

DRG Payment in France

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1. Hospital context in France

The hospital sector takes an important place in health care provision in France. One person in six is hospitalized each year either as an inpatient or day-patient. Hospitals are also important providers of out-patient care: they account for about 33 million specialist consultations and an estimated 15.5 million emergency visits per year.

Acute care (including day cases and home hospitalizations) accounts for about 16 million cases and is provided by a mixture of public and private facilities. Public hospitals represent 60 % of hospitals and 65% of all acute inpatient beds. They have the legal obligation of ensuring the continuity of care, which means providing 24 hour emergency care, accepting any patient who seeks treatment and participating in activities related to national/regional public health priorities. The private-for-profit sector represents 25% of all inpatient beds but 46% of surgical beds and more than 70% of ambulatory beds (places). The market share of private hospitals depends heavily on the type of hospital activity. More than half of all surgery and one fourth of obstetric care are provided by private-for-profit hospitals. Their market share goes up to more than 70 percent in some areas of elective surgery, such as eye surgery (cataract in particular), ear surgery and for endoscopies. In contrast, certain complex procedures are carried out almost exclusively by public hospitals, for example in the case of burn treatments (92%) or treatment of patients with surgery of serious multiple trauma (97%).

Until 2005, different funding arrangements were used to pay public and private hospitals with complex rules and little transparency as to the efficiency and productivity of individual health care facilities. Public and private not-for-profit hospitals had global budgets, mainly based on historical costs, while private-for-profit hospitals had an itemized billing system with different components: daily tariffs covering the cost of accommodation, nursing and routine care; and separate payments for each diagnostic and therapeutic procedure carried out, with separate bills for costly drugs and physicians' fees.

The difference of payment between public and private hospitals has always been a subject of debate. Public hospitals considered global budgets as an instrument of rationing which strangled the most dynamic hospitals and insensitive to changing demand. Private hospitals argued that global budgets

rewarded inefficiency and prevented fair benchmarking, i.e. they believed that they are more efficient but not paid accordingly.

2. French DRG payment model

Objectives. Activity based payment (T2A, *Tarifification à l'activité*) was introduced in 2004/2005 to pay for acute hospital services. The major objectives of the reform were improving hospital efficiency; creating a 'level playing field' for payments to public and private hospitals and improving the transparency of hospital activity and management. The general policy objective has been assuring an equitable allocation of funding between hospitals.

Implementation. The T2A applies to all acute care hospitals (public and private, including home hospitalization) and all patients (inpatients and day cases) except those treated in psychiatry, rehabilitation and long-term care. The implementation was progressive. In the public sector (public and private not for profit hospitals) the share of activities paid by T2A increased gradually starting with 10% in 2004, 25% in 2005 to reach 100% in 2008. Private for profit hospitals on the other hand were paid entirely by T2A since March 2005. However, a transition period was allowed where "national prices" were adjusted for each provider taking into account its own historical costs/prices. The introduction of T2A for rehabilitation services, which was initially planned for 2010/11, has been delayed several times and will only be effective by 2016.

Patient classification. Under T2A, the income of each hospital is linked directly to the number and case-mix of patients treated which are defined in terms of homogeneous patient groups (GHM, *Groupe Homogène des Malades*). The classification system used in France was inspired initially from the US Health Care Financing Group classification (HCFA-DRG) but adapted to the French system and modified regularly over the years. The initial idea of developing a patient classification system dates back to the early 1980s, when the government decided to introduce global budgets at the hospital level to replace the previously used per diem system. The idea was to adjust budgets allocated to hospitals by measuring their clinical activity through GHM (Michelot and Rodrigues, 2008), but this had never been implemented effectively.

The GHM classification has changed three times since the introduction of T2A, passing from 600 groups in 2004 to about 2300 in 2009. Assignment of patients to GHM is based on the primary diagnosis and on surgical interventions provided. Version 9 (2004-2005) aimed to improve the definition of complications and introduced a separate list of diagnoses for cases which are acutely severe/complicated. Version 10 (2006-2008) aimed to improve the classification taking into account

problems encountered in financing hospitals. In response to requests from the hospital federations a number of extra (mostly ambulatory) surgical groups and specific DRGs for non-surgical ambulatory procedures were created. The current version (v11) of the classification, which was introduced in January 2009, accounts for 2291 groups (compared with 784 in the previous version) and represents a major change. The number of GHM increased through the introduction of four levels of case severity applied to most base-GHM. Data on length of stay (LOS), secondary diagnoses and age is used in a systematic way to assess the level of case severity.

Price setting. The DRG prices (tariffs) are set annually at the national level based on average costs. However, there are two different sets of tariffs: one for public (including private-non-profit) hospitals and one for private for-profit hospitals. Moreover what is included in the price differs between the public and private sectors. The tariffs for public hospitals cover all of the costs linked to a stay (including medical personnel, all the tests and procedures provided, overheads, etc.), while those for the private sector do not cover medical fees paid to doctors (who are paid on a fee-for-service basis) and the cost of biological and imaging tests (eg. scanners,) which are billed separately. The initial objective of achieving price convergence between the two sectors, started in 2010 with about 40 selected GHM and pursued until 2012, was abandoned this year against fervent critics from public hospitals.

Average costs per GHM (reference costs) are calculated from the national cost study (ENCC) separately for public and private hospitals. ENCC provides detailed cost information for each hospital stay from about 70 to 100 voluntary hospitals which are able to produce a detailed standardized accounting model. Until 2007, the cost database covered only public and private non-for-profit hospitals (about 45 facilities) representing about 3% of these hospitals (about 9% of hospital stays). Initially, costs for private hospitals were based on reimbursement data. Since 2007, cost information is collected from a set of private for-profit hospitals for calculating costs in a comparable way. Hence, the number of participating hospitals has increased slightly reaching 110 hospitals in 2012, representing about 16% of total stays.

Given that the cost database does not cover all hospitals but just a small group, costs per GHM are weighted by the type of hospital to calculate reference costs. The actual prices per GHM are determined by the Ministry of Health taking into account the overall budget (target expenditure) envelope for the acute hospital sector and other health priorities. Therefore, reference costs ("raw" tariffs) are modified in a complex and opaque way to compute actual GHM prices each year. For

example, in 2009 ATIH (*Agence technique de l'information sur l'hospitalisation*)¹ noted that GHM prices were modified to adjust for the increase in MIGAC² budgets in 2009, the growth of expenditures for additional payments on expensive drugs, the evolution of overall activity volumes and national priorities (for cancer treatment and palliative care). However, it is not clear how these different elements influenced the prices of different GHM. As far as individual hospitals are concerned, the prices change every year and it is not possible to predict the evolution of GHM prices from one year to other.

Extra payments: Public hospitals (and private hospitals participating in so called 'public missions') receive additional payments (MIGAC) to compensate for specific 'missions', including: education, research and innovation related activities; activities of general public interest such as meeting national or regional priorities (e.g. developing preventive care); and the financing of some investments contracted with the Regional Health Agencies. The costs of maintaining emergency care and related activities are paid by fixed yearly grants, plus a fee-for-service element taking into account the yearly activity of providers. Finally, a restricted list of expensive drugs and medical devices is paid retrospectively, according to the actual level of prescriptions made.

While, there has been a net progress in improving the transparency of allocations for education and research activities with T2A, the calculation of budgets to finance "public missions" appear to be problematic. The private sector claims that this budget is used as a mechanism to cover actual efficiency deficits of public hospitals, while public sector asks for better evaluation (costing) of the value of their "public missions". The expenditure on these budgets (MIGAC) increased by 30% between 2007 and 2010 against a 9% increase in expenditure linked to activity over the same period (MECSS, 2012).

Expenditure control: In order to contain the level of hospital expenditure, national-level expenditure targets for acute care (with separate targets for the public and private sector) are set by the Parliament. If the actual growth in total volume exceeds the target, prices subsequently go down. Evolution of activity volumes is not followed at individual hospital level but at an aggregate level (public sector, private sector). Prices have been adjusted downwards several times since 2006 as the increase in activity was higher than the targets set. However, this macro-level regulatory mechanism

¹ ATIH (Technical Agency for Hospital Information) is the institution responsible for developing the GHM patient classification system and calculating prices. It was created in 2002 and is an independent public administrative institution co-funded by the government and the national health insurance funds. It has an advisory committee, involving representatives of public and private healthcare facilities.

² MIGAC (*Missions d'Intérêt Général et d'Aide à la Contractualisation*) budgets finance missions and activities which are difficult to quantify in the hospital database (episode statistics) and those which should not be impacted by the volume of measured hospital activity.

creates confusion and an extremely opaque environment for hospitals where it is not possible to predict market trends and prices. GHM prices are set as a function of global changes in hospital activity, (increasingly) independent of costs and their evolution at the hospital level.

Data quality. All hospitals have Medical information units (DIM) which carry out internal controls to analyse the plausibility of data. ATIH, Technical Agency for Hospital Information, provides technical help (a specific computer program) and data (on reference LOS means and standard deviations by DRG from a comparable group of hospitals) to assure coherence of information coded (diagnosis and procedures).

Moreover, external data quality checks are carried out at the regional level by the Regional Health Agency and the Health insurance fund to identify “unjustified” billing of services and up/incorrect coding. Between 2006 and 2009, three quarters of hospitals were audited at least once and among these half more than once. In 2006, more than 60% of inpatient stays (more than 80% for ambulatory episodes) had some kind of coding error or inconsistency in procedures billed (CNAM, 2006). If up-coding or incorrect coding is detected, hospitals have to reimburse received payments. In addition, they may have to pay financial penalties which can go up to 5% of their annual budgets. The revenues recovered from these penalties amounted to €51 million in 2008 and €23 million in 2010 (Daudigny et al., 2012).

Care quality. There is no specific adjustment for quality of care in GHM prices. GHM payments do not vary according to differences in outcomes. To avoid inappropriate early discharge of patients (a risk under activity based payment) for certain GHM, there is a length of stay threshold: payments for cases with shorter LOS are reduced proportionally. Otherwise, quality-related programs, such as developing infection-control programs, can be negotiated and financed through specific allocations from ARS as part of the MIGAC budget envelope.

Moreover, with the introduction of GHM-based payment, there has been quite substantial work, led by the Ministry of Health and the High Health Authority (HAS), to develop indicators to better monitor care quality in hospitals. A battery of indicators measuring care process and structure/organisation, which has been tested and validated in a small number of voluntary hospitals, was generalised as of 2012. Surprisingly, however, outcome indicators such as standardised mortality rates, readmission and complication rates are not part of the battery of indicators, and are not monitored routinely.

2. Early results on activity, efficiency and care quality

There has been little quantitative evidence on the impact of T2A on hospitals' behaviour. Below is a summary of available evidence, pooling results from recent studies³.

Activity. Overall hospital activity (number of cases treated and sessions⁴) has been growing regularly since the introduction of T2A, the rate of hospitalisations passing from 351 per 100000 population in 2004 to 373/100000 in 2009. It also appears that hospitals have anticipated the T2A, as the increase in activity has started as early as 2002/03 with the announcement of the reform.

The evolution of activity has been quite different between public and private sectors. In public hospitals both the number of cases treated and the case-mix adjusted production has increased significantly between 2004 and 2009 and for all types of activities (medicine, surgery, obstetrics), with a more striking increase in surgery. Interestingly, both hospitalisations with overnight stays and ambulatory cases have increased.

In private for profit hospitals, a strong increase of ambulatory procedures and surgery was observed simultaneously with a reduction in full-time hospitalizations in surgery and in obstetrical and medical cases. Between 2005 and 2009, the number of hospitalisations in medical wards decreased by 7% while obstetric stays decreased by 13%. These appear to have been transferred to public and private non-profit hospitals which increased their medical and obstetric cases by about 6% over the same period.

On the contrary, outpatient surgery has increased in all sectors. The increase is particularly strong in the public sector (60% rise since 2005) whereas it has been more moderate (about 20%) in the private-for-profit and non-profit sector whose rate of outpatient surgery was already very high. Despite these trends, the private sector remains the main producer of outpatient surgery: in 2009, 62% of outpatient surgery was performed by the private-for-profit hospitals against 30% in public hospitals.

Efficiency. Globally, there seem to be some positive change in hospital sector efficiency. The number of public hospitals in deficit has been going down regularly and the size of overall deficit reduced from 485 million euros in 2007 to 220 million in 2010 (Daudigny, 2012). There appear to be a positive trend in productivity⁵ of public hospitals (Or et al. 2013; Studer 2012).

³ Or et al. 2013; Evain (2011); Evain et Yilmaz (2012); Studer (2012)

⁴ Sessions in France correspond mainly chemotherapy, radiotherapy and dialyses.

⁵ Productivity is the ratio between a measure of production (numerator) and a measure of the resources used (denominator). In sectorial analyses, we are typically interested in changes in overall productivity (growth rate).

There has been a significant increase in case-mix weighted hospital production⁶ (over 10% in ISA⁷ points between 2005 and 2009) in public sector, in comparison with the private-for-profit sector where a stagnation of weighted production is observed (Figure 1). In private non-profit hospitals, the trend is similar to that of the public sector, but growth in production was greater before 2005 (+15%), than after (5%). In all sectors, better activity coding and changes in coding habits (optimisation of co-morbidities) could have an impact on the higher production index.

However, in the public hospitals, the significant increase in overall production appear to be linked both to the rise in the number of hospital stays (previous section) and to the case-mix of their patients. In private hospitals, the volume of activity has been increasing for outpatient stays. Yet these less complex cases weigh less in the production index. Despite the rise in outpatient surgery, the level of weighted production slightly decreased in private clinics due to the contraction in inpatient hospitalisations. Moreover, the growing gap between the public and private sectors in production (since 2007) indicates different case-mix trends between the two sectors. It seems that under T2A, private hospitals have further concentrated their activity in selecting less complex cases.

Increased production in public hospitals has been accompanied by a reduction in hospital staff (except for doctors) and number of beds. However, the increase in public expenditures for acute care has been more rapid than the increase in production growth in most of the years. This could suggest that staff-related expenditures have continued to increase for structural reasons (social contributions, etc.). It is also possible that expenditures have risen due to intermediate consumptions such as drugs, the cost of medical equipment and the more intense use of new medical technologies.

In private-for-profit sector, modification of activity (case-mix) did not accompanied a proportional decrease in their human resources or revenues from the health insurance fund, which resulted in lower sector productivity (the relationship between expenditure growth and production growth) since the implementation of T2A.

DRG creep: Since classification of patients into GHM determines hospital revenues, strong incentives exist for hospitals to “optimize” their coding practices. In 2006, a year after the introduction of DRG-based payment, external controls from Health Insurance Funds have demonstrated that a large number of hospitals either intentionally up-coded patients or inadvertently classified patients into incorrect GHMs. The up-coding of some outpatient consultations as day cases appeared to be a real

⁶ Hospital stays are very different in terms of the resources used according to disease, severity of the disease and patient characteristics (age, co-morbidities). The number of hospital stays weighted by the intensity of care delivered allows monitoring hospital production by taking the case-mix structure into account.

⁷ Synthetic Index of Activity (ISA): A synthetic measure of overall hospital production weighted by its case-mix.

problem (CNAM, 2006). The Ministry of Health issued in 2007 a decree describing those procedures carried out in outpatient consultations which should not be coded as day cases. In all sectors the steady increase observed in outpatient cases in medicine and obstetrics until 2006 followed by a sharp decline in 2007 before a stabilisation.

Quality. The T2A can present an intrinsic risk regarding the quality of care as it creates direct pressure on hospitals to reduce the length and cost of hospital stays without taking health outcomes into account. Many countries adjust payments, in particular to control readmission rates, considered as a relevant indicators of hospital quality, since payments per case/stay do not give hospitals any incentive to prevent readmissions. Mortality in short periods after specific interventions is also often used as a quality indicator.

Estimation of hospital mortality rates at 30 days, for three types of care (colorectal cancer surgery, acute myocardial infarction and strokes) shows steady decline between 2002 and 2009. This decrease in the mortality rates, that had begun prior to the introduction of T2A, maintained the same rhythm for acute myocardial infarctions and strokes whereas the decrease was more significant from 2007 for colorectal surgery. The overall results are reassuring but it is impossible to isolate the impact of T2A on these trends in relation to other hospital reforms (such as the introduction of volume thresholds for heart surgery and cancer care).

30 day readmissions rates, on the other hand, increased over the period 2007-2009, notably in medical hospitalisations for strokes and myocardial infarction but also colon cancer surgery and hip surgery. This trend towards an increase in readmissions, observed for several types of care is sign of low quality and alarming. Readmissions should be subject to regular monitoring and deeper analysis. Furthermore, the steady increase in emergency admissions especially of elderly people with multiple diseases, which has become a policy concern in recent years, points to the weaknesses in the coordination of care within and across healthcare settings.

Perverse effects. Two perverse effects of T2A, well described in the literature, are the selection of low-risk patients and supplier induced demand. Different patient-selection strategies are possible; the specialisation in relatively standard and programmed care is one method. Furthermore, when the DRG tariffs are not adjusted well to compensate for complex cases within a DRG, hospitals can reduce the intensity or length of care for more complex patients.

As to specialisation, public hospitals by definition have to provide a large scope of activity, defined by hospital planning and regulation leaving them little possibility for converting their capacities between different medical and surgical activities. Private clinics, while subject to authorisation, have greater flexibility in their (dis)investment decisions. These differences have resulted in radically different

trends towards specialisation in private hospitals which are increasingly specialised in a few areas compared with public hospitals. During the period from 2002-2009, the gap between the public sector, for which the specialisation index remained stable over the whole period, and private sectors, where the range of services covered decreases with higher rates of specialisation, has widened (Or et al. 2013).

As to the possibility of eventual strategies to reduce the resources dedicated to high cost patients (the oldest and sickest), the analysis of length of hospital stays for different patient profiles (oldest/high co-morbidity against youngest/fewer co-morbidities) for selected diseases and interventions (stroke, myocardial infraction hip replacement), does not suggest any difference in trends in the period after T2A according to gravity of patients. Naturally, the average length of stay for older/sicker patients is longer than for other patients. While lengths of stay decreased globally for all patients in the past 10 years, reductions for younger patients with few comorbidities had been a quicker. This suggests that the adjustments to GHM payments for compensating costs-outliers (patients who need above average resource use) have been adequate/effective.

However, the strong increase in the standardised rates of selected interventions/procedures (cataract, prostatectomy, endoscopy) compared with the rates of total hip replacement, a heavy surgery difficult to induce, is suggestive of induced demand that is little justified (Figure 2).

3. Evaluation of the French DRG payment model

Several features of the French DRG payment model appeared to be problematic for the hospitals and might have influenced the results. First, the methods of calculating both the reference costs and DRG tariffs used in public and private sector turned out to be quite opaque and created frustration among hospitals. The quality of cost data from the hospital cost sample has been challenged. The difficulty of understanding the link between costs and prices created irritation and bad feeling about the T2A.

Second, the macro-level regulatory mechanism created confusion and an extremely opaque environment where it is very hard for the hospitals to predict their income based on their activity. Most DRG prices have been reduced regularly others had seen an increase without any obvious explanation. Thus, some hospitals may have experienced a reduction in their revenues even if their own level and range of activities have remained unchanged but there has been a global rise in activity which has led to a fall in GHM prices. Generally, it is very difficult for providers to see clearly what will be their budget situation by the end of the year as prices changes every year and with little warning or communication about the strategy.

The ambition of price convergence for public and private facilities, which was pushed by the previous government with the active support from the private hospital federation, has also created tension. In practice that meant price reductions for public hospitals and steady prices for private ones since tariffs are based on average costs in areas where the private sector had a competitive advantage (ambulatory surgery) and already have a high profit margin (Cash et al. 2011).

Overall, the lack of transparency in tariffs and obscurity of specific objectives pursued with payment policy created increasing frustration and bad feeling about T2A at provider level. In the absence of clear and stable price signals (indicating areas to develop) and a close follow up of activity at hospital level, providers appear to be concerned mainly by balancing their accounts in any way they can.

In 2009, the Auditor's Office (Cour des comptes), pointed that (1) DRG-based hospital payment has become a very opaque mechanism of cost control for managers and local regulators; and (2) the follow up of hospital resources and costs was insufficient. In 2012, several national auditing institutions have recognised the problems with activity based payment and criticized the actual implementation of the DRGs in France (IGF, 2012; IGAS, 2012; MECSS, 2012). In addition to the necessity of improving transparency of price setting and modifying macro-level control mechanisms, they pointed out the need for simplification of the system, better communication with public hospitals and better monitoring of the results. Currently, cost data is not available to identify efficient providers (benchmarking), to facilitate an understanding of the differences in medical practices and to monitor changes in behaviour of various actors. Major quality indicators such as readmission and avoidable mortality rates are not monitored either.

4. Future directions

In 2013, the Minister of Health acknowledged that the French T2A model is far too complex and that the rules need to be simplified. Increasingly, the quality and the pertinence of care provided under the DRG system are also questioned. T2A provides incentives to develop hospital activity, sometimes beyond what is medically necessary. Assuring pertinence of care became a policy priority, with several institutions tackling the issue. The High Health Authority (HAS) is working on developing clinical guidelines for selected surgery and/or treatments in hospital. The variations in hospitalisation and surgery rates across hospitals and regions are also being followed up more closely now.

Concerning care quality, the Minister is reflecting on options for providing extra payments to hospitals based on a range of quality indicators. At the moment, only a few process indicators are being considered for this exercise. Finally, it is largely recognized that T2A does not favour the cooperation between hospitals or within a hospital between different services, nor the fluidity of patients' pathways. There are intentions for extending payments beyond acute hospital

reimbursement (especially for chronically ill and multi-morbidity patients) and bundling payment for rehabilitative services. But this appears to be more difficult than initially thought, due to lack of robust cost data across providers.

Overall, the French experience with DRGs suggests that DRG payment provide opportunities for enhancing efficiency and improving quality of care but also present risks. It appears that applications of DRG based funding in Europe has evolved rapidly to deal with its perverse effects and to incentivise quality in the payment (Or and Hakkinen, 2011). French model needs also adjustments for better aligning objectives of quality, pertinence and coordination of care in the payment. For this, availability of a strong information system for monitoring both costs and quality of hospital services is essential. French experience also shows the importance of a flexible and transparent governance supporting continuous fine-tuning of the incentive structure.

Figure 1. Evolution of hospital production (activity weighted by case-mix)

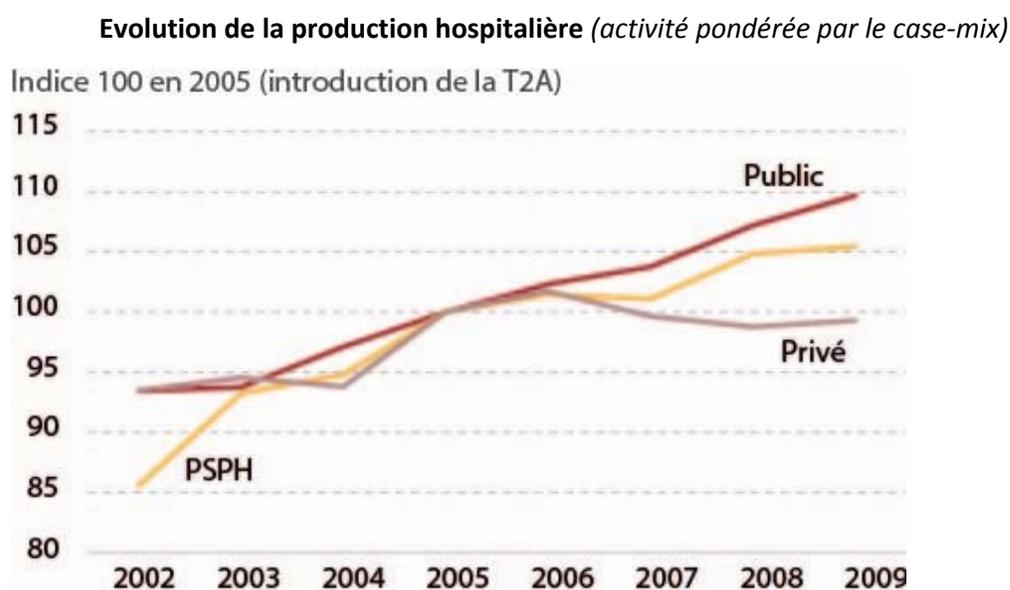
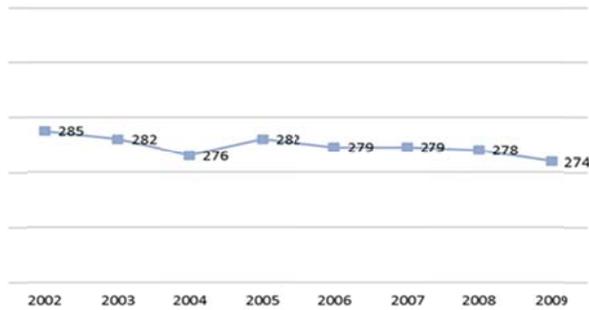
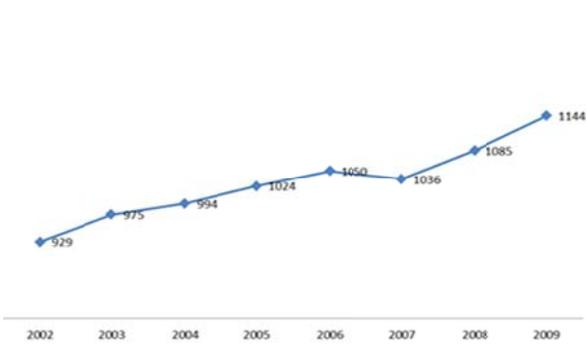


Figure 2. Taux standardisés pour 100 000 habitants

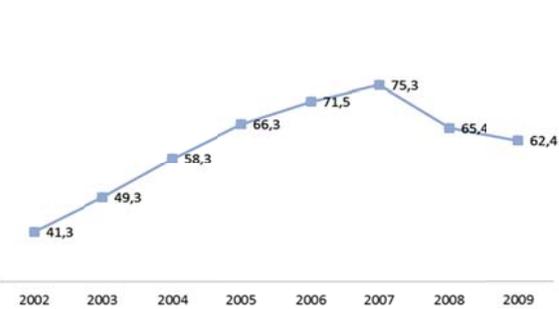
A. Prothèses totales de la hanche



B. Chirurgie de la cataracte

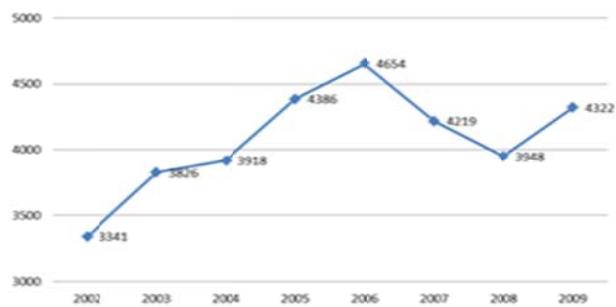


C. Prostatectomies



*2007 : publication par l'HAS d'un guide de bonnes pratiques pour préciser les indications de cette intervention

D. Endoscopies**



**2006 : la mise en place des forfaits qui encadrent la pratique de l'endoscopie en milieu hospitalier

Source : Or et al. 2013, page 49.

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