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# Who Took out Additional Supplementary Health Insurance? A dynamic Analysis of Adverse-Selection

Carine Franc*, Marc Perronnin**, Aurélie Pierre**, in collaboration with Chantal Cases***

* Cermes, Inserm U988, CNRS UMR8211
** Irdes
*** Ined

**According to economic theory, individuals choose their insurance cover levels in virtue of anticipated health expenditures. Thus, they partially reveal their health risks. Yet, on the French health insurance market this hypothesis, known as 'adverse-selection', has only been tested on the supplementary health insurance purchase decision. However, the supplementary health insurance market is extremely heterogeneous, at least in the same way as beneficiaries' health risk levels.**

**Between July 1st 2003 and December 31st 2006, a mutual insurance fund for state employees (*Mutuelle générale de l'équipement et des territoires*) offered existing holders of its supplementary cover ('MGET basic') an additional health coverage ('MGET+'). This particular context, where individuals covered from the same supplementary health insurance decide to purchase additional cover, provides an opportunity to test the adverse-selection hypothesis. Using an approximated health risk calculated from a policyholder's age and past health expenditures, the determinants of purchasing MGET+ are analysed and compared through time.**

**At the end of 2005, around 20 % of the individuals covered by 'MGET basic' had purchased 'MGET+' cover, and the majority from its outset in 2003. Initial purchasers tended to be older with higher healthcare needs, notably in physician, optical and dental care. From 2004, policyholders with more modest incomes tended to defer purchasing MGET+ and did so in anticipation of optical care expenditures, the only expense item that maintains its positive influence through time.**

In 2008, , over nine out of ten individuals benefitted from supplementary health insurance cover in France. These are either voluntary individual private insurance contracts or mandatory contributions to an employer-subsidised health insurance plan. Voluntary subscriptions, concerning around half the supplementary health insurance beneficiaries, are decisions resulting from the trade-off between health insurance needs and the ability to finance them.

As far as possible, supplementary health insurance providers adjust insurance premiums in accordance with estimated health risk. Low self-perceived risk is therefore all the more likely to deter potential insurance purchasers from paying for a certain level of coverage. Offering a single policy for a unique premium applicable to all policyholders would eventually dissuade healthy young people from subscribing if the cost of insurance was considered higher than that of the incurred medical expenses. This adverse selection, which in the case of exclusive (or mixed) insurance plans corresponds to low-risk drain off, draws the insurer into the 'death spiral' where spiralling deficits eventually threaten a plan's existence. However, health insurance providers have limited access to the type of information needed to adjust premium rates according to policyholders' health risks. For example, data on objective health status is technically difficult and costly to obtain, and raises ethical issues. In addition, the public health authorities attempt to avoid the introduction of policies underwritten on individual risk by taxing anti-solidarity[1] policies[2] whose subs-

1 Translator's note : insurance policies with health-risk selection upon admission, extra-charge according to health status

2 These contracts are subject to the tax convention on insurance amounting to 7% of the premium amount… Few insurance contracts are however subject to a health questionnaire (Arnould, Pichetti, Rattier, 2007).

cription is conditional to having answered a health questionnaire. In fixing premiums, the *Code de la Mutualité*, which regulates the non profit insurers called *mutuelles*,allows its members to take into account only age, place of residence and the number of years a policy has been held.

The theory of insurance stipulates that, in order to avoid dissuading the low-risk insured from purchasing a policy, insurance providers propose segmenting contracts offering variable coverage levels (Rotschild, Stiglitz, 1976). The insured are then led into a self-selection process: the higher their expected medical expenses, the higher the level of coverage subscribed to. The insurer can thereby segment the insured according to risk category and charge a premium relatively adapted to that level of risk. Studies on health insurance in France have not, however, revealed the real existence of adverse-selection in the decision of purchasing rather that not purchasing a supplementary health insurance cover (Buchmueller *et al.*, 2004). Indeed, in France nine out of ten individuals benefit from supplementary health coverage but the distinction between those covered and those not covered does not allow a real segmentation of the insured by risk category. Adverse-selection phenomenon is thus likely to be observed in the choice of coverage level among the insured that already benefit from supplementary health coverage.

The *Mutuelle générale de l'équipement et des territoires* (MGET) is a mutual provider insurance fund for public sector employees essentially covering town and country civil servants and eligible beneficiaries (spouses, children) [insert p. 5]. In addition to basic complementary health insurance contract (MGET basic), it offers additional insurance contract ('MGET+') covers with differentiated levels of coverage. Between July 1st 2003 and December 31st 2006, the MGET+, a single additional insurance cover, was offered to existing 'MGET basic' beneficiaries. This supplementary health insurance enhanced reimbursement for most health expenditures subject to provider over-billing (Data insert).

This context enables to study adverse-selection phenomenon on a population initially covered from the same basic supplementary health insurance policy. That is to say that we study adverse-selection at the margin demand of health insurance. From a sample of MGET [insurance provider] administrative data, we analyse the factors determining the choice of subscribing to the MGET+: When? Why? To fulfil what needs? The extent of adverse-selection phenomena are analysed by measuring the influence of individual health risk (estimated by age and past health expenditures) on purchasing additional insurance.

## Supplementary health insurance massively purchased on its introduction

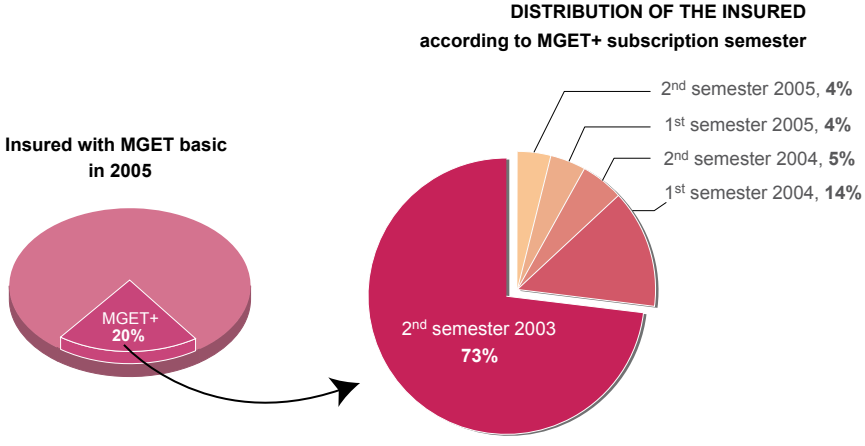
At the end of 2005, almost 20% of MGET basic policyholders chose to purchase the supplementary health insurance [Graph 1]. The MGET+ policyholders are on average older (59 *versus* 48 years old), with a higher proportion of women (41 % *versus* 37 %).

A large majority of MGET+ subscriptions were taken out in 2003, the year it was launched: 73% of MGET+ beneficiaries had subscribed in 2003; 19 % in 2004 and 8% in 2005 [Graph 1]. The high rate of subscriptions in 2003 seems to indicate that this additional insurance effectively answered a real need, either because this population has a greater aversion to risk or a specific healthcare consumption. The characteristics of MGET+ beneficiaries are possibly different between those that subscribed from the beginning of 2004 and onwards (steps 2-5), and those that subscribed in 2003 (1st step). In order to study the extent to which the determinants of demand for additional insurance vary through time, the probability of purchasing supplementary health insurance is modelled for the five successive semesters following its introduction according to 'health risk' approximated by age, ex ante health expenditures (two and a half year period prior to the time period considered), wage grading of the 'MGET basic' policyholder to whose contract additional beneficiaries are attached, region of residence, etc. (Methods insert). The under-

## CONTEXT

This work fits within the framework of a study conducted in 2009 on behalf of the General Mutual Fund for Equipment and the Territories (MGET), today known as the General Mutual Fund for the Environment and Territories.
It consisted in evaluating MGET+ subscriber profiles and analysing the impact of additional health insurance on the healthcare consumption of its beneficiaries. For IRDES, and more generally the researchers concerned, it falls within the framework of research analysing the correlation between health insurance coverage levels and healthcare consumption.
This relationship plays an important role in research on health insurance as it is linked to issues concerning market equity and efficiency.

**G1 Percentage of insured having subscribed to MGET+ and subscription semester**




Data: MGET.

lying hypothesis suggests that variations in time of subscription in reality reflect different health risks and consequently, the determinants of demand vary through time which constitutes a dynamic approach to adverse-selection.

## Early subscriptions strongly influenced by health risk

### At its launch, this additional health insurance attracted a majority of older beneficiaries

The probability of subscribing to MGET+ from its introduction (1st step) changes according to age (Graph 2): before the age of 20, it diminishes as age increases; between 20 and 80 years old, it increases with age and finally, after 80 years old, it once again diminishes as age increases. The probability of purchasing MGET+ is thus higher among very young children than 20 year olds: medical expenses relating to physician care, better reimbursed by MGET+, are in effect higher for the very young insured. Between the ages of 20 and 80, the effect of age can be interpreted as a greater need for care due to a poorer health status. The older insured, globally in poorer health and presenting a higher health risk, decided to purchase additional health insurance on its introduction. Finally, after 80 years old, visual and dental conditions become more stable and the needs for glasses and dental prostheses diminish. Consequently, the need to purchase additional health insurance that essentially covers these expense items is much lower.

From the second semester 2004, additional health insurance attracts young subscribers: the probability of purchasing additional cover decreases as age increases (Graph 3).

### Health expenditures have a major influence

*Ex ante* health expenditures reveal that needs in physician care and optical and dental care have a positive influence on the probability of purchasing MGET+ from its introduction. Physician care are the health services that most influence this probability (+ 0.37 points for an additional 100 Euros expenditure), closely followed by optical care (+ 0.34 points for an additional 100 Euros expenditure). Dental care is in third position with a more modest influence (0.14 points for an additional 100 Euros expenditure). The insured having purchased the MGET+ at its outset had high healthcare needs before subscribing, particularly health servicesbetter reimbursed by the additional insurance. One can thus conclude that their general health status is probably poorer.

From the 1st semester 2004, the influence of health expenditure on the probability of subscribing to the MGET+ tends to diminish: in the second semester 2004, optical, dental and physician care expenditures still have a positive impact on the probability of subscribing but to a lesser extent (Table 1). Among these three expense items, only the optical expenses maintain their significant positive impact in the third and fourth step. Finally, no expense item has a positive impact on the probability of subscribing in the second semester 2005 (last step). Thus, individuals who chose to subscribe MGET+ early tended to cumulate health risks with high expected expenditures, notably in optical and dental care which characterises a lower insurance-opportunity cost[3].

## Late subscriptions among the more modest earners

### Income

All other factors being equal, and in particular for a given health risk, the probability of purchasing MGET+ from its introduction is not significantly higher among the policyholders (public sector employees) with the highest wages.

This result, which is contrary to previous studies' findings (in particular, Buchmueller *et al.*, 2004) in which access to supplementary health insurance is easier for higher income individuals, can be explained by its relatively 'affordable' contribution of 11 Euros per month. Health risk thus prevails over income in accessing MGET+, and all the more so

3 The insurance opportunity cost corresponds to the consumer goods an individual has to give up to purchase health insurance. When health expenditures are nil, the sum spent on purchasing insurance represents an amount of money not spent on purchasing other goods, in which case, the opportunity cost is high. If health expenditures are high, the amount spent on purchasing insurance liberates purchasing power by reducing out-of-pocket health expenditures in which case, the opportunity cost is much lower.

## METHOD

**Modelling.** In order to test dynamic adverse-selection, we use a traditional insurance demand model in which the amount an individual is prepared to pay for additional health insurance is equal to the average benefits expected from the MGET+ policy during the course of the year, plus a certain amount (the risk premium) taking into account the probability of the risk occurring and the anticipated expenses. The individual chooses to purchase MGET+ if the premium (132 €/year) is inferior to this amount. It thus involves modelling the probability of purchasing additional health insurance according to variables reflecting the risk of incurring health expenditures and their expected levels.

Dynamic adverse-selection is modelled using a sequential probit model analysing the probability of purchasing additional health insurance in five steps. This first step consists in modelling the probability of purchasing additional health insurance from the semester of its introduction (second semester 2003). The second step models the probability that an individual who is known not to have purchased MGET+ in the first semester studied, will do so in the second (first semester 2004). Following this principle, the third, fourth and fifth steps model the probability of having purchased in the second semester 2004, the first semester 2005 and the second semester 2005. At each step, the probability of purchasing can be written as follows :

$$Pr(Y=1) = F(a.S+b.W+g.X)$$

- Y = 1 .. subscription to the supplementary health insurance contract;
- S ..... all the variables approximating health status: age (health risk proxy) and health expenditures claimed in the two and a half years preceding the subscription semester modelled (health status proxy);
- W ..... variable approximating the income of the 'MGET basic' policyholder by means of a wage grading index;
- X ..... all the control variables influencing insurance demand: gender, region of residence, employment status of the 'MGET basic' policyholder (employed, retired, student, unemployed), coverage status on the 'MGET basic' (main insured, eligible child, eligible spouse), number of persons included in the 'MGET basic' contract.

since the 'MGET basic' premium is based on wagewage level.

From the second semester 2004, the effect of the 'MGET basic' policyholder's income becomes significant: beneficiaries of MGET basic contract purchased by policyholders in the lower wage brackets subscribe to MGET+ more massively. Thus, the probability that MGET basic beneficiaries not having purchased MGET+ in the second semester 2003 will do so in the first semester 2004 is higher by 2 points if the policyholder's wagewage is inferior to 300 (that is 1,343 € a month before tax) than when it falls between 301 and 400 (that is between 1,346 € and 1,790 € a month before tax). Even if this gap tends to diminish through time (it is 1 point lower in the last subscription semester), it nevertheless remains significant. Differences in subscription rates between beneficiaries are not significant when the policyholder's wage grades fall between the 301 to 695 index (between 1,344€ and 3,111€/month), the largest rate of subscription is in fact from the lower wage brackets that tend to defer MGET+ subscriptions. In addition, those with higher wage that decided not to purchase in the initial steps will either never do so, or at a lower rate than the more modest wage earners in the following periods.

### The effect of other variables

The probability of having subscribed to MGET+ from its introduction is higher

T1

**Sequential model of the probability of purchasing MGET+**

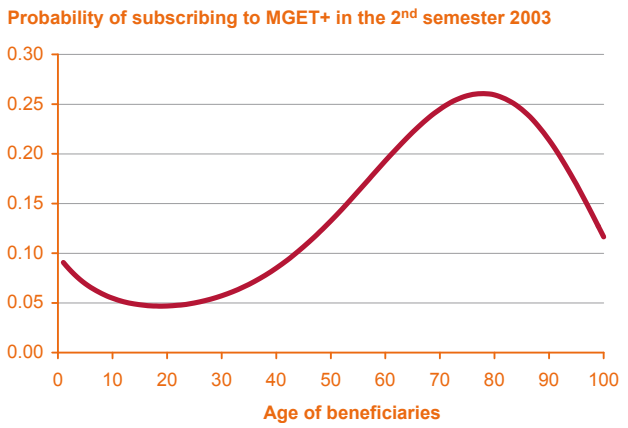
| Sequentialisation | 1st step 2nd semester 2003 | | 2nd step 1st semester 2004 | | 3rd step 2nd semester 2004 | | 4th step 1st semester 2005 | | 5th step 2nd semester 2005 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Probability of an average person purchasing | 0.12893 | | 0.02736 | | 0.01019 | | 0.00771 | | 0.00673 | |
| | dy/dx[a] | Significance[b] | dy/dx | Significance | dy/dx | Significance | dy/dx | Significance | dy/dx | Significance |
| **Gender** *(ref. : Men)* | | | | | | | | | | |
| Women | 3.378 | *** | 0.851 | *** | 0.334 | ** | 0.179 | * | 0.234 | ** |
| **Age** | | | | | | | | | | |
| Age | -0.933 | *** | -0.289 | *** | -0.176 | *** | -0.202 | *** | -0.197 | *** |
| Age squared | 0.031 | *** | 0.008 | *** | 0.003 | *** | 0.004 | *** | 0.004 | *** |
| Age cubed | -0.00021 | *** | -0.00007 | *** | -0.00002 | *** | -0.00003 | *** | -0.00002 | *** |
| **Wage grade index range** *(ref.: Under 300)* | | | | | | | | | | |
| From 301 to 400 | -0.478 | NS | -2.003 | *** | -0.829 | *** | -1.142 | *** | -0.573 | ** |
| From 401 to 500 | 1.846 | NS | -0.980 | ** | -0.440 | ** | -0.688 | *** | -0.318 | * |
| From 501 to 695 | 3.025 | NS | -0.690 | NS | -0.674 | *** | -0.667 | *** | -0.282 | NS |
| Over 695 | 2.270 | NS | -0.722 | NS | -0.515 | ** | -0.601 | *** | -0.477 | *** |
| **Occupation of the main usured and family situation of eligible third parties** *(ref.: insured in employment)* | | | | | | | | | | |
| Main insured { Retired | -2.922 | *** | -0.833 | *** | -0.235 | * | -0.224 | * | -0.194 | * |
| Main insured { Student | 6.303 | NS | 3.116 | NS | 8.736 | ** | 3.034 | NS | 48.331 | * |
| Eligible beneficiary { Spouse | -2.799 | *** | -1.140 | *** | -0.306 | * | -0.145 | NS | -0.179 | NS |
| Eligible beneficiary { Child | -1.508 | NS | -2.107 | *** | -1.685 | *** | -1.467 | *** | -1.470 | *** |
| **Area of residence** *(ref.: Ile-de-France)* | | | | | | | | | | |
| Parisien Basin | -2.372 | * | -0.860 | * | -0.021 | NS | -0.544 | *** | -0.368 | *** |
| North | -1.923 | NS | -0.914 | * | -0.440 | ** | -0.030 | NS | -0.139 | NS |
| Alsace-Lorraine | 6.044 | *** | 2.243 | *** | 0.530 | NS | 0.020 | NS | -0.039 | NS |
| Franche-Comté | -0.164 | NS | -0.630 | NS | -0.452 | * | -0.451 | *** | -0.377 | ** |
| West | -4.792 | *** | -1.046 | *** | -0.654 | *** | -0.559 | *** | -0.470 | *** |
| South-West | -2.662 | ** | -0.066 | NS | -0.070 | NS | -0.086 | NS | 0.003 | NS |
| Center-East | -0.487 | NS | 0.255 | NS | -0.025 | NS | -0.275 | * | -0.048 | NS |
| Mediterranean | -3.879 | *** | 0.018 | NS | -0.657 | *** | -0.430 | *** | -0.224 | NS |
| **Number of insured on MGET basic policy** | | | | | | | | | | |
| Number of insured | -1.815 | *** | -0.336 | ** | -0.128 | * | -0.158 | ** | -0.059 | NS |
| **Health expenditures 2 and a half years prior to subscription semester** | | | | | | | | | | |
| Physician care (for 100 €) | 0.365 | *** | 0.078 | *** | 0.012 | NS | -0.005 | NS | 0.011 | NS |
| Dental care (for 100 €) | 0.136 | *** | 0.030 | * | 0.000 | NS | 0.011 | * | 0.002 | NS |
| Other fees (for 100 €) | 0.045 | NS | 0.029 | NS | 0.028 | *** | 0.005 | NS | 0.012 | NS |
| Prescription drugs (for 100 €) | 0.007 | NS | -0.016 | ** | -0.001 | NS | 0.001 | NS | -0.001 | NS |
| Optical care (for 100 €) | 0.340 | *** | 0.138 | *** | 0.029 | * | 0.025 | * | 0.014 | NS |
| Other prescriptions (for 100 €) | -0.027 | NS | -0.002 | NS | 0.000 | NS | 0.000 | NS | 0.001 | NS |
| Hospital care (for 100 €) | -0.012 | NS | -0.005 | NS | -0.003 | * | -0.002 | NS | -0.003 | NS |
| Other (for 100 €) | 0.020 | NS | -0.005 | NS | -0.013 | NS | 0.005 | NS | -0.002 | NS |

[a] Marginal effect on the probability of subscribing (dy/dx). b Significance of marginal effect. *** : 0.1% threshold; **: 1% threshold; *: 1% threshold; NS: not significant.

**Reading guide:** Among the individuals not having purchased MGET+ cover in the second semester 2003, the probability of having purchased in the second semester 2004 is higher for women by 0.851 points compared to men.

**Data:** MGET.

**G2** **Probability of subscribing to MGET in the second semester 2003, according to age**

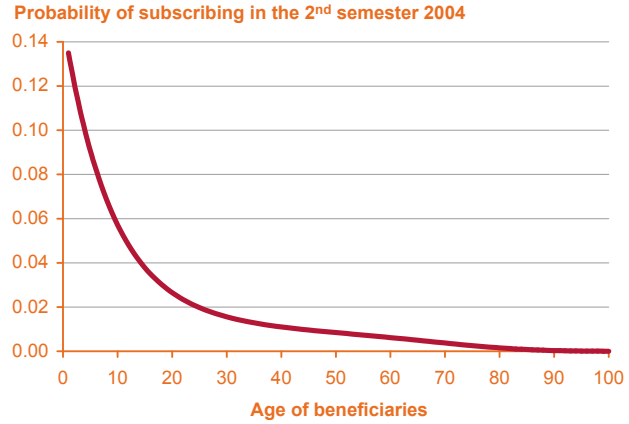



**Reading guide:** The probability that a 20 year old individual covered by 'MGET basic' will subscribe to MGET+ in the second semester 2003 is 5% against 13.1% for a 50 year old individual covered by 'MGET basic'.

**Data:** MGET.

*The calculation reference being different in 2003 and 2004, the probabilities in graphs 2 and 3 are not comparable.*

**G3** **Probability of subscribing to MGET+ in second semester 2004, according to age**




**Reading guide:** *the probability that a 20 year old individual covered by 'MGET basic' will subscribe to MGET+ in the second semester 2004 knowing that they did not purchase the additional insurance previously is 2,7% against less than 1% for a 50 year old individual covered by 'MGET basic'.*

**Data:** MGET.

among women (+ 3.4 points) and this gender effect persists for all the semesters studied. This result can be explained by higher expected health expenditures among women.

The number of persons covered by the MGET basic policy is also a determining factor: the higher the number the less likely additional insurance will be purchased. As MGET+ premium is fixed and per individual insured, the cost of subscribing is likely to be a deterrent in purchasing additional insurance for all the MGET basic beneficiaries.

* * *

Even if the vast majority of supplementary health insurance beneficiaries purchased the supplementary health insurance from the outset, significant factors determining the demand for supplementary heath insurance were revealed: health status, estimated by age and prior health expenditures, is closely correlated to the immediate purchase of additional health insurance. For these insured, additional health insurance seems to correspond to ensuring the ability to pay for expected health needs. This result is in accordance with the adverse selection hypothesis: individuals presenting the highest health risks revealed their health status by purchasing additional cover.

Later subscriptions are less closely correlated to past health expenditures. Moreover, these subscriptions are more often associated with individuals in the lower wage brackets. Several interpretations can explain this result: on the one hand, the insured may have been forced to defer purchasing insurance. On the other hand, these same individuals having been classified as being in relatively good health from their low ex ante health expenditures could in fact be in poor health but have been obliged to forego medical treatment in the past because their insurance did not sufficiently cover the health expenses. Cases such as these, demonstrate the limits of estimating health status by past health expenditure.

These results contrast sharply with previous studies that do not emphasise the significant influence of health status on the decision to purchase complementary health insurance. It thus seems that, contrary to the choice of being covered or not, essentially determined by income, subscribing to more or less high coverage levels is strongly determined by health status. ♦

### The General Mutual Fund for Equipment and the Territories (MGET)

Until June 30th 2003, the MGET offered a supplementary health insurance policy called 'MGET basic'. During the study period, this policy refunded insuree's copayment for 'standard' outpatient care ( physician care, surgeons, midwives, nurses, laboratory tests, prescription drugs and medical transportation); out-of-pocket expenses for hospital care; from 115% to 140% of the Social security ceiling pricefor dental prostheses and orthodontics; from 865% to 900% of the Social security ceiling price for glasses, 55 € for the frames and 115 € for contact lenses. In exchange, the insured paid a premium proportional to their income and independent of health risk (age, health status).

From July 1st 2003, the MGET offered its policyholders an additional supplementary insurance contract called MGET+. This contract enabled the insured to complete 'MGET basic' reimbursements for the majority of medical charges exceeding the Social security ceiling price: physician care (+ 30% of the tariff), non-government regulated medical fees (+ 30% of the tariff), dental apparatus and orthodontics (+ 105% to + 135% of the ceiling price added to the MGET basic coverage), optical (+ 31 € to + 92 € according to the type of glasses, + 61 € on the frames and + 115 € on contact lenses). For all these expense items, the MGET+ policy doubled the reimbursement levels.

All MGET basic policyholders were able to subscribe to MGET+ for themselves and all or part of their eligible beneficiaries. The MGET+ policy could be purchased at any time during the year. MGET+ subscribers paid an additional fixed-rate premium of 11 € per month per person covered but was free for the third child onwards.

This additional insurance offer was maintained until December 31st 2006 after which it was replaced by other additional cover contracts, Santé + and Pharma +.

# DATA

The administrative data base of the health insurance fund MGET provides information on policyholder characteristics on 31st December 2005, as well as all the healthcare expenditures claimed from 2001 to 2005, that is to say two and a half years before and after the introduction of MGET+.

### *Socio-economic and socio-demographic characteristics*

On December 31st 2005, information about the situation of each individual covered by 'MGET basic' was available concerning: age, gender, administrative status (student, in employment, retired, unemployed), family situation (head of the family, spouse, child…) the policyholder's wage grading index, the region of residence and retirement date. Information concerning the 'MGET basic' policy was equally available: policy number, the number of children covered and the coverage status (policyholder, eligible spouse, eligible child…). This latter information enabled us to distinguish the main insured from the other beneficiaries. Finally, for the policyholders having decided to purchase the MGET+ insurance, the subscription date and the additional premium paid were also known. Information concerning age, whether an individual had retired and whether they benefitted from the MGET+ for all the observation years (2001, 2002, 2003, 2004 and 2005) could thus be reconstructed. We suppose that all the other variables remain unchanged through time and that the individuals concerned maintained their employment status and wage grading.

### *Care expenditures presented for reimbursement*

For all the beneficiaries concerned, the exhaustiveness of healthcare expenses claimed to the MGET from 2001 to 2005 was available. The following information was available for each consumption item: month and year of reimbursement; month and year of care; type of health insurance contract (MGET basic / MGET+); expenditures incurred for each expenditure item:

- Physician care. *Consultations and medical act by GPs, specialists, neuropsychiatry, other consultations, home visits*;
- Dental care. *preservative dentistry, prostheses within and outside the tariff established by the professional union for dental surgeons (CNSD), orthodontics, dental acts not refunded by the National Health Insurance*;
- Other fees. *Surgical acts, radiology*;
- Prescription drugs. *White labels, blue labels*;
- Optical care. *Glasses, contact lenses, frames, extra charges*;
- Other prescriptions. *Laboratory tests, medical auxiliaries, orthopaedics*;
- Hospital care. *Fixed daily copayment, individual room, hospitalisation costs*;
- Other. *Spa treatments, medical transportations, prevention and other.*

### *Sample base*

As only the public sector wage grading index was available, only the basic policies covering at least one public service employee as head of the family were analysed. Were only retained the MGET basic policies in which only one civil servant is registered due to difficulties identifying the employment status of each individual insured. Beneficiaries not covered by the MGET basic policy during the years 2001-2005 were eliminated as were those where the head of the family had not declared an income. Finally, the study only concerns individuals living in Metropolitan France; that is over 100,000 contracts.

As the expenditures file was too voluminous for statistical analysis, the study was based on a representative sample of the base population. In order to keep all individuals covered by MGET basic contract, the policyholders (civil servants) were sampled then, in a second step, all the other beneficiaries were selected. The sample was stratified by semester of subscription to the MGET+ so as to maintain a minimal statistical strength per period of observation. A simple random sample representative of total expenditures (at + or – 5%) was used. All the statistical results were adjusted by the inverse of the probability of subscription for each insured person. The final sample was made up of 18,126 insured of which 9,458 never subscribed to MGET+, 3,676 insured who subscribed in the second semester 2003, 1,987 who subscribed in the first semester 2004, 1,150 in the second semester 2004, 953 in the first semester 2005, and finally 902 in the second semester 2005.

On 31st December 2005, policyholders' average age was 49.5. There is on average 1.5 individuals covered per basic contract. The majority are men; 63% against only 48% of the population as a whole. This is certainly due to the types of jobs held by 'MGET basic'policyholders. The 'MGET basic' policyholders in the sample are equally characterised by a high number of retirees; 45% (55% employed) against around 20% of the French population according to 1999 census data. Over half the public service employees (58%) have a wage grading index ranging between 301 and 400; that is a wage before tax of between 1,347 € and 1,790 € per month. Total health expenditures in 2005 amounted to 1,697 € per insured.

Almost one of five policyholders benefitted from MGET+ on December 31st 2005. The percentage of subscribers belonging to the higher wage grades (over 401, excluding bonuses and expenses amounting to 1,794 € per month) is higher among MGET+ beneficiaries (42% *versus* 35%). MGET+ beneficiaries are on average older (59 *versus* 48 years old, that is an 11 year difference) with a higher percentage of women (41% *versus* 37%).

# GLOSSARY

- **Additional supplementary health insurance:** couverture surcomplémentaire
- **Co-payment:** ticket modérateur
- **Medical charges exceeding the statutory fee:** dépassement d'honoraires
- **Out-of-pocket expenses:** reste à charge (ticket modérateur et forfait hospitalier journalier)
- **Supplementary health insurance:** couverture complémentaire
- **Government-regulated tariff:** tarif de convention

# DEFINITIONS

- **Beneficiary:** here, often designates any individual covered by the policy but the policyholder himself
- **Eligible child:** child of the policyholder covered by the contract
- **Eligible spouse:** spouse of the policyholder covered by the contract
- **Insured:** any individual covered by an insurance contract
- **MGET:** provider mutual insurance fund for state employees
- **'MGET basic':** supplementary health insurance contract provided by the mutual insurance fund MGET
- **'MGET+':** additional supplementary health insurance contract provided by the mutual insurance fund MGET
- **Policyholder:** here, the subscriber of the contract who must be affiliated to one of the authorized civil service institutions

# FURTHER INFORMATION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IRDES INSTITUT DE RECHERCHE ET DOCUMENTATION EN ÉCONOMIE DE LA SANTÉ 10, rue Vauvenargues 75018 Paris
www.irdes.fr • Tél.: 01 53 93 43 02 • Fax: 01 53 93 43 07 •
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