Improving Takeup of Health Insurance Program
A Social Experiment in France

Sophie Guthmuller
Florence Jusot
Jérôme Wittwer

A B S T R A C T

This paper is based on a randomized experiment conducted in order to understand the low takeup rate of a complementary health-insurance voucher program for the poorest in France. We explore two of the main hypotheses put forward to explain low enrollment: difficulties in accessing information about the program and a voucher amount considered to be too low. Results show that a voucher increase has a small but significant effect on takeup and the invitation to an information meeting discourages it. This study confirms the difficulties that are faced in increasing the health-insurance coverage of poor populations via subsidy programs.

Sophie Guthmuller is a PhD student in economics at PSL, Université Paris-Dauphine, LEDa-LEGOS. Florence Jusot is a professor of economics at Université de Rouen and an associate researcher at PSL, Université Paris-Dauphine, LEDa-LEGOS. Jérôme Wittwer is a professor of economics at Université Bordeaux Segalen and an associate researcher at PSL, Université Paris-Dauphine, LEDa-LEGOS. *This study was financially supported by the Haut Commissariat aux Solidarités actives contre la pauvreté (Ministère de la jeunesse et des solidarités actives) and by Health Chair, a joint initiative by PSL, Université Paris-Dauphine, ENSAE and MGEN under the aegis of the Fondation du Risque (FDR). Sophie Guthmuller thanks the Caisse Nationale d'Assurance Maladie des Travailleurs Salariés (CNAMTS) for the PhD scholarship. The authors are grateful to the Caisse Primaire d'Assurance Maladie (CPAM), the Caisse d'Allocations Familiales (CAF) of Lille, the Institut de Recherche et Documentation en Economie de la Santé (IRDES) and, in particular, Caroline Desprès, and the Institut National d'Etudes Démographiques (INED) for their contribution to the experiment implementation and for their help in the data preparation. The authors would like to thank Bruno Crépon, Andrew Clark, Michel Grignon, Tor Iversen, Maarten Lindeboom, Anthony Scott and Peter Siminski for their useful comments. The authors declare that there are no conflicts of interest and that the procedures followed within the experiment were in accordance with the ethical standards of the CNIL (Commission Nationale de l'Informatique et des Libertés). The data used in this article can be obtained beginning August 2014 through July 2017 from Sophie Guthmuller.* *Correspondence to: Sophie Guthmuller, LEDa-LEGOS, Université Paris-Dauphine, Place du Maréchal de Lattre de Tassigny, 75775 Paris Cedex 16, France. E-mail: sophie.guthmuller@dauphine.fr. Tel: +33 666835937.*
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I. Introduction

The French Social Security system covers 76 percent of all healthcare expenditures. Individuals can purchase a complementary health insurance (CHI) plan in order to reduce the remaining copayment. This system raises the issue of financial access to care and the affordability of CHI for the poorest populations. In France, as in other countries with healthcare copayments, it has been widely reported that inequalities in access to healthcare are mainly explained by inequalities in access to CHI (Buchmueller et al. 2004; Doorslaer et al. 2004; Bago d'Uva and Jones 2009; Or, Jusot, and Yilmaz 2009). Because these inequalities are considered to be unfair, public policies have been implemented in order to improve the coverage of low-income households by reducing the financial barriers that restrict their access to care.

In 2000, the French government instituted Complementary Universal Health Coverage (CMU-C), offering free CHI to the 7 percent poorest households (Grignon, Perronnin, and Lavis 2008). In 2005, a subsidized complementary health insurance program in the form of a voucher called an "Aide Complémentaire Santé" (ACS) was additionally introduced for poor households whose income was slightly above the CMU-C threshold. This program provides financial incentives for uninsured households to acquire a CHI plan. It also partially reimburses those who had already purchased a policy, and gives them an incentive to purchase a better-quality CHI plan. Currently only 6 percent of the French population does not have complementary insurance (Perronnin, Pierre, and Rochereau 2011). However, 31 percent of households whose resources are just above the CMU-C eligibility threshold still remain uninsured (Arnould and Vidal 2008). This high rate of noncoverage among the poor is partly explained by the very low uptake of the ACS vouchers. In 2009, this program was used by only 18 percent of the eligible population.

Two main hypotheses can be formulated to explain this low ACS uptake. The first is related to the lack of information regarding the program itself and the application process. This applies in particular to the eligible holders of an individual CHI who do not assert their rights. Recent literature reviews on the takeup of means-tested programs have shown that the nonpecuniary aspects of a program, such as stigma, transaction costs, administrative complexity, and lack of information may strongly influence enrollment (Remler, Rachlin, and Glied 2001; Currie 2006). A number of pieces of work have shown that information plays a role in takeup. Lo Sasso and Buchmueller (2004), for example, found that lack of information about the State Children's Health Insurance Program (SCHIP), partly due to little prior experience with public-insurance programs, may have contributed to nonparticipation. Daponte, Sanders, and Taylor (1998) showed that informing people about Food Stamp benefits increased enrollment. Similarly Aizer (2003) found positive effects of outreach, especially in the form of application assistance, on the takeup of Medicaid.

The second potential explanation of the globally low ACS takeup rate is insufficient subsidy. This may particularly be the case for eligible individuals who remain uncovered. The principal reason reported by individuals for being uninsured is indeed financial difficulties, which is consistent with previous work that has highlighted the predominant role of income in health-insurance demand in both France (Saliba and Ventelou 2007; Grignon and Kambia-Chopin 2009; Jusot, Perraudin, and Wittwer 2012) and the United States (Marquis and Long 1995; Thomas 1995; Bundorf and

Pauly 2006; Auerbach and Ohri 2006; Gruber 2008). Before the deduction of the ACS voucher, these premia may represent nearly 10 percent of the income of the poorest households (Kambia-Chopin et al. 2008; Jusot, Perraudin, and Wittwer 2012). As the ACS voucher covers only 50 percent of the contract premium (Fonds CMU 2008), the CHI may remain unaffordable for the poorest part of the eligible population even with the voucher: The subsidy may be insufficient to render the cost-benefit tradeoff of being insured attractive. Last, the application process induces an additional cost which may not be entirely covered by the financial benefit of the voucher; this might explain the nontakeup by eligible individuals who are already insured.

This paper aims to test those two main explanations of low ACS takeup. The elasticity of ACS demand to the subsidy amount will be central. Several previous pieces of work have proposed inferring the expected impact of a subsidy on insurance demand based on estimates of the price elasticity of insurance demand in general population surveys in France (Franc and Perronnin 2007; Grignon and Kambia-Chopin 2009) or in the United States (Marquis and Long 1995; Thomas 1995; Marquis et al. 2004; Auerbach and Ohri 2006). We here instead take a direct approach to public-policy evaluation by setting up a randomized social experiment to measure the effects of a change in the current subsidized CHI program on ACS takeup. We identify 4,209 individuals who are potentially eligible for ACS via their resources and randomly assign them into three groups that were offered different ACS voucher amounts and access to information. This experiment was implemented by a local office of the National Health Insurance Fund, called the Caisse Primaire d'Assurance Maladie (CPAM), in Lille, a large city in the North of France.[1]

The originality of our method should be underlined. Social experiments ensure the robust identification of the causal effects of public interventions. However, implementing a controlled social experiment is particularly costly and requires the active participation of the institutions involved. Very little work on health insurance has used randomized social experiments. One famous exception is the experiment carried out by RAND in the United States in the 1970s, which provided a wide variety of robust results regarding the link between health-insurance coverage and healthcare expenditures and use (Manning et al. 1987). A randomized experiment on the same topic is currently being conducted in Oregon within Medicaid (Finkelstein et al. 2012).

Based on a randomized experiment we conducted in order to understand the low takeup rate of the ACS program in France, we propose to study two of the main hypotheses put forward to explain low enrollment: a lack of access to information about the program and a voucher amount considered to be too low. To the best of our knowledge, our social experiment is first to focus on the impact of subsidies and differentiated access to information on health insurance demand. Results show that a voucher increase has a small but significant effect on takeup. The invitation to the meeting appears to cancel out the positive effect of the voucher increase. Our results suggest that reasons behind the poor takeup rate are also likely to be found at the administration level. Our experiment underlines indeed the difficulties in effectively reaching

1. Lille's main urban subdivision had a population of 226,827 inhabitants while the metropolitan district has 1,105 080 inhabitants, making it the fourth most populous city in France. Lille is located in a former mining and industrial area. The unemployment rate of the 15–64 population is higher than the rate of the whole Metropolitan France (14.6 percent versus 11.1 percent), while the mortality rate is slightly lower than this of the whole Metropolitan France (0.77 percent versus 0.88 percent).

the targeted population. This study finally confirms the difficulties that are faced in increasing the health insurance coverage of poor populations via subsidy programs.

The remainder of the paper is organized as follows. The design of the experiment and the data are described in Section II. Section III then presents the potential outcome framework that theoretically defines the evaluation of social programs and describes the outcome variables used in our experiment. Results regarding the effect of the voucher amount and information briefing proposal on ACS takeup in the controlled experiment framework are detailed in section IV and these results are discussed in section V. Section VI concludes.

II. The Design of the Social Experiment

A. Background

The French health insurance system consists of two parts: National Health Insurance (NHI) and complementary health insurance (CHI). The National Health Insurance fund provides public, compulsory, and universal health insurance that covers 76 percent of overall health expenditure, about 90 percent of inpatient care expenses, 65 percent of ambulatory-care expenses, but very little with respect to dental and eye care (Le Garrec, Bouvet, and Koubi 2012). However, individuals suffering from long-term illnesses benefit from full coverage of treatment costs related to their condition. This exemption from copayment does not, however, imply that these patients do not face relatively large out-of-pocket healthcare costs. For instance, they have to bear the copayments related to other illnesses they may have, but also any deductibles or charges that exceed the statutory fee[2] for the expenditures related to their chronic disease (Elbaum 2008).

The French NHI does not thus cover all healthcare costs. The residual costs can be covered by a CHI policy. This CHI is additional, voluntary, and private. In France, CHI is not only complementary to NHI, as CHI covers copayments, but also supplements NHI as it can reimburse charges that exceed the statutory fee or healthcare expenses that are not covered at all by NHI (for instance, excess fees for doctor visits, non-reimbursed medication and private rooms in hospital). CHI contracts can be purchased either individually or through the individual's employer. Starting in 2000, a free and public complementary health insurance, called CMU-C, has been available for low-income individuals, which pays for most out-of-pocket expenses. The CMU-C program covers 7 percent of the French population (Arnould and Vidal 2008).

2005 saw the introduction of a subsidized complementary-health-insurance program in the form of a voucher called the "Aide Complémentaire Santé" (ACS) for poor households whose income was slightly above the CMU-C threshold. In January 2009, households whose income level was between the CMU-C threshold and 20 percent

2. In France, healthcare fees are agreed by the national health insurance system and reimbursement is based on these statutory fees. However, some doctors (those belonging to the unregulated payment sector) have the right to set prices exceeding this statutory fee for their visits or for a certain type of care. This was the case for 24 percent of all physicians in 2010. This rate is 41 percent in average for specialists care but varies by specialty. For instance, 85 percent of the surgeons have the right to ask for higher fees while this figure is 32 percent for pediatricians (Cnamts 2011).

Table 1
ACS Subsidy Amounts

Age Groups	Amounts (in Euros)
Under 25	100
25–59	200
60 or older	400

over this threshold were eligible for ACS: It thus applied to households with an annual income between 7,447€ and 8,936€ per consumption unit.[3] In practice, eligible households can apply for ACS at their local National Health Insurance office to benefit from the voucher that is subtracted from the price of the insurance plan. This voucher is only valid for individual plans and does not apply to employer-provided plans.

As the CHI premiums in France increase with the age and the number of beneficiaries, the voucher amounts depend also on the number of beneficiaries and their age, ranging from 100€ to 400€ per individual.[4] Table 1 shows the voucher amounts in 2009 when the experiment was implemented. According to the CMU, the average annual cost of a CHI plan taken out by ACS beneficiaries was 764€ in 2009 (Fonds CMU 2010). The voucher, hence, represents on average 50 percent of the annual CHI premium, all age groups taken together.

B. The Design

The experiment was jointly designed with the CPAM of Lille based on its previous practice. Up to 2009, the CPAM offered a specific service only to individuals who applied for the CMU-C but who were in fact eligible for ACS. These individuals were invited to an information briefing session and were proposed an increased voucher amount funded locally by the CPAM. Based on this existing practice, our social experiment was designed to test the impact of a general increase in the ACS subsidy and improved access to information in the form of a briefing session on ACS takeup among the entire eligible population for ACS.

The experiment relied on the national postal information campaign launched to inform individuals about the ACS scheme, organized at a local level by each CPAM. All potentially eligible individuals covered by the CPAM in Lille were identified at the end of 2008 on the basis of their 2007 tax declarations which entitled them to family allowance benefits from the Lille Family Benefits Fund (CAF) in 2008.[5] The computer

3. From January 2011, ACS covered individuals with resources up to 26 percent above the CMU-C plan eligibility threshold. This figure will be extended to 35 percent in 2012 (PLFSS 2011).

4. The voucher amounts have been revised upward, and new age brackets were defined in August 2009: under 16 years old = 100€; 16–49 years old = 200€; 50–59 years old = 350€; and 60 and over = 500€.

5. In French, CAF stands for "Caisse d'allocations familiales." The CAF offers allowances related to family, children, housing, and the minimum income. Allowances entitlement and amounts are conditional on household income. It is important to note that using the mailing lists of the CAF to identify those potentially

search used by the French government to select the population potentially eligible for the ACS was originally conceived by the Grenoble Observatory on the nontakeup of social rights and public services (ODENORE) (Revil 2008a). 4,209 individuals were randomly selected to participate in the experiment among the individuals who were potentially eligible for ACS and who had not taken up their rights at the end of 2008.[6]

This experimental population was randomly divided into three groups. In January 2009, 1,394 individuals assigned to the control group received a letter by post informing them of the National ACS scheme in force on that date; 1,412 individuals in the first treatment group received the same letter but stipulating an increase in the voucher amount; and 1,403 individuals in the second treatment group received by post the same letter stipulating the increased voucher amount and a second letter with an invitation to an information briefing. A letter of one page explains in a few sentences the ACS scheme and the voucher amounts offered. The letters were identical between groups except the voucher amounts proposed. In addition, for the treatment groups, a sentence indicated that the extra vouchers were proposed within an experiment. An ACS application form that potentially eligible individuals were invited to return for effective eligibility assessment was enclosed in all the letters. This application form consists of eight pages. In addition to information related to characteristics of household's members, applicants have to fill in 14 items about the resources of each member of the household.

The files provided by CAF only allowed us to target the population likely eligible for the ACS without guaranteeing their effective eligibility since, as noted above, the CAF files were based on 2007 income levels whereas ACS eligibility is based on income twelve months prior to application.

The voucher increase proposed to Treatment Groups 1 and 2 represented a 62.5 percent to 75 percent increase over the national subsidy in force according to age. The financial aid proposed per person to each age group is shown in Table 2.[7]

The information meeting on the ACS proposed to Treatment Group 2 and led by a social worker was conducted in groups of around 15 individuals and took place at the CPAM head office in Lille. These briefings lasted two hours and were aimed at

eligible for the ACS restricts the analysis to people entitled to the allowances offered by the CAF. Without being able to give a specific figure, it is likely that the selected sample is broadly representative of the eligible population. Nevertheless, we have selected a population who already use social security. This means that we remove from the analysis households who are eligible for ACS but systematically do not take up social benefits, and households who are eligible for the ACS but not for family allowances (for instance, elderly home owners).

6. Originally, 5,000 individuals were identified. However, it should be kept in mind that ACS eligibility is evaluated in terms of household resources, and the program itself is a benefit attributed to the household. Moreover, some households (dual-earner couples in particular) are composed of several individuals identified by CAF as potentially eligible. During the information campaign the letters were sent by the CPAM to each individual; some households consequently received several letters. In our experimental setting, these cases are problematic. Two individuals who were randomly assigned into different groups but who belong to the same household may have received two different letters. To address this contamination bias, we removed from our sample all individuals belonging to the same household but assigned to different groups. In addition, we randomly selected an individual within households in which several individuals were assigned to the same group. Accordingly, dual-earner couples are generally but identically underrepresented in each group. The final sample covers 4,209 individuals.

7. The increased vouchers are only temporary: They last two years and the voucher amount is cut in half the second year.

Table 2
ACS Voucher Amounts Per Capita Proposed During the Experiment (in Euros)

Group	Under 25	Age 25–59	60 or Older
Control	100	200	400
Treatment 1 and 2	175	350	650

Notes: ACS voucher amounts per person in the household. The amounts proposed to the control group are the official amounts at the time of experiment (January–July 2009, see Table 1). For example, when CHI covers a 26-year-old adult and two children under 25, the ACS voucher is (200€ + 2*100€) = 400€. This household could benefit from a 400€ discount on their annual insurance premium. The increased vouchers were those proposed by the CPAM within the specific program in place before the experiment, which explains the nonuniform increase across age groups.

informing individuals about the ACS scheme and the formalities required to benefit from it. During the briefing, the social worker addressed the following topics: (1) presentation of the ACS scheme and the application procedure, (2) explanation of the eligibility rules and the type of resources that are taken into account, (3) eligibility assessment examples based on resources of some participants, and (4) collective support and advice on how to fill in the application form. In addition to the application form, the social worker handed out written supports summarizing the application procedure.

The meeting was not restricted to individuals who had returned an application form. Twelve briefings were organized from February to April 2009, at a rhythm of two per week on Thursday and Saturday mornings. This is why letters to the second treatment group were sent out in successive waves over a two-month period so as to manage the flow of individuals who responded positively to the meeting invitation. An anthropologist was present during meetings to observe the participants behavior and to understand the reasons for nontakeup. These observations are reported in Wittwer et al. (2010).

C. Experimental data matched with administrative data

The returned application forms and ACS agreements were observed between January 21, 2009 (the date at which the first wave of letters was sent out) and July 30, 2009 (the experimental end date) by the CPAM benefits department. The data collected by the CPAM provides information on each individual included in the experimental sample: the experimental group; whether an ACS application form was returned; if after assessment they were notified of their entitlement to ACS; in the case of refusal, whether it was due to above-threshold resources or on the contrary below-threshold resources entitling them to CMU-C. Finally, for individuals in Treatment Group 2, information on briefing attendance was recorded.

These data were then matched to CPAM administrative data containing information on age, gender, whether individuals were within the working population or out of the labor force due to disability or to retirement on December 31, 2008, long-term illness scheme beneficiaries, ambulatory-care expenditures in 2008, CHI status prior to the experiment and CMU-C beneficiaries in 2007. Table A1 in Appendixes presents the

full set of variables used. Information on inpatient care expenditure is not available, because these are not individually recorded by CPAM due to the specific financing system of hospitals. Not taking these expenditures into account in the analysis does not much affect the willingness to buy a CHI, as CHI mostly covers ambulatory-care expenditure and inpatient care is almost entirely covered by National Health Insurance.

Information on CHI plan status is collected by the CPAM thanks to a computer information exchange standard called NOEMIE (Norme Ouverte d'Echange entre Maladie et les Intervenants Extérieurs). This standard allows the electronic transmission of healthcare invoices between CPAM offices and CHI providers. Data on CHI coverage recorded via National Health Insurance does not tell us if the CHI was purchased through the employer or individually. Since individuals covered by an employer-provided CHI are actually not eligible for ACS, independently of their income level, this lack of information can induce an overestimation of the eligible population. However, we expect this bias to be limited as employer-provided CHIs only represent around 20 percent of CHI plans among the low-income population (Arnould and Vidal 2008).

Table 3 provides descriptive statistics for the population under consideration. We check that the random assignment did indeed lead to very similar distributions of variables between groups.[8] The sample is split equally between men and women. A large proportion, almost 80 percent, is aged 25 to 59 while the under-25s represent less than 10 percent of each group. Regarding the employment status, 61 percent are in the working population, nearly 25 percent are out of the labor market due to disability, and 15 percent receive a retirement pension. Finally, we note that one month before the start of the experiment, one individual out of three was not covered by a CHI plan,[9] while 50 percent of the population had ambulatory healthcare expenditure greater than 700€ in 2008.

III. Methodology

A. Potential Outcomes Model

The evaluation of the effect of the voucher increase and the information meeting on the demand for ACS is theoretically based on the potential-outcome model, developed by Roy (1951) and Rubin (1974). More formally, we want to estimate the causal effect of a treatment T on an outcome Y. This model defines two potential outcomes: Y_{i1} the outcome of individual i when i is treated and Y_{i0} the outcome of individual i when i is untreated. The causal effect of participating in the treatment for i is then $\Delta_i = Y_{i1} - Y_{i0}$. But Δ_i is always unobservable as only one of the outcome variables is observable: When i is treated, Y_{i1} is realized and Y_{i0} is not observed. Y_{i0} is then called the counterfactual outcome and refers to the outcome Y that would have pertained had the individual been treated.

More precisely, we want to measure the average treatment effect (ATE) on the full

8. Chi-square tests accept the null hypothesis of independence.

9. This rate is well above survey-data estimates for this population, as this rate is 19 percent if the population is approximated by the first income decile and 14 percent for the second decile (Arnould and Vidal 2008). The gradual adoption of the standard exchange system NOEMIE certainly explains part of the difference: Not all CHI providers were affiliated to the system in December 2008.

Table 3
Description of the Population Before the Experiment

	Group							
	Control		Treatment 1		Treatment 2		Total	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
Age in 2008								
Under 25	105	7.5	113	8.0	108	7.7	326	7.8
25–59	1,048	75.2	1,056	74.8	1,040	74.1	3,144	74.7
60 or older	241	17.3	243	17.2	255	18.2	739	17.6
Sex								
Male	679	48.7	691	48.9	693	49.4	2,063	49.0
Female	715	51.3	721	51.1	710	50.6	2,146	51.0
Employment status in 2008								
Working	845	60.6	857	60.7	865	61.6	2,567	61.0
Retired	210	15.1	206	14.6	200	14.3	616	14.6
Disabled	339	24.3	349	24.7	338	24.1	1,026	24.4
Ambulatory healthcare expenses in 2008								
0€–199€	374	26.8	350	24.8	362	25.7	1,086	25.8
200€–699€	340	24.4	366	25.9	355	25.3	1,060	25.2
700€–1,999€	338	24.3	334	23.6	357	25.5	1,028	24.4
2,000€ or more	342	24.5	362	25.7	329	23.5	1,035	24.6
Long-term illness in 2008								
Yes	385	27.6	398	28.2	407	29.0	1,190	28.3
No	1,009	72.4	1,014	71.8	996	71.0	3,019	88.4
CHI coverage in 2008								
Yes	927	66.5	935	66.2	923	65.8	2,785	66.2
No	467	33.5	477	33.8	480	34.2	1,424	33.8
CMU-C coverage in 2007								
Yes	98	7.0	100	7.1	91	6.5	289	6.9
No	1,296	93.0	1,312	92.9	1,312	93.5	3,920	93.1
Total	1,394	100.0	1,412	100.0	1,403	100.0	4,209	100.0

Notes: (1) All figures in these columns are numbers of individuals. (2) All figures in these columns are percentages. Percentages for each group (control, Treatment 1, and Treatment 2).

population. $\Delta_{ATE} = E[Y_1 - Y_0] = E[Y_1] - E[Y_0]$. As the counterfactual is unobservable, our aim is to find the best substitute in order to estimate the ATE without bias.

Within the framework of an experimental design, the treatment is randomly assigned across individuals: Untreated individuals form the control group and treated individuals the treatment group. Thus if the sample of individuals is sufficiently large, random assignment ensures that both groups are similar, not only with respect to ob-

servable variables but also unobservable variables. This solves the self-selection issue by construction. Formally we have, $E[Y_0 \setminus T = 1] = E[Y_0 \setminus T = 0] = E[Y_0]$ and $E[Y_1 \setminus T = 1] = E[Y_1 \setminus T = 0] = E[Y_1]$.

In our social experiment we defined two different treatments: an ACS voucher increase for the first treatment group and an information meeting proposal in addition to the voucher increase for the second treatment group. As these treatments were randomly assigned, the impact of the treatments can then be estimated by difference in the means between the treated and untreated groups. The effect of the voucher increase will then be estimated by the difference in the means between Treatment Group 1 and the control group, and that of the meeting proposal by the difference in the means of the outcome variable between Treatment Group 2 and Treatment Group 1. Significant differences between groups are evaluated via Chi-squared tests.

B. Outcomes variables

We focus on two outcome variables to evaluate treatment effectiveness. We assess the demand for or the interest in the ACS by the number of returned application forms subsequent to the letter received from the CPAM. The first outcome variable is then the rate of returned application forms.

Beyond the rate of completed application forms, and within the experimental framework, we can also calculate the percentage of individuals effectively entitled to ACS, since a number of the applications were refused. The second outcome variable is defined as the rate of ACS notified—that is, the proportion of experienced individuals who effectively received an ACS voucher after eligibility reassessment by the CPAM. There are two cases where applications were refused; when individual's resources were below the eligibility threshold, they could benefit from the free CMU-C plan and when their resources were above the ACS cutoff point, their application were refused.

IV. Results

A. Impact of the voucher increase

Of the 4,209 individuals involved, only 701 returned an application form for a takeup rate of 16.7 percent (Table 4). Table 4 also compares the application return rates by group. 15.9 percent of the control group returned an ACS application form (222 applications). The takeup rate in Treatment Group 1, which benefitted from the increased voucher amount, is higher (at the 5 percent significance level) than that in the control group with 18.6 percent of applications. Increasing financial aid thus appears to have a positive, though limited, impact on the probability of takeup.

This impact can be measured by the elasticity of the probability of returning a completed application form to the financial aid proposed. This elasticity is calculated in average for all age-groups by the ratio of the rise between treatment groups in the probability of returned forms to the rise in the voucher amount,[10] and is equal to 0.22

10. By using a growth rate of 75 percent for the voucher amount (although this figure is 62.5 percent for the over-60s), we choose to underestimate the aggregate elasticity rather than estimate the elasticity separately by age group with limited accuracy due to the small number of individuals over 60 years old.

Table 4
Returned ACS Application Forms

	Completed Forms		95 Percent Confidence Interval (in Percentages)	Number of Individuals	
	1	2		1	2
Control	222	15.9	(14.0; 17.8)	1,394	100.0
Treatment 1	262	18.6	(16.5; 20.6)	1,412	100.0
Treatment 2	217	15.5	(13.6; 1.4)	1,403	100.0
Of which:					
With meeting	35	28.0	(20.0; 36.0)	125	100.0
Without meeting	182	14.2	(12.3; 16.2)	1,278	100.0
Total	701	16.7	(15.5; 17.8)	4,209	100.0

Notes: (1) All figures in these columns are numbers of individuals. (2) All figures in these columns are percentages.

(Table 5). Surprisingly, the results are quite similar for individuals already covered by CHI (66.2 percent of the sample) and those who are not (33.8 percent). The rate of returned applications among individuals already covered by CHI is 16.4 percent in the control group and 19 percent in Treatment Group 1, as against 15 percent and 17.6 percent respectively among individuals without CHI coverage: These differences are not significant. Similarly, we observe no difference in the elasticity of takeup rate to voucher amount according to CHI coverage (0.23 for individuals initially covered by CHI as against 0.21 for those not covered).

Looking at the ACS agreements and the case of refusals, we see that in total, 55.2 percent of returned applications were in fact eligible for ACS (Table 6), 10.1 percent were eligible for CMU-C but not ACS (in the cases where income was below the minimum ACS threshold) and 34.7 percent were refused because their income levels were too high. Among the 4,209 individuals included in the experiment, 9.2 percent were effectively eligible for ACS, 1.7 percent for CMU-C, 5.8 percent was refused both ACS and CMU-C, and 83.3 percent failed to apply (Table 6 and Table 7).

A comparison of the number of ACS agreements by group yields similar results to those obtained for the comparison between returned applications. However, the gap between the control group and Treatment Group 1 is accentuated. The rate of ACS agreements relative to the number of participants is 10.8 percent in Treatment Group 1 as against 7.9 percent in the control group. The voucher amount elasticity of the probability of ACS notification is 0.49 (Table 5), and is significantly higher compared to the one calculated on the basis of the rate of returned forms. This increase in elasticity is explained by a much lower proportion of returned forms in the control group than in the Treatment Group 1. In fact, the proportion of ACS notification among returned application forms is only 49.6 percent in the control group and 58 percent in the first treatment group (Table 6).

Table 5
The Voucher Amount Elasticity of ACS Demand

	Returned Form			ACS Notification		
	Proportion			Proportion		
	Control	Treatment 1	Elasticity	Control	Treatment 1	Elasticity
Total	15.9	18.6	0.22 *(–0.01 ; 0.49)*	7.9	10.8	0.49 *(0.11 ; 0.96)*
CHI in 2008						
Yes	16.4	19	0.21 *(–0.06 ; 0.55)*	8.2	11.1	0.48 *(–0.03 ; 1.06)*
No	15	17.6	0.23 *(–0.16 ; 0.76)*	7.3	10.1	0.51 *(–0.12 ; 1.47)*

Notes: The elasticity is calculated as the ratio of the growth rate in the probability of returning an application form (to obtain ACS) between the control and Treatment 1 groups, on the one hand, and the growth rate in the voucher amount between the national and increased levels for those aged up to 60 (the rate being slightly lower for those over 60), on the other. Ninety-five percent confidence intervals are in brackets. Proportions of returned form and ACS notification for each group (control group and treatment group) are in percentages.

The exceptional financial aid offered to the individuals in Treatment Groups 1 and 2 appears to have more successfully targeted eligible beneficiaries — that is to say, the poorest individuals in the experimental sample, as the rate of refusals due to income levels above the eligibility threshold is much lower in Treatment Groups 1 and 2 than in the control group (Table 7).

B. Impact of the proposed meeting

The rate of returned applications is 15.5 percent among Treatment Group 2, whose members received an invitation to an information briefing as well as a voucher increase. This rate is slightly lower than that in the control group but not significantly so. On the contrary, the rate is significantly lower in the second treatment group than in Treatment Group 1 (at the 5 percent significance level). Somewhat unexpectedly, the invitation to the briefing appears to have impeded takeup, thus cancelling out the positive effect of the voucher increase.

Among the 1,403 individuals in Treatment Group 2, only 125 attended the information briefing to which they were invited (8.9 percent). Of these, 35 completed and returned an ACS application form. Individuals who attended the meeting are significantly more likely to complete an application form (and to obtain an ACS agreement). The takeup rate is 28 percent of the individuals who attended the briefing. On the contrary, among the 1,278 individuals in Treatment Group 2 who did not attend the

Table 6
ACS Agreements

	Number of ACS Agreements	Percentage in Relation to the Total Number of Individuals	95 Percent Confidence Interval (in Percentages)	Percentage in Relation to the Total Number of Returned Application Forms	95 Percent Confidence Interval (in Percentages)
Control	110	7.9	(6.5; 9.3)	49.6	(42.9; 56.2)
Treatment 1	152	10.8	(9.1; 12.4)	58.0	(52.0; 64.0)
Treatment 2	125	8.9	(7.4; 10.4)	57.6	(51.0; 64.2)
Attended the meeting	22	17.6	(10.8; 24.4)	62.9	(46.0; 79.6)
No meeting	103	8.1	(6.6; 9.6)	56.6	(49.3; 63.9)
Total	387	9.2	(8.3; 10.1)	55.2	(51.5; 58.9)

Notes: Number of ACS agreements by group and their proportion in relation to the total number of individuals included in the experiment and the total number of completed application forms.

Table 7
Cases of ACS Refusal

	CMU-C Agreement			Resources Above Upper Limit		
	Number	Percentage in Relation to the Total Number of Individuals	Percentage in Relation to the Total Number of Completed Application Forms	Number	Percentage in Relation to the Total Number of Individuals	Percentage in Relation to the Total Number of Completed Application Forms
Control	25	1.8	11.3	87	6.2	39.1
Treatment 1	25	1.8	9.5	85	6.0	32.5
Treatment 2	21	1.5	9.7	71	5.1	32.7
Attended the meeting	2	1.6	5.7	11	8.8	31.4
No meeting	19	1.5	10.4	60	4.7	33.0
Total	71	1.7	10.1	243	5.8	34.7

Notes: The number of CMU-C agreements and the number of refusals due to resources above the limit of eligibility, and the corresponding percentages in relation to the total number of individuals and all completed application forms.

briefing, the takeup rate is only 14.2 percent. The information briefing thus seems to have a positive impact on the ACS takeup rate among those who participated and a negative effect for those who failed to attend the briefing. One explanation could be that some of the individuals in the second treatment group, those who did not go to the meeting, thought that meeting attendance was compulsory and therefore did not consider it a good thing to apply for the ACS because they could not attend the meeting. (This result remains significant after controlling for covariates, see Table A2 in Appendixes.)

Note that the positive impact of the information meeting needs to be looked at more carefully as we can no longer rely on the experimental nature of our data at this point. As meeting attendance was not compulsory, it is likely that individuals self-selected themselves, that is, individuals with a positive expected outcome were more likely to participate. We tend to control for this potential endogeneity bias by employing a recursive bivariate model but we find ambiguous evidence of the meeting attendance on ACS takeup (Guthmuller, Jusot, and Wittwer 2012).

C. Impact of covariates

In order to look at the impact of covariates on the probability to complete an application form we run a probit regression on the whole sample (Table 8). First, the important thing to note is that these estimations confirm the slight positive effect of the voucher increase and the deleterious effect of the meeting invitation within the experimental results. The average marginal effects are similar to the differences in the rate of returned forms between groups reported in Table 8.

Besides, it is very clear that expected high healthcare expenditures increase the probability of ACS takeup. It appears indeed that age and previous healthcare expenditures (in 2008) have significant and big impacts. Similarly, the effect of disability is certainly linked to healthcare needs. It is finally worth noting that the people's response to information on ACS benefits is mainly explained by healthcare needs while the role of economic incentives, as the voucher increase, appears to be much weaker. One can imagine that people with high healthcare needs are simply much more aware of any public program for healthcare benefits.

Last, the impacts of gender and retirement may be noticed. The effect of retirement is likely explained by the time that retired people can devote to ACS takeup. The impact of gender is more difficult to analyze. One possible explanation is the expected high proportion of single mothers in our sample. It is indeed difficult for single mothers to deal with the heavy administration process associated with ACS takeup.

V. Discussion

This experiment has shown that increasing the voucher amount slightly improves the ACS takeup rate, with a 0.22 elasticity of the probability of applying for ACS to the subsidy. This result is consistent with previous work in the United States showing a price elasticity of health insurance demand varying between –0.2 and –0.6 (Thomas 1995; Marquis and Long 1995; Marquis et al. 2004; Auerbach and Ohri 2006).

Table 8
Likelihood of ACS Takeup

Dependent Variables	Average Marginal Effect	
Group		
Control	Reference	
Treatment 1	0.025*	(0.0139)
Treatment 2	–0.004	(0.0137)
Age	0.012***	(0.0021)
Age^2	–0.0001***	(0.0002)
Female	–0.026**	(0.0115)
Employment status in 2008		
Working individual	Reference	
Disabled individual	0.154***	(0.0342)
Retired individual	0.152***	(0.0187)
CMU-C coverage in 2007	0.028	(0.0236)
CHI coverage in 2008	0.017	(0.1187)
Long-term illness in 2008	–0.007	(0.0161)
Ambulatory healthcare expenditures in 2008		
0€–200€	–0.054***	(0.0177)
200€–699€	–0.007	(0.0184)
700€–1,999€	0.011	(0.0167)
2,000€ or more	Reference	
Pseudo R^2	0.0613	
N	4,209	

Notes: Probit regression of the probability of ACS takeup (dummy variable: 1 individual returned an application form; 0 otherwise). Average marginal effects are reported and standard errors are in parentheses. Statistical significance levels * =10 percent; **=5 percent; ***=1 percent.

Nevertheless, we must be cautious about these comparisons because part of our experimental sample is initially covered by a CHI plan. We discuss this point below. In addition to the weakness of the takeup rate elasticity, the low takeup rate is intriguing. We explore other potential explanations and ask whether the imprecise eligibility assessment rule used by the CPAM partly explains this weak enrollment rate.

A. Takeup rate and eligibility

As reported in Table 7, a sizeable number of applications were refused by the CPAM due to resources that were too high or too low. This imprecise targeting of the eligible population may be an initial explanation for low enrollment because noneligible individuals may know that they cannot benefit from ACS (for instance, through former social benefits applications).

Our experiment underlines the difficulties in reaching the targeted population. These

difficulties are due to the administration's lack of precise information on actual family resources; thus, we do not have accurate information on who is eligible for ACS. As mentioned above, a nonnegligible number of individuals who returned an application form were not eligible for ACS. It is essential to take this factor into account because uncertainty about effective eligibility reduces the incentive to apply for the program.

To further investigate this issue, after the experiment, we collected new data on 2008 incomes for each individual to more precisely assess eligibility for ACS in 2009. After reassessing eligibility with this new information, we found that only 43 percent of the experimental sample for whom 2008 income was available, were eligible for ACS, confirming that the initial eligibility targeting of the experimental population in 2008 was imprecise (Table 9). All the figures presented in this section are dragged from this new defined sample.

Among this redefined eligible population, the takeup rate rises to 24 percent. The failure of some individuals in the initial sample to apply could be explained by their knowledge of their ineligibility status. However, this rate remains low and suggests other obstacles to application. The refusal rate among applicants remains high: 22.3 percent of the claimants were refused due to resources beyond the entitlement criteria, of which 5 percent were refused due to resources that were too low and 17.2 percent because of resources that were too high. This finding underlines the complexity of eligibility criteria, which is heightened by the narrowness of the target population. Moreover, imprecise targeting of eligible people implies costs for the CPAM: the direct costs of sending letters to noneligible people, indirect costs due to the nonapplication of eligible individuals because of uncertainty about their eligibility, and the nonfinancial costs borne by noneligible people who apply.

Our results also suggest that health insurance subsidies could help to better target eligible populations given that the acceptance rate is slightly higher in both treatment groups than in the control group (79.2 percent versus 74.4 percent). In particular, the proportion of refusals due to resources above the eligibility threshold was lower in both treatment groups, suggesting that the increase in the subsidy has attracted the poorest among the experimental sample.

B. Information costs

In addition to complex eligibility rules, individuals may find it difficult to complete forms or to understand the application procedure. A previous study on the reasons for the nontakeup of ACS found that 63 percent of individuals who benefited from a disability allowance and were identified as eligible said that they did not take advantage of this right because they lacked information about the program and the claim process (Revil 2008b). More generally, a lack of information and administrative complexity, including difficulties completing forms or understanding the application process, are major factors in nontakeup, as shown by studies that have reviewed nonfinancial reasons for the nontakeup of social benefits in Europe (Kerr 1982; Kerr 1983; Craig 1991; van Oorschot 1995; Gilles-Simon and Legros 1996; van Oorschot 1998) and in the United States (Remler, Rachlin, and Glied 2001; Currie 2006). In our framework, literacy problems must be considered; the letter is written in an administrative syntax, and the social security scheme is particularly intricate. Moreover, qualitative observations by the anthropologist during information briefings showed that some people

Table 9
Returned ACS Application Forms Among the Redefined Sample

	Control		Treatment 1		Treatment 2		Treatment 2: With Meeting		Treatment 2: Without Meeting		Total
	1	2	1	2	1	2	1	2	1	2	1
Returned forms:	117	22.4	134	25.7	126	23.8	20	33.9	106	22.6	377
CHI	86	24.9	89	25.4	92	25.4	12	34.3	80	24.5	267
No CHI	31	17.5	45	26.2	34	20.4	8	33.3	26	18.2	110
Number of individuals	523	100.0	522	100.0	529	100.0	59	100.0	470	100.0	1,574

Notes: (1) All figures in these columns are numbers of individuals. (2) All figures in these columns are percentages.

seem to have difficulties in distinguishing the CMU-C plan from the ACS benefit. Because the CMU-C is known to be a generous and free social CHI plan, people tend to be disappointed when they realize that ACS does not entitle them to a free plan (Wittwer et al. 2010).

As indicated above, individuals who attended the meeting were significantly more likely to complete an application form (and to obtain an ACS agreement). This result must be considered carefully because we cannot rely on the experimental nature of our data at this point. Surprisingly, even when considering only the redefined sample of the eligible population, the enrollment rate remains low (36 percent of the newly defined sample of eligible individuals; Table 9). This result suggests that information costs may not be completely excluded by the briefing. To better understand the low enrollment rate of meeting participants, we exploit the qualitative insights collected by the anthropologist during meetings. According to her observations, two types of participants can be distinguished. The first type understands most of the information provided during the meeting (Wittwer et al. 2010). Some people in this group decline to enroll because they realize that they are not eligible. Others do not enroll because they think that a CHI plan is too expensive after the voucher has been deducted (see below). The second type appears to be unable to assimilate the information provided during the meeting. Most of the time, people in this group do not apply.

We also find that the invitation to participate in an information briefing discourages certain individuals from applying. This finding illustrates the difficulty in adequately communicating the existence of a scheme and the administrative procedures involved to allow people to benefit from it. Moreover, only 9 percent of the population attended a briefing, which may legitimize the idea of using third-party organizations (such as associations, mutual benefit organizations, social workers) to disseminate information and support (Chauveaud and Warin 2009).

These observations confirm the diversity of enrollment behaviors. To go further in the analysis of nontakeup, it is useful to separately consider individuals covered by a CHI plan and those without a CHI plan. The benefit from the ACS appears to be very different for these two subpopulations. For individuals without CHI, the net benefit from a complementary health insurance plan is questionable.

C. Benefit from a CHI plan

Assuming rational behavior of eligible individuals without a CHI plan, we expect that these individuals will decide to apply for ACS if the benefits they could obtain from it exceed their costs. Several studies on reasons for the takeup of means-tested programs in the United States show evidence of such behavior (Remler, Rachlin, and Glied 2001; Currie 2006). For instance, a study by Janet Currie of Medicaid in 2000 finds that immigrant families with more children are more likely to enroll in the plan because they benefit more without facing higher enrollment costs (Currie 2000).

Regarding health insurance programs, benefits may depend on the potential health status of the recipients and their potential healthcare use as well as their attitudes toward financial risk (Remler, Rachlin, and Glied 2001). An interpretation of the low takeup rate of ACS may be the result of a rational choice regarding the needs and the preferences of this population. By definition, preferences, particularly risk aversion, are unobservable. It is therefore not possible to evaluate the subjective value of the

Table 10
Health Expenditures and Out-of-Pocket Expenses (OOP) in 2008 Among the Redefined Sample

	CHI	No CHI	Total
Total healthcare use	2,501.58€	2,213.29€	2,407.07€
Out-of-pocket expenses			
Average annual amount	535.09€	323.55€	465.74€
Percentages of individuals with more than 250€ OOP	54 percent	34 percent	47 percent
Average annual amount of OOP related to dental and optical care	114.63€	55.93€	95.39€
Average annual amount of OOP related to other care	420.46€	267.62€	370.36€
Percentages of individuals with chronic disease	42 percent	44 percent	43 percent
Average annual amount of OOP of individuals suffering from a chronic disease	741.08€	443.78€	640.22€
Average annual amount of OOP of individuals without chronic disease	384.97€	227.62€	334.74€
Number of individuals	1,058	516	1,574

Notes: Out-of-pocket expenses after reimbursement by National Health Insurance (NHI).

program for this population. However, we can explore whether the program is valuable for uninsured individuals regarding their potential copayment.

As expected considering their income level, this population has a generally poor health status, which may lead to important healthcare needs. Two indicators are available in the administrative data to assess individual health status: the benefit from an exemption from copayment for long-term illnesses and health expenditures. In 2008, 42.9 percent[11] of the redefined sample of eligible individuals benefited from exemptions from copayment due to long-term illnesses, whereas this was only the case for 15 percent of the French population. In this redefined sample, the average amount of health expenditure was 2,407.07€ but health expenditures were strongly concentrated among individuals with the worst health status (Table 10). The mean health expenditures of people who benefitted from a copayment exemption was 4,374.87€, whereas health expenditures for the remaining part of the population were 929.57€, on aver-

11. The proportion of individuals exempted from copayment due to long-term illnesses is larger in the redefined sample. This difference is not surprising considering the increase of health status with income. However, health expenditures of individuals exempted because of long-term illnesses are quite similar in the original and the redefined sample,

age. After reimbursement by National Health Insurance, the average copayment was 465.74€ for the whole population, 640.22€ for individuals exempted because of a chronic illness, and 334.74€ among the rest of the population.

If we assume that the average health insurance premium is 500€ per year (Arnould and Vidal 2008; Jusot, Perraudin, and Wittwer 2012) and that the ACS voucher covers 50 percent of this premium, we can estimate that the program is valuable for individuals who expect to have a copayment higher than 250€ per year. In fact, 47 percent of the sample and 34 percent of the individuals without a CHI plan had a copayment of more than 250€ in 2008. The average copayment for individuals without a CHI plan is 323.72€. Even without considering the out-of-pocket expenses for dental and optical care, which are not well covered by most of the CHI contracts, the average copayment is more than 250€ and is as high as 267.62€ for individuals without a CHI plan. Thus, the net benefit of the program does not fully explain its low takeup rate among the population without a CHI plan. However, this result does not mean that enrollment behavior avoids rationality. In fact, the likelihood of returning a form is positively correlated with healthcare expenses (Table 8). The low takeup rate is even more questionable among the population that was initially covered by an insurance plan.

D. Low takeup of covered people

We might expect that people covered by a CHI plan would systematically return forms given that ACS is a windfall for them. As reported in Table 9, however, only 25 percent of eligible individuals covered by a CHI plan in 2008 actually returned a form, regardless of the experimental group to which they belonged.

This low return rate is puzzling. First, we must keep in mind that some people who are covered by a CHI plan are covered by their employer and therefore are not eligible for ACS.[12] As noted above, the proportion of insured people covered by their employer in the studied population represents roughly 20 percent of the insured population. Therefore, the corrected return rate for the insured population is likely to increase to 31 percent (under the assumption that people covered by their employer realize that they are not eligible). Nevertheless, it is unclear why most people covered by an individual plan do not return the form.

The failure to understand the information contained in the letter may also be a convincing explanation. As noted above, the letter mailed by the CPAM is written in an administrative syntax, and the social security scheme is particularly intricate. We might expect that some insured persons could misinterpret the eligibility scheme. In particular, they may expect the ACS voucher to be restricted to uninsured people or that the ACS benefit requires the choice of a specific insurance plan that would require them to give up their current plan. Furthermore, applying to ACS requires covered people to indirectly reveal their income to their insurance companies (because they use the ACS voucher to pay their plan). Revealing his income may be unpleasant in itself and may be associated with the fear that the contract will not be renewed.

The low takeup rate of the insured population supports the idea that the low takeup rate of the uninsured population—the main target of the ACS program—cannot be wholly understood as a simple economic tradeoff between insurance benefits and the

12. In Table 9, we selected people who appeared to be eligible on the basis of their income in 2008.

premium amount. Nevertheless, we can observe that the takeup rates are very close in the control group and in Treatment Group 1 in the covered population, contrary to what is observed in the uninsured population (Table 9). This difference between the two populations is compatible with economic tradeoffs. Indeed, the voucher amount is not supposed to influence the takeup behavior of the insured population for whom the voucher is a windfall (regardless of the voucher amount assuming that it is sufficient to compensate application costs). Conversely, it is supposed to influence the takeup behavior of the uninsured population, for whom the premium amount must be compared with the voucher amount.

E. Methodological issues

The experimental approach used in this study has the advantage of relying on the assessment of a program implemented in vivo. The randomization avoids selection issues, which are usually the main difficulty in evaluating public policy. However, the improvement in internal validity robustness is counterbalanced by a loss in external validity representativeness. The studied population is only representative of the eligible population for ACS in Lille, which undoubtedly has its own particular characteristics. Nevertheless, Lille is the fourth-largest city in France and is characterized by a high unemployment rate. We can thus assume that the population of Lille is quite representative of the French low-income population. Similarly, the effectiveness of the experiment is dependent on the institution that conducted it and its relationship with the individuals concerned. There is no guarantee that the same experiment conducted with a similar population would provide the same results in another CPAM. Moreover, as with all experiments, this study is limited in time. It does not allow us to observe the long-term repercussions of the treatments given the potential slow diffusion of information. Ultimately, receiving an ACS agreement does not necessarily mean that it is used to purchase CHI coverage. Therefore, it would be interesting for future work to examine the effects of the treatments on CHI coverage.

VI. Conclusion

Based on a randomized experiment, this study proposes to understand the low takeup rate of the ACS program which is a complementary health insurance voucher program for the poorest in France. Two of the main hypotheses put forward to explain low enrollment were explored: a lack of access to information about the program and a voucher amount considered to be too low. To the best of our knowledge, this social experiment is first to focus on the impact of subsidies and differentiated access to information on health insurance demand. Results show that a voucher increase has a small but significant effect on takeup.

Surprisingly, the invitation to an informational meeting appears to cancel out the positive effect of the voucher increase. This experiment also underlines the difficulties in effectively reaching a targeted population and finally confirms the difficulties that are faced in increasing the health insurance coverage of poor populations via subsidy programs.

In the French context, this experiment provides some relevant elements for improving access to health insurance of the low-income population. Considering that increasing the voucher amount slightly improves the ACS takeup rate and better targets the eligible population, we may expect that the increase in the standard amount of financial aid for individuals aged 50 and over instituted on January 1st 2010 will have a positive impact on ACS takeup. However, as this national increase is lower than that proposed within the framework of our experiment, we can also expect the impact to be smaller. Moreover, this experiment points out the difficulty of reaching a target population by means of a postal information campaign, such as that implemented at the national level in 2008–2009, and the counter-productive nature of the invitation to an information briefing. In this light, extending the target population on January 1, 2011 may be a first step to encouraging ACS takeup.

Nevertheless, these changes to the ACS program may well be insufficient to generalize access to health insurance for the poorest, and further research is needed to properly design other forms of intervention or alternative policies.

Appendixes

Table A1
Description of Variable Set

Type	Variables	Description
Experimental data	Completed form returned	Dummy variable = 1 if individual returned completed application form, 0 otherwise
	ACS proposal	Dummy variable = 1 if individual received an ACS proposal after CPAM assessment, 0 otherwise
	CMU-C proposal	Dummy variable = 1 if individual received an ACS refusal but a CMU-C proposal (in case of resources below ACS eligibility threshold) after CPAM assessment
	ACS refusal	Dummy variable = 1 if individual received an ACS and CMU-C refusal (in case of resources above ACS eligibility cap) after CPAM assessment, 0 otherwise
	Meeting participation	Dummy variable = 1 if individual went to the meeting, 0 otherwise (only for Treatment Group 2)

Sociodemographic variables	Age in 2008	Individual
	Age^2 in 2008	Individual
	Gender	Individual
Health, Healthcare utilization and CHI coverage	Ambulatory healthcare expenses in 2008	0€–199€
		200€–699€
		700€–1,999€
		2,000€ or more
	Long-term diseases in 2008	Dummy variable = 1 if individual had a long-term disease in 2008, 0 otherwise (LTC)
	Complementary health insurance coverage in 2008 (December 31)	Dummy variable = 1 if individual is covered by a CHI in 2008, 0 otherwise
	Complementary health insurance coverage after experiment (September 30, 2009)	Dummy variable = 1 if individual is covered by a CHI after experiment, 0 otherwise
	CMU-C coverage in 2007 (December 31)	Dummy variable = 1 if individual is covered by CMU-C in 2007, 0 otherwise
	Employment status in 2008 (December 31)	Working individual (includes occupied and unemployed individuals)
		Retired individual
		Disabled individual

Table A2
Likelihood of meeting attendance (Treatment Group 2)

Dependent variables	Average marginal effects	
Age	0.009***	(0.0030)
Age^2	–0.00007**	(0.00003)
Female	–0.017	(0.0155)
Employment status in 2008		
Working individual	Reference	
Disabled individual	–0.032	(0.0272)
Retired individual	–0.033*	(0.0188)
CMU-C coverage in 2007	–0.010	(0.0291)
CHI coverage in 2008	–0.034**	(0.0168)
Long-term illness in 2008	0.013	(0.0227)
Ambulatory healthcare expenditures in 2008		
Under 200€	–0.043**	(0.0218)
200€–699€	–0.052**	(0.0203)
700€–1,999€	–0.003	(0.0209)
2,000€ or over	Reference	
Pseudo R^2	0.0527	
N	1,403	

Notes: Probit regression of the probability of attending the briefing (dummy variable: 1 individual attended the briefing; 0 otherwise). Average marginal effects are reported and standard errors are in parentheses. Statistical significance levels * =10 percent; **=5 percent; ***= 1 percent.

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