A-1995-4038-A0E2-4CC72C0E3FB3/0/france2005toolkit.pdf>

Health Technology Assessment on the Net:

*professional development by distance*

<http://www.hta.uvic.ca/glossary.htm#E>