Do hospitals respond to prices? Evidence from Norway

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Abstract

The aim of this study is to investigate how variations in prices offered to hospitals for different types of treatment affect the length of stay and waiting times in Norwegian hospitals. We exploit variation in prices created by changes in DRG weights and in the proportion of Activity Based Financing decided by the Norwegian government. Since the Norwegian government has expressed recent interest in how patients are prioritised, we then compare the responsiveness of waiting times and length of stay to prices across different patient priority groups.

The data are taken from the Norwegian Patient Register covering the whole population of patients who received inpatient hospital treatments in the period 2002-2007. The dataset contains individual information on waiting times, length of stay, age, gender, primary and secondary diagnosis, number of co-morbidities and DRG-weights. Fixed Effect panel data models are applied in order to control for unobservable heterogeneity across DRGs. The preliminary results suggest that higher price lead to shorter waiting times and longer lengths of stay for the most highly prioritised patients.

Key words: Hospitals, DRG, treatment activity, waiting times, Norway

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1. Introduction

Expenditure in the health care sector has been continuously increasing and hospital payment systems have been changing as an attempt to control costs. A common policy instrument is Prospective Payment System (PPS) based on Diagnosis-Related Groups (DRG). DRG-classification gives a clear description of the activity in hospitals and makes it possible to compare hospitals even if they are treating different types of patients as all patients can be categorised into one of the DRGs[1]

There are several reasons why countries choose to introduce activity based financing. The usual arguments include more transparency in hospital resource allocation (relating provider revenue to workload sometimes referred to 'money follows the patient'), greater efficiency, better quality and reduced waiting times (Street et.al, 2007).

Theoretical papers have predicted that higher prices should be associated with higher quantity and lower waiting times as increases in prices for some diagnoses give incentives to treat more patients with those diagnoses (Ref). Recent empirical studies, however, show mixed results. In most of the countries where activity-based funding was introduced, the activity in the hospitals increased. Biorn et al. (2002) and Kjerstad (2003) find that the introduction of ABF in Norway had a significantly positive effect on the number of patients treated and DRG points produced. The introduction of DRG based financing in one county in Sweden resulted in the first two years to a 20 % increase in productivity compared to other counties. However, the effect was temporary (Mikkola et al. 2002). In contrast, Dafny (2005) find little evidence that hospitals increased the volume of admissions for diagnoses with largest price increase in USA.

With activity-based financing based on the DRG-system, hospitals' income depends on the number of patients discharged and the DRGs that patients' stay are allocated onto. Thus, a hospital might increase its income either by treating (discharging) more patients or by allocating patients' stay onto DRGs with higher prices. The latter mechanism is what is called DRG-upcoding; it's a nominal response that increases hospital income without producing more treatments for patients.

[1] The main variables for DRG classification are diagnosis and procedures.

The aim of this study is to investigate how changes in DRG prices affect hospital activity. We investigate this issue using data from Norway. In Norway DRG-prices are calculated based on historical costs from a sample of hospitals. Hospitals are financed by a combination of a block grant and an activity based grant. The size of the activity based grant depends on the number of patients treated, the patients' DRG's and the national average cost of treatment.[2] Together these two grants are meant to cover the running cost of providing (somatic) hospital services.

The relative share of the grants is determined annually by the Government in office. Over the last years the Government in office has varied from a minority Centre-Right government to the current majority Labour-Left-Centre Government. A choice of a high share of activity based financing is typically supported by the Right-wing parties, as it correspond to their ideology of market based solutions in the health care market (money-follow-the-user, competition among providers). The Labour-left parties on the other hand put less emphasize on market based solution, and typically aim for a lower share of the activity based grant. Hence we believe that the choice of 'low' or 'high' share of activity based financing serves as a source of exogenous variation. This makes it possible to derive valid information about the effects of different pricing policies on supply by the hospital sector. Importantly, the government's decision on the percentage of activity-based financing affects high-cost DRGs more than low-cost DRGs.[3] Hence the Government in office's choice of the relative share will be expected to have a distributional effect on activity, potentially affecting patients differently.

In a public health care system, where waiting lines are long patients face different longitude of waiting times, it is important that prioritisation of patients in terms of treatment access is made according to policy objectives. These priorities will typically be based on the medical conditions and treatment potentials. Norway has laid down prioritization guidelines which are based on medical condition, and it is possible to follow the actual access to treatment. This makes Norway an interesting case for investigating whether a market based regulation through may be commensurable with policy objectives. A further objective of this study is therefore more explicitly to see whether the supply of hospital care is more sensitive to financial incentives for more highly-prioritised patients as compared to patients of lower

[2] In this way, the activity-based grant introduces a form of benchmark competition among hospitals, (Shleifer, 1985).
[3] This follows since the price of each DRG is the product of the share of the activity based financing and the cost of each DRG.

priority. This would inform an assessment of whether pricing policy could be used to support better prioritisation.

2. Institutional Settings

The hospital financing in Norway has changed over time. Activity Based Funding (ABF) was introduced in 1997. Since then hospitals receive a block grant and an activity based grant. The block grant is determined by a capitation formula which captures the expected need of the population in a hospital's catchment area, and the expected cost of treatments, (NOU 2008:2, Hagen and Kaarboe, 2006). The size of the activity based grant depends on the number of patients treated, the patients' DRG's and the national average cost of treatment. Together these two grants are meant to cover the running cost of providing (somatic) hospital services.

More specifically, information on hospital costs is collected for all treatments from about 50 % of the hospitals. From this information the national average costs for each DRG are calculated. Treatments with an average cost which correspond to the national average cost of all patients are given DRG-weight 1, and treatments with an average cost of say twice the national average cost of all patients are given DRG-weight 2. Hence, the DRG-weights give information on the relative average cost of treatments. The DRG-costs form the basis of the prices that are being paid for future hospital treatments. Typically there is a two-year lag between the collection of the cost data and the year in which they are used to set prices for each DRG.

The relative share of the two grants is determined by the Government. Since the share given to the activity based financing determines the marginal revenue of producing a DRG-point it is expected to affects hospitals' activity; a relative high share implies higher incentives to increased activity.

The share of activity-based funding has been changing over the years. Table 1 in Appendix summarises the changes in the years 2002-2007, (column III). The Table gives information on of which cost year that is used to calculate the DRG-weights, (column II), the average cost of all hospital stays in a year (column IV), and the reimbursement per DRG-point, (last column). The reimbursement is the product of the activity based financing-share and the cost per DRG-point. All monetary terms are expressed in NOK.

From Table 1 we also notice that in some years both the cost calculations and the ABF-share are changing, in other years either the cost calculations are updated or the ABF-share is changed. Finally there were no changes in either the cost calculation or the ABF-share in 2007.

3. Data

The data are taken from the Norwegian patient register (NPR) covering the whole population of patients receiving elective inpatient hospital treatment in the period 2002 – 2007.

Waiting time (WT) is defined as the time elapsed from when a patient is added to the list until the treatment is provided. Missing waiting times, and waiting times greater than 730 days or less than 1 day, are excluded from the analysis as these are most likely coding errors. Rehabilitations and other treatments where additional reimbursements apply are also excluded from the dataset. The financing of these procedures depends on patient's length of stay in hospital. In our waiting times analysis we only include elective patients. In our length of stay analysis we include both elective and emergency patients.[4]

Our main explanatory variable, the price received by hospital each year, is constructed in following way: Since prices differ by DRGs, we define g_{jt} as the weight attached to DRG *j* in year *t*. The price offered to hospitals for each DRG in year *t* is p_{jt} :

$p_{jt} = z_t g_{jt}$, where z_t = the share of ABF and g_{jt} is weight for DRG *j* in year *t*.

The descriptive statistics are presented in tables 2-3 in the Appendix. Table 2 shows the descriptive statistics for waiting times analysis where only the elective inpatient treatments are included. Mean waiting time has decreased over time (from 132 days in 2002 to 128 days in 2007). The mean age is around 52 and there are more females than males in the sample. DRG-weights monotonically increase while the price variable varies substantially and reflects the changes in the activity based financing. Descriptive statistics for length of stay are presented in table 3. In addition to elective patients, the emergency cases are also included in this sample. Notice that some patients are recorded with a length of stay equal to 0 days. As a

[4] For the Volume analysis we will include all the patients treated in the hospitals. We are still waiting for the data for Day Cases.

patient still needs a bed while staying in hospital,[5] these observations are replaced by 0.5. The average length of stay shows a decreasing trend (5 days in 2002 and around 4,4 days in 2007). The explanatory variables that are included in the analysis are price, gender, age, number of co-morbidities and the priority groups.

We use the method suggested by Askildsen *et al* (2010b) which derives maximum waiting times from Norwegian medical guidelines in order to assign priority groups for patients. These guidelines were developed at one of the Norwegian health authorities, Health Region West.[6] This region covers about 22 % of the population in Norway. The medical guidelines cover 21 medical specialities. Based on descriptions of medical conditions, they assign recommended maximum waiting times (between 4 and 52 weeks), or no priority. By translating the medical conditions in the guidelines to ICD-10 codes we have been able to assign patients in the Norwegian patient register to maximum acceptable waiting time groups.[7] Patients are mapped into groups with maximum waiting times of 84 days (which we label 'high' priority), 182 days ('medium') and more than 182 days ('low'). There are also some patients who receive treatments which correspond to ICD-10 codes not classified by the guidelines. We have grouped these patients into one group, 'unknown priority'.

[5] According to the guidelines for registering, these are the patients that stay in hospital for more than 5 hours, but do not stay overnight.
[6] A potential problem is that medical guidelines developed in one health region might be affected by access to medical staff and medical equipment (capacity constraints), and that capacity constraints vary systematically among regions. Sveri (2005) finds that capacity constraints were not taken into consideration when the maximum waiting times were set.

[7] We are grateful to Jacob Mosvold, chief consultant physician at 'Diakonhjemmet hospital' (Oslo) for translating descriptions of medical conditions into relevant ICD-10 codes, and to professor in medicine Ole Frithjof Norheim for advising us interpreting the guidelines. See Nordheim (2005) and Askildsen *et al* (2010b) for further documentation.

4. Methods

The interest is in how changes in prices affect hospital activity. The main challenge is to find a way to estimate this effect. As explained in the previous section, the total price effect consists of the relative changes in DRG-weights g_{jt} and the general changes in ABF (z_t) that apply to all treatments.

We estimate the following empirical models.
We start by looking at the total price effect (Model 1).

$$ln(y_{ijt}) = \beta_0 + \beta_1 ln(p_{jt}) + \beta_2 G_{i\in g} + X'\beta + \alpha_k + \alpha_j + d_t + \varepsilon_{ijt} \qquad (1)$$

where

y_{ijt} - the waiting time / length of stay for patient *i* in DRG *j* and year *t*

p_{jt} - price for DRG *j* at time *t (*and $\mathrm{p_{jt} = z_t g_{jt}}$ from Section 3.)

$G_{i\in g}$ - vector of dummy variables representing priority group to which patient *i* is assigned

$X'\beta$ - a vector of individual characteristics: gender, age, number of co-morbidities

α_k - fixed effect for hospital *k*

α_j - fixed effect for DRG *j*

d_t - year dummies

e_{ijt} - error term.

Furthermore we are interested in whether the care for different priority groups is more or less responsive to price changes. We include therefore priority groups interacted with price variable (Model 2).

$$ln(wt_{ijt}) = \beta_0 + \beta_1 ln(p_{jt}) + \beta_2 ln(p_{jt}) * G_{i\in g} + X'\beta + \alpha_k + \alpha_j + d_t + \varepsilon_{ijt} \qquad (2)$$

A potential problem, especially when analysing length of stay, is that the price variable might be endogenous. As noted previously, the price variable $\mathrm{p_{jt}}$ has two components; the ABF share (z_t) and the DRG weight (g_{jt}). The DRG weights reflect historical costs for specific procedures and are therefore partly determined by average length of stay. However, the ABF share is exogenous (see section 2). As a first attempt to correct for endogeneity, we separate the prices variable in one exogenous part (z_t) and one (potentially) endogenous part (g_{jt}) and estimate the following regression (notice that $\ln p_{jt} = \ln(z_t g_{jt}) = \ln z_t + \ln g_{jt}$)[8]:

$$ln(wt_{ijt}) = \beta_0 + \beta_1 ln(g_{jt}) + \beta_2 ln(z_t) + \beta_3 G_{i \in g} + X'\beta + \alpha_k + \alpha_j + year + \varepsilon_{ijt} \qquad (3)$$

g_{jt} = DRG weight *j* in year *t*.

z_t = ABF share in year *t*.

We are interested in whether the prioritisation practise varies over years when the Activity Based Financing is high (high ABF share: 55 -60 % in 2002, 2003 and 2005) and low ABF share (40 % in 2004, 2006 and 2007). In order to identify this effect, we include interaction terms for priority groups with different levels of ln(z_t). This allows us to investigate whether the exogenous changes in the share of ABF affect priority groups differently. In the last model we therefore include interaction terms for priority groups and the ABF share variable.

$$ln(wt_{ijt}) = \beta_0 + \beta_1 ln(g_{jt}) + \beta_2 ln(z_t) + \beta_3 G_{i \in g} + \beta_4 ln(z_t) * G_{i \in g} + X'\beta + \alpha_k + \alpha_j + year + \varepsilon_{ijt}$$
(4)

[8] Since *zt* is collinear with the year dummies, we drop the year dummies and include instead a linear year trend.

5. Results

The results are presented in Table 2. We expect to find a negative price effect on waiting times, i.e. when the total prices increase, waiting times should decrease. As we control for DRG fixed effects, we look at the changes over time within DRGs: when the relative price for a DRG increase, we expect reduced waiting time for that particular DRG. We see that this is the case (Model 1). The first model indicates a price elasticity equal to -0.10. When price increases by 1 %, waiting time is reduced by 0.1 %. We also see that patients in lower priority groups tend to wait longer for treatment. Note that the model includes DRG fixed effects and thus shows variations in waiting times within DRGs according to priority group assignment.

The price effect in the second model captures the effect of a price change on the waiting times for the high priority patients (elasticity = -0.114). The interaction terms between priority groups and price are positive and statistically significant for the medium and unknown priority groups. These coefficients are additional to the effect for the reference, high priority, group. Thus, the price elasticity of waiting times is positive for the medium priority group and close to zero for the unknown priority group.

Table 2. Regression results for waiting times.

	(1)	(2)	(3)	(4)
Price	-0.103**	-0.114**		
	(0.006)	(0.006)		
High Priority	Ref	Ref	Ref	Ref
Medium Priority	0.399**	0.232**	0.399**	0.542**
	(0.007)	(0.010)	(0.007)	(0.016)
Low Priority	0.322**	0.313**	0.321**	0.437**
	(0.006)	(0.008)	(0.006)	(0.015)
Unknown Priority	0.113**	0.066**	0.113**	0.222**
	(0.005)	(0.007)	(0.005)	(0.014)
Medium Priority*Price		0.241**		
		(0.011)		
Low Priority*Price		0.005		
		(0.008)		
Unknown Priority*Price		0.067**		
		(0.007)		
DRG-Weight			-0.104**	-0.102**
			(0.006)	(0.006)
Tariff (=Z)			-0.053**	-0.166**
			(0.009)	(0.014)
Medium Priority*Z				0.198**
				(0.020)
Low Priority*Z				0.161**
				(0.019)
Unknown Priority|t=1				0.150**
				(0.018)
2002	Ref	Ref		
2003	-0.024**	-0.029**		
	(0.005)	(0.005)		
2004	-0.075**	-0.065**		
	(0.005)	(0.005)		
2005	-0.054**	-0.058**		
	(0.005)	(0.005)		
2006	-0.078**	-0.073**		
	(0.005)	(0.005)		
2007	-0.023**	-0.018**		
	(0.005)	(0.005)		
Year			-0.004**	-0.004**
			(0.001)	(0.001)
Constant	3.424**	3.397**	11.798**	12.189**
	(0.789)	(0.787)	(2.235)	(2.237)
Adjusted R^2	0.227	0.228	0.227	0.227
Observations	892,372	892,372	892,372	892,372

Robust standard errors in parentheses. All models also contain fixed effects for DRGs and hospitals and dummy variables for gender, age category and number of comorbidities (not shown).
* $p < 0.01$, ** $p < 0.001$

As an attempt to separate the general and relative price effects, in Models 3-4 we include the logarithm of the DRG weights and the ABF share. Our results indicate that when the relative price increases, the waiting time decreases. The coefficient on the ABF share is significant and negative, and indicates that an increased ABF share reduces waiting times. However, from model 4 we see that this effect only holds for patients in the high priority group. For patients in the medium and low priority group, the effect seems to be close to zero.

In Table 3 we present results when the dependent variable is length of stay.

Table 3. Regression results for length of stay.

	(1)	(2)	(3)	(4)
Price	0.996**	1.000**		
	(0.001)	(0.001)		
High Priority	Ref	Ref	Ref	Ref
Medium Priority	-0.010**	0.002	-0.010**	0.099**
	(0.002)	(0.003)	(0.002)	(0.006)
Low Priority	-0.118**	-0.088**	-0.119**	-0.017**
	(0.002)	(0.002)	(0.002)	(0.005)
Unknown Priority	-0.016**	-0.002	-0.016**	0.049**
	(0.001)	(0.002)	(0.001)	(0.004)
Medium P*Price		-0.021**		
		(0.003)		
Low Priority*Price		-0.051**		
		(0.003)		
Unknown Priority*Price		-0.021**		
		(0.002)		
DRG-Weight			0.995**	0.997**
			(0.001)	(0.001)
Tariff (=z)			-0.032**	-0.113**
			(0.002)	(0.004)
Medium P*Z				0.149**
				(0.007)
Low Priority*Z				0.140**
				(0.006)
Unknown P*Z				0.089**
				(0.005)
2002	Ref	Ref		
2003	-0.150**	-0.149**		
	(0.001)	(0.001)		
2004	0.236**	0.235**		
	(0.001)	(0.001)		
2005	-0.202**	-0.201**		
	(0.001)	(0.001)		
2006	0.186**	0.184**		
	(0.001)	(0.001)		
2007	0.158**	0.158**		
	(0.001)	(0.001)		
Year			-0.032**	-0.032**
			(0.000)	(0.000)
Constant	2.459**	2.460**	65.278**	65.442**
	(0.030)	(0.030)	(0.518)	(0.519)
Adjusted R^2	0.479	0.479	0.479	0.479
Observations	4,614,518	4,614,518	4,614,518	4,614,518

Robust standard errors in parentheses. All models also contain fixed effects for DRGs and hospitals and dummy variables for gender, age category and number of comorbidities (not shown).
* $p < 0.01$, ** $p < 0.001$

An increase in price of 1 % leads to around 1 % longer stay in hospital (Model 1). This might be an indication that when the reimbursements for hospitals increase, hospitals can increase length of stay for the patients. This price effect remains large and positive for high priority patients when interaction terms are also included (Model 2). The price effect is slightly smaller for patients of low or unknown priority.

Increases in DRG weights also lead to increase in LoS (Models 3 and 4). The price effect in Models 1 and 2 can therefore be dominated by the effect of DRG-weight. This can be an indication that even with a lag, changes in DRG-weights are endogenous; higher DRG-weights probably reflect a longer average length of stay.

The ABF share is again negative and significant in both models. A negative elasticity in model 3 indicates that the increase in the ABF share has an overall negative effect on length of stay. Increased ABF seems to give incentives to treat more patients and the lengths of stays are therefore reduced. In Model 4 it is related to the high priority patients. For the medium and low priority groups the effect of a tariff on length of stay is positive. For the unknown priority group it is close to zero.

6. Concluding remarks

In this paper the interest has been on how changes in prices affect waiting times and length of stay for different priority groups.
The main reason for the introduction of ABF in Norway was to increase activity and in that way to reduce waiting times. The analysis shows that increase in total price per DRG does indeed reduce waiting times for the most prioritised patients.

When the price effect is distinguished between changes to the DRG-weight and the policy decision on the percentage of ABF, we find Activity Based Financing effect on waiting times for the High Priority group (elasticity = -0.17).

The analysis on length of stay show that increase in general prices has a positive effect on LoS; the increase in DRG-weight has a similar effect while the tariff variable indicates that length of stay is reduced for the highest priority patients. However, as mentioned in the previous section, the DRG-weight is possibly endogenous in the analysis of length of stay.

Whether this is the case and how to handle it will be a focus in further research. It will be interesting to see whether the results change when the Day Cases will be included. This analysis will also be performed on an aggregate (hospital) level in order to see whether there is a price effect on the number of patients treated.

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Appendix

Table 1.

Year	Cost Year	ABF	Price per DRG point (in NOK)	Reimbursement per DRG point (in NOK)[9]
2002	2000	55 %	29,428	16,185
2003	2000	60 %	29,931	17,959
2004	2002	40 %	29,454	11,782
2005	2002	60 %	30,325	18,195
2006	2004	40 %	31,614	12,646
2007	2004	40 %	32,490	12,996

[9] Nominal prices.

Table 2. Summary statistics on dataset for waiting times analysis.

Note: Elective Inpatient Treatments only.

Variable	Obs	Mean	Stand.Dev.	Min	Max
2002					
Waiting Time	150,035	131.757	146.232	1	730
Age	150,035	51.255	23.162	0	102
Male	150,035	0.456	0.498	0	1
Number co-morbidities	150,035	0.977	1.290	0	7
DRG-weight	150,035	1.29	1.237	0.12	25.92
Price	150,035	0.711	0.680	0.066	14.256
2003					
Waiting Time	159,775	127.338	142.992	1	730
Age	159,775	51.564	22.775	0	102
Male	159,775	0.456	0.498	0	1
Number co-morbidities	159,775	1.087	1.384	0	7
DRG-weight	159,775	1.301	1.214	0.12	25.92
Price	159,775	0.781	0.728	0.072	15.552
2004					
Waiting Time	121,099	125.105	139.447	1	730
Age	121,099	51.367	22.842	0	107
Male	121,099	0.457	0.498	0	1
Number co-morbidities	121,099	1.132	1.417	0	7
DRG-weight	121,099	1.310	1.304	0.12	27.04
Price	121,099	0.524	0.522	0.048	10.816
2005					
Waiting Time	142,745	122.590	140.215	1	730
Age	142,745	52.321	22.732	0	104
Male	142,745	0.477	0.499	0	1
Number co-morbidities	142,745	1.181	1.453	0	7
DRG-weight	142,745	1.335	1.319	0.12	27.04
Price	142,745	0.801	0.791	0.072	16.224
2006					
Waiting Time	161,826	125.555	141.545	1	730
Age	161,826	52.470	22.536	0	104
Male	161,826	0.476	0.499	0	1
Number co-morbidities	161,826	1.212	1.484	0	7
DRG-weight	161,826	1.380	1.532	0.1	30.37
Price	161,826	0.552	0.613	0.04	12.148
2007					
Waiting Time	156,892	128.210	140.945	1	730
Age	156,892	52.541	22.694	0	104
Male	156,892	0.469	0.499	0	1
Number co-morbidities	156,892	1.286	1.529	0	7
DRG-weight	156,892	1.402	1.532	0.03	30.63
Price	156,892	0.561	0.613	0.012	12.252

Table 3. Summary statistics on dataset for length of stay analysis.

Note: Elective Inpatient and Emergency Cases.

Variable	Obs	Mean	Std. Dev.	Min	Max
2002					
LOS	721,813	4.977	6.262	0.5	258
Age	721,813	47.679	27.786	0	108
Male	721,813	0.452	0.498	0	1
Number co-morbidities	721,813	1.353	1.54	0	7
DRG-weight	721,813	1.009	1.169	0.012	25.92
Price	721,813	0.555	0.643	0.066	14.256
2003					
LOS	750,324	4.855	6.255	0.5	365
Age	750,324	48.162	27.729	0	111
Male	750,324	0.454	0.498	0	1
Number co-morbidities	750,324	1.495	1.656	0	7
DRG-weight	750,324	1.019	1.167	0.12	25.92
Price	750,324	0.612	0.700	0.072	15.552
2004					
LOS	763,525	4.712	6.225	0.5	365
Age	763,525	48.323	27.617	0	107
Male	763,525	0.457	0.498	0	1
Number co-morbidities	763,525	1.510	1.656	0	7
DRG-weight	763,525	1.027	1.256	0.12	27.04
Price	763,525	0.411	0.503	0.048	10.816
2005					
LOS	778,744	4.641	6.147	0.5	365
Age	778,744	48.563	27.697	0	107
Male	778,744	0.460	0.498	0	1
Number co-morbidities	778,744	1.553	1.678	0	7
DRG-weight	778,744	1.042	1.288	0.12	27.04
Price	778,744	0.625	0.773	0.072	16.224
2006					
LOS	803,359	4.506	5.995	0.5	330
Age	803,359	48.666	27.672	0	108
Male	803,359	0.459	0.498	0	1
Number co-morbidities	803,359	1.612	1.722	0	7
DRG-weight	803,359	1.048	1.410	0.03	32.78
Price	803,359	0.419	0.564	0.012	13.112
2007					
LOS	796,753	4.415	5.864	0.5	365
Age	796,753	48.860	27.669	0	108
Male	796,753	0.460	0.498	0	1
Number co-morbidities	796,753	1.636	1.754	0	7
DRG-weight	796,753	1.061	1.443	0.03	30.63
Price	796,753	0.424	0.577	0.012	12.252