

COST SHARING AND PROTECTION MECHANISMS IN HEALTH

EXAMPLES OF HYPOTHETICAL SIMULATIONS: RESULTS



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- **The external experts were consulted about a (preliminary) version of the scientific report. Their comments were discussed during meetings. They did not co-author the scientific report and did not necessarily agree with its content.**
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■ SCIENTIFIC REPORT

1 INTRODUCTION

How to use this document?

This Scientific Report is not intended to be read as a stand-alone document, but as a complement to the Technical Manual, Supplement and Synthesis (in Dutch and French) of this study. It gives a detailed account of the simulation results underpinning the messages rendered in the Synthesis.

The background, problem description, as well as the discussion of the results, the conclusions and policy recommendations are to be found in the Synthesis.

The Synthesis, Technical Manual and Supplement are published as separate documents on our website. They can be accessed from the same referral page as the current document.

1.1 General background

Patient cost sharing is a common feature of health insurance schemes. Patient cost sharing is what the patient pays for care at the point of use. Different kinds of arguments for patient cost sharing have been offered in the literature. It may be implemented to help finance universal healthcare systems by raising additional revenue (cost shifting). Second, cost sharing is often seen as a tool to reduce moral hazard and hence to increase efficiency and reduce overconsumption. Ideally, increased cost awareness should limit wasteful healthcare use without forgoing necessary care. A third rationale for cost sharing is to provide patients with monetary incentives to encourage or discourage the use of specific health services. However, since the financial burden for the poor and the sick may become considerable because of cost sharing, policymakers have introduced protection measures to keep the healthcare system financially accessible for vulnerable groups.



The compulsory social health insurance system in Belgium is characterised by coverage of nearly the entire population for a wide range of services. However, patient cost sharing and social protection mechanisms are also inherent features of the Belgian health insurance system. Various forms of cost sharing are implemented: co-payments, coinsurance and an income-dependent stop-loss limit, called the system of maximum billing. These forms of cost sharing are called direct forms of cost sharing.¹ A co-payment is a fixed fee (flat rate) per item or service. In case of coinsurance the patient pays a percentage of the cost of the service.

The system of maximum billing (MAB) puts a ceiling on the total amount of co-payments and coinsurance at the level of a household, where the ceiling is a function of the net taxable income of the household. Before the MAB ceiling is reached, households pay part of the cost in the form of co-payments and coinsurance. Once they reach the ceiling, there is full coverage of services included in the MAB system. The system of maximum billing is only one protection measure Belgian policymakers have introduced to keep healthcare financially accessible for vulnerable groups. Low-income households receive an increased reimbursement benefit, paying reduced co-payments and coinsurance rates at each encounter with the healthcare system. The reduction depends on the type of expenditure. In addition, several protection mechanisms have been put in place for chronically ill patients.

1.2 Scope of the study

As in any other healthcare system, Belgian policymakers have to take difficult decisions about how best to allocate limited resources. They are confronted with potentially conflicting goals of providing high-quality and accessible healthcare in an efficient way. The current complex structure of health insurance, patient cost-sharing and social protection measures implicitly reflects the weights assigned to each of these goals and underlying values.

The concrete design of social protection mechanisms is a challenge for policy makers. Questions that arise are: What is the desirable degree of income redistribution to be generated by health insurance or protection mechanisms? On which groups should protection measures focus? How selective should these measures be? What about the chronically ill that are not poor? How to keep the political support of higher-income groups for an insurance system with a high level of cost sharing when they are ill and at the same time large contributions or taxes when healthy?

Many of these questions are philosophical or political in nature and cannot be answered by any empirical analysis. However, the consequences for the population or for certain groups of changing specific features in the design of cost sharing or protection measures can be empirically explored. Hence, such empirical analysis may yield useful information to evaluate policy measures that were taken in the past or that might be considered in the future.

The **overall objective of this study** is to simulate budgetary and distributional consequences of policy measures related to the design features of social protection mechanisms. Some characteristic features of the current health insurance system will not be questioned. Hence, the analysis rests on the acceptance of the following basic principles in the current design:

1. The existence of patient cost sharing as such is not questioned.
2. The need for social protection mechanisms to keep healthcare affordable is not questioned.



3. A coherent policy for welfare distribution and the fight against poverty goes beyond the health insurance system. However, we will focus on the affordability of healthcare expenses only.
4. The current mix of public financing methods in Belgium (e.g. direct and indirect taxes, social security contributions, patient cost sharing) is not questioned.

The study is limited to individuals covered by the compulsory health insurance, about 99% of the population. Furthermore, we do not cover private health insurance.

The study was commissioned by the National Institute for Health and Disability Insurance (RIZIV – INAMI).

1.3 Research methods and overview of the report

The recommendations (see Synthesis) are based on

- a review of existing literature (grey literature, legal documents, policy papers) to describe and analyse the protection mechanisms in the Belgian health insurance system; and
- microsimulation modelling to evaluate the budgetary and distributional consequences of policy measures taken between 2012 and 2016 and of hypothetical changes in the design of current measures.

Microsimulation modelling

Policy evaluation can be conducted at different levels. Many policy analyses focus on the aggregate (or macro) level by calculating overall costs and average effects, often complemented with a description of the impact on specific “types” of individuals or households. A major shortcoming of analyses at an aggregate level is that they are not very informative on the distributional effects of the policy. Moreover, an analysis of “type” cases may be misleading because “type” cases are not necessarily representative of the population.

A microsimulation model calculates effects at the level of the micro unit of analysis (households or individuals) but it does so for a representative sample of the population and therefore gives a more complete picture of the effects of the policy.

In this study a static microsimulation model was used: it provides redistribution impacts, but they have to be interpreted as “day after reform” impacts since no behavioural responses are included. Moreover, all policy measures are applied to the income distribution, population composition, fees and prices recorded in our data (2012). This implies for example that the age composition does not differ across different simulations. Hence the monetary impact (e.g. on co-payments or reimbursements) and the socio-demographic features of affected households should be interpreted accordingly.

We refer to Chapter 6 in KCE Report 80 (Effects of the Maximum Billing system on health care consumption and financial access to health care) for a detailed description of the technique of microsimulation.²

In many simulations performed in this study, it was necessary to change the reimbursement status: from entitlement to increased reimbursement to no entitlement and vice versa. To this end, an algorithm was developed taking account of RIZIV – INAMI reimbursement regulations (see section 2.6.3 in the Technical Manual).

Structure of the report

This scientific report is a companion document to the Technical Manual and gives the simulation results of recent policy measures as well as of possible new measures changing the design features of social protection mechanisms.

The first step in all simulation exercises is the construction of a baseline situation. The constructed baseline situation in this document reflects the regulation of cost sharing and protection mechanisms in 2012. A detailed description of how the baseline simulation was set up, can be found in the Technical Manual.



In a second step, the impact of policy measures that were taken between 2012 and 2016 is simulated and results are presented in Chapter 2 of this document. For each policy measure a technical documentation sheet^a is provided, as well as tables with the main results. Also, the impact of each policy measure on the amount of co-payments before and after application of the maximum billing system (MAB) is analysed at the household level and is available in a separate supplement.

Finally, the same information is provided for simulations changing the design features of social protection mechanisms. Chapter 3 evaluates the impact of potential new policy measures.

^a The technical documentation also contains the steps that were taken in the simulation. The explanation of the variables starting with PP or SS can be found in Appendix 1 in the Technical Manual.

2 CHANGES IN SOCIAL PROTECTION MECHANISMS BETWEEN 2012 AND 2016

2.1 Summary of policy changes

Table 1 gives the global impact of policy measures that were taken between 2012 and 2016 (except for the complete take-up of the OMNIO status or entitlement to increased reimbursement – see further). A description of the measures as well as their distributional effects are provided in sections 2.2 to 2.6.

The impact for RIZIV – INAMI is given in terms of total reimbursements from the maximum billing (MAB) system. For the global impact for the insured we calculated the following results:

- total co-payments (gross co-payments)
- total co-payments after the MAB (net co-payments)
- total out-of-pocket payments after MAB (net co-payments and supplements^b)
- number of de facto^c households with MAB reimbursements
- number of extreme payer de facto households
- number of persons entitled to increased reimbursement of medical costs.

In addition to representing the results in terms of absolute amounts or numbers, the impact is also expressed in terms of percentage change with respect to the results of another simulation (baseline or other).

^b Only those supplements that are registered in the sickness fund data could be included.

^c A de facto household consists of all household members residing at the same address on 1 January, as registered in the National Register.



Simulations N_1 to N_3 start from the baseline simulation, reflecting regulations in 2012. Simulations N_4 and N_5 are cumulative with the previous simulation.

Table 1 – Overview of simulated changes between 2012 and 2016

	Total co-payments	Total MAB reimbursements	Co-payments after MAB	Out-of-pocket payments after MAB	Number of de facto households MAB reimbursements	Extreme payers ^a	Number of persons with right to increased reimbursement ^b
Baseline situation (N_0)	2 141 223 394	361 829 676	1 779 393 717	2 463 000 931	650 180	152 098	1 667 038
Complete take-up OMNIO (N_1)	2 083 366 042	337 033 410	1 746 332 632	2 429 939 846	617 961	143 686	2 400 406
Comparison N_1 and N_0	-2.70%	-6.85%	-1.86%	-1.34%	-4.96%	-5.53%	43.99%
Changing the definition of the reference household who benefited from OMNIO (N_2)	2 141 644 903	361 995 177	1 779 649 726	2 463 256 939	650 393	152 109	1 662 664
Comparison N_2 and N_0	0.02%	0.05%	0.01%	0.01%	0.03%	0.01%	-0.26%
Automatic eligibility to increased reimbursement (N_3)	2 062 836 149	334 709 402	1 728 126 747	2 411 733 960	616 332	143 434	2 706 748
Comparison N_3 and N_0	-3.66%	-7.50%	-2.88%	-2.08%	-5.21%	-5.70%	62.37%
Comparison N_3 and N_1	-0.99%	-0.69%	-1.04%	-0.75%	-0.26%	-0.18%	12.76%
Change in MAB right for handicapped children (N_4)	2 062 836 149	334 795 911	1 728 040 237	2 411 647 450	616 467	143 434	2 706 748
Comparison N_4 and N_3	0.00%	0.03%	-0.01%	0.00%	0.02%	0.00%	0.00%
Introduction status chronic illness (N_5)	2 062 836 149	347 273 298	1 715 562 850	2 399 170 063	657 171	143 020	2 706 748
Comparison N_5 and N_4	0.00%	3.73%	-0.72%	-0.52%	6.60%	-0.29%	0.00%

^a Extreme payers are de facto households whose co-payments are higher than 10% of their net equivalised income of 2011. De facto households without co-payments and whose net equivalised income is equal to zero are not considered as extreme payers. ^b The number of persons with right to increased reimbursement was calculated by attributing the weight of the household to each individual. Out-of-pocket payments consist of net co-payments and supplements recorded in the variable SS00165. All amounts are in 2012 euro.



2.2 Estimating the difference between OMNIO beneficiaries and complete take-up for the OMNIO status

2.2.1 Complete take-up for the OMNIO status

Technical documentation	
Initial situation (N_0)	<p>Increased reimbursement of healthcare expenses is granted via two different statuses:</p> <ul style="list-style-type: none"> Entitlement to preferential reimbursement (rechthebbende op de verhoogde verzekeringstegemoetkoming (RVV) – Bénéficiaire de l'intervention majorée (BIM)) is based on a specific allowance or based on a specific characteristic after means-testing and is extended to members of the reference household (=applicant, partner and their dependent persons). Entitlement to OMNIO is granted to all members of de facto households with a low income after a means test.
Policy Change (N_1)	<p>The OMNIO status was only granted after the introduction of an active request. In this simulation, we calculated complete take-up for the OMNIO status. All de facto households without a right to OMNIO in situation N_0 but which comply with the income condition are awarded OMNIO.</p>
Steps for the simulation	<p>Starting point is the initial situation N_0.</p> <ul style="list-style-type: none"> The entitlement to preferential reimbursement (RVV – BIM) or OMNIO in N_0 remains unchanged^a. Individuals for whom the 3rd digit of PP0030 = 1, keep the right to preferential reimbursement or OMNIO. The entitlement to OMNIO is extended to de facto households having (1) individuals without the right to OMNIO and (PP1010 = 0); (2) a gross taxable income (sum of IPCAL codes) in 2011 below the following threshold (applicable in 2012): Threshold (€): 15 606.71+(Number of members of the de facto household - 1)*2 889.22 The level of co-payments (SS00160) and RIZIV – INAMI expenditures (SS00060) depend on the right to increased reimbursement. Using a specific algorithm, co-payments and RIZIV – INAMI expenditures are recalculated for all individuals in de facto households that gain the right to OMNIO. The right to the social MAB is re-evaluated (PP3001), MAB reimbursements (own calculations) and co-payments after MAB reimbursements are recalculated.
Impact of the policy	
Number of households and persons	<p>The percentage of all households where at least one person was entitled to OMNIO amounted to 1.88% (N=93 559) and 11.49% (N=572 350) before and after complete take-up, respectively.</p> <p>Among the households where at least one person gained eligibility to OMNIO, 33 883 households (0.69% of the total sample) had at least one person entitled to preferential reimbursement (RVV – BIM).</p>
Difference in co-payments	<p>The total amount of co-payments for these households affected by the measure decreased from € 122 933 892 to € 65 076 540 (see Table 2).</p>
MAB reimbursements	<p>The social MAB is attributed to all households entitled to OMNIO. Despite this change, the important reduction in co-payments resulted in lower MAB reimbursements for these households, i.e. from € 38 812 745 to € 14 016 479 (see Table 2). 70% of the households that gain entitlement to OMNIO and previously had MAB reimbursements discontinue to receive MAB reimbursements (see Table 4).</p>



Technical documentation		
Co-payments after reimbursements	MAB	After MAB reimbursements, the decrease in co-payments amounts to €33 061 086 (see Table 2).
Characteristics of households affected by the measure		<p>Table 3 shows the characteristics of the households according to their eligibility to preferential reimbursement (RVV – BIM and OMNIO). Compared to the households that benefited from OMNIO in the baseline situation (before simulating the policy for complete take-up), those that gained eligibility to OMNIO have:</p> <ul style="list-style-type: none"> • lower mean and extreme co-payments; and • an underrepresentation of indicators of a long-term illness (physiotherapy-E, increase child allowance, integration allowance handicap, long hospital stay, multiple hospital stays and the status chronic illness) <p>Table 4 shows the characteristics of the households that gain eligibility to OMNIO and benefit from a reduction in co-payments (column 'winners'). Compared to the general population, the winners have:</p> <ul style="list-style-type: none"> • an overrepresentation of single parent households; • an overrepresentation of households affiliated to a sickness fund as self-employed and of households that live exclusively from unemployment benefits; • an underrepresentation of persons in retirement or in early retirement; • an underrepresentation of persons with an indicator of a long-term illness (i.e. lump sum allowance B or C, physiotherapy-E, integration allowance handicap, help for the elderly, long hospital stay, multiple hospital stays, MAB for the chronically ill and the status chronic illness). This might be because low income households in these situations already benefited from RVV – BIM (e.g. people benefiting from an integration allowance for handicap) or OMNIO (see Table 3); a lower mean and median net taxable income (as expected given that the policy specifically targets low-income households). However, the number of households that benefit from means-tested welfare, such as guaranteed income or help for the elderly, are slightly underrepresented. This is expected since persons entitled to these allowances are entitled to RVV – BIM; an overrepresentation of extreme payer households, many of which have no or a low income.
Conclusion/Key message		<p>According to our estimates, the OMNIO status was granted to only 16% of the households that were eligible. This low take-up highlights the importance of the current policy that aims to pro-actively grant increased reimbursement of healthcare expenses to low-income households.</p> <p>Households benefiting from OMNIO in the initial situation had higher mean and extreme co-payments than the households that gained eligibility to the status. Low take-up among these households may be in part due to the fact that they have less contacts with the healthcare system.</p>

^a A more detailed analysis of the households that would lose the eligibility to increased reimbursement because their income is above the income threshold is presented in section 2.4.2.



Table 2 – Impact of complete take-up for OMNIO

	Baseline situation (N_0)	Complete take-up OMNIO (N_1)	Change N_1 – N_0	Relative take-up (N_0 / N_1)
OMNIO				
N persons	248 158	981 526	733 368	0.25
% of total	2.25%	8.90%	6.65%	
N Households	93 560	572 350	478 790	0.16
% of total	1.88%	11.49%	9.61%	
Change in expenditures for households affected by the measure				
Co-payments (€)	122 933 892	65 076 540	-57 857 352	-
MAB reimbursements (€)	38 812 745	14 016 479	-24 796 266	
Co-payments after MAB reimbursements (€)	84 121 147	51 060 061	-33 061 086	-

^a The number of persons was estimated by allocating the weight of the de facto household to each of its members.

Table 3 – Complete take-up for OMNIO: characteristics of households entitled to increased reimbursement

		Baseline situation (N_0)		Complete OMNIO take-up (N_1)		
		RVV-BIM & OMNIO	OMNIO	RVV-BIM & OMNIO	All OMNIO	Gained OMNIO
Households^a	N	1 059 684	93 560	1 504 590	572 350	478 790
RIZIV – INAMI reimbursements N_1	Mean (€)	6786.82	3616.46	5362.07	2532.32	2320.47
	P90 (€)	19260.82	7790.57	16393	6298.77	5845.42
Patient's co-payments N_1	Mean (€)	333.17	198.17	269.07	145.75	135.50
	P90 (€)	789.1	441.67	676.08	388.61	377.14
NTI 2011 (€)	Mean(€)	17 063	14 261	14 288	9 511	8 583
	Median(€)	13 688	12 983	12 899	10 750	9 646
NTI 2011- equivalised (€)^b	Mean (€)	12 733	9 635	10 851	7 248	6 782
	Median(€)	12 529	9 490	11 521	8 311	7 736
Household size	Mean	1.86	2.72	1.76	1.82	1.65



		Baseline situation (N_0)		Complete OMNIO take-up (N_1)		
		RVV-BIM & OMNIO	OMNIO	RVV-BIM & OMNIO	All OMNIO	Gained OMNIO
Single parent household	%	7.40	21.37	7.52	9.71	7.43
Young children (0-6 years)	%	7.98	26.08	8.13	11.81	9.02
Older persons (65-74 years)	%	18.75	3.77	16.22	9.71	10.87
Older persons (75 years or more)	%	33.07	2.38	27.21	12.11	14.01
Guaranteed income	%	20.33	6.29	14.77	3.59	3.06
Early retired	%	0.87	0.44	0.76	0.53	0.55
Retired	%	34.12	3.90	29.51	16.75	19.26
Disability	%	13.05	11.85	10.27	5.92	4.76
Incapacity for work	%	1.59	4.27	1.46	1.74	1.24
Unemployment	%	12.94	26.24	12.71	14.93	12.72
Affiliated to a sickness fund						
Salaried	%	90.87	95.46	87.18	81.64	78.94
Mixed (salaried, self-employed)	%	2.52	1.35	2.36	2.36	2.55
Self-employed	%	5.63	2.62	7.92	11.04	12.69
No head of the sickness fund	%	0.99	0.57	2.54	4.96	5.82
Lump sum allowance B or C	%	3.37	0.31	2.48	0.59	0.64
Physiotherapy-E	%	5.29	1.47	3.93	1.12	1.05
Increased child allowance	%	3.25	4.27	2.44	1.55	1.02
Integration allowance handicap	%	7.26	1.14	5.17	0.77	0.70
Help for the elderly	%	9.50	0.34	6.86	0.88	0.98
Long hospital stay	%	2.88	1.31	2.21	0.85	0.76
Multiple hospital stays	%	4.49	2.06	3.48	1.53	1.42
MAB for the chronically ill	%	7.99	1.52	7.04	4.54	5.13
Status chronic illness	%	32.27	10.39	24.72	8.57	8.21

^a Includes all households where at least one person benefits from the status. ^b Equivalised income=income corrected for household size



Table 4 – Complete take-up for OMNIO: characteristics of affected households and the general population

Variables		Statistic	Winner	All
Co-payments after MAB		N	316 398	4 980 113
		Mean (Change in €)	-104.49	-6.64
		P90 (Change in €)	-10.90	0.00
		P10 (Change in €)	-227.16	0.00
NTI 2011 (€)		Mean (€)	10 927	37 002
		Median (€)	11 820	28 290
NTI 2011 - equivalised (€)		Mean (€)	8 457	24 828
		Median (€)	9 288	20 759
Extreme payers N_0	NTI equivalised=0	%	14.56	2.36
	0<NTI equivalised<=6000	%	3.73	0.59
	NTI equivalised>6000	%	0.43	0.11
Extreme payers N_1	NTI equivalised=0	%	14.23	2.34
	0<NTI equivalised<=6000	%	1.81	0.46
	NTI equivalised>6000	%	0.02	0.09
Change in extreme payers	NTI equivalised=0	N	-1 048	-1 048
	0<NTI equivalised<=6000	N	-6 070	-6 070
	NTI equivalised>6000	N	-1 295	-1 295
	All	N	-8 413	-8 413
MAB reimbursements N_0		%	14.14	13.06
MAB reimbursements N_1		%	3.96	12.41
Change in MAB reimbursements		N	-32 219	-32 219
Household size		Mean	1.88	2.22
Single parent household		%	10.34	4.43
Young children (0-6 years)		%	12.64	13.24
Older persons (65-74 years)		%	11.37	15.07
Older persons (75 years +)		%	13.52	17.09
Guaranteed income		%	3.49	4.57



Variables		Statistic	Winner	All
Early retired		%	0.74	1.93
Retired		%	18.84	26.79
Disability		%	5.03	6.05
Incapacity for work		%	1.48	1.08
Unemployment		%	15.35	5.75
Affiliated to a sickness fund	Salaried	%	78.17	86.08
	Mixed (salaried, self-employed)	%	3.46	7.04
	Self-employed	%	14.84	6.10
	No head of the sickness fund	%	3.53	0.78
Lump sum allowance B or C		%	0.64	1.12
Physiotherapy-E		%	1.06	2.45
Increased child allowance		%	1.36	1.16
Integration allowance handicap		%	0.72	1.78
Help for the elderly		%	1.09	2.61
Long hospital stay		%	0.56	1.03
Multiple hospital stays		%	1.31	2.53
MAB for the chronically ill		%	4.41	8.37
Status chronic illness		%	8.56	15.37



2.3 Limiting the transfer of the entitlement to OMNIO to members of the 'reference' household

2.3.1 Transfer of the entitlement to OMNIO to members of the reference household

Technical documentation			
Initial situation (N_0)		Increased reimbursement of healthcare expenses is granted via two different status: <ul style="list-style-type: none">• Eligibility to preferential reimbursement (rechthebbende op de verhoogde verzekeringstegemoetkoming (RVV) – Bénéficiaire de l'intervention majorée (BIM)) is based on a specific allowance or based on a specific characteristic after means testing and is extended to members of the reference household.• Eligibility to OMNIO is granted to all members of de facto households with a low income after a means test.	
Policy Change (N_2)		The entitlement to OMNIO is limited to members of the reference household (i.e. person who opens the right, the partner and their dependents). The impact of adjusting the household definition from the de facto household to the reference household is evaluated for all de facto households entitled to OMNIO in situation N_0. This is an intermediary step before setting up the simulation for the simplification of the system that led to the abolishment of the OMNIO status (see section 2.4.1).	
Steps for the simulation		<p>Starting point is the initial situation N_0.</p> <ul style="list-style-type: none">• The entitlement to preferential reimbursement (RVV – BIM) in N_0 remains unchanged^a. This is the subgroup of individuals with the 3rd digit of PP0030 = 1 and PP1010 = 0.• Persons entitled to OMNIO in N_0 (PP1010 = 1) are assigned to a 'reference household' (see section 5.3.2 in the Technical Manual for the construction of the reference household).• When there is but one single reference household in the de facto household (perfect overlap), the entitlement to OMNIO remains unchanged^a.• When more than one reference household was identified in the de facto household, the right to OMNIO (PP1010) was recalculated at the level of the reference household, using the gross taxable income (changing sum of IPCAL codes) of 2011. Individuals may lose the eligibility to OMNIO if their reference household's gross taxable income exceeds the following threshold (2012): Threshold (€): 15 606.71+(Number of members of the reference household - 1)*2 889.22• The level of co-payments (SS00160) and RIZIV – INAMI expenditures (SS00060) depend on the right to increased reimbursement. Using a specific algorithm, co-payments and RIZIV – INAMI expenditures are recalculated for all individuals in de facto households that lose the right to OMNIO.• The right to the social MAB is re-evaluated (PP3001), MAB reimbursements (own calculations) and co-payments after MAB reimbursements are recalculated.	
Impact of the policy			
Number of persons	of households and	The change in the extension of the right to OMNIO affects 2 014 households (less than 2.15% of households which benefited from OMNIO). The number of persons with right to OMNIO who live in those households decreased from 8 212 to 3 838 (see Table 1).	



Technical documentation		
Difference in co-payments		The co-payments for these households increased from €521 235 to €942 744, with a difference of €421 509.
MAB reimbursements		The MAB reimbursements for these households increased from €78 240 to €243 741. A total of 212 new households received MAB reimbursements.
Co-payments after reimbursements	MAB	The amount of co-payments minus the reimbursements via the MAB increased from €442 994 to €699 002.
Conclusion/Key message		<p>In order to ensure the integration of OMNIO and RVV – BIM into a single system, sickness funds bring persons eligible for OMNIO together into reference households within de facto households. In case of doubt about the reference household composition the persons are contacted and asked to introduce a new declaration of honour in order to verify the reference household's composition and its income.</p> <p>RIZIV – INAMI estimated that 21 136 persons who were entitled to OMNIO in 2013 would lose their eligibility under the new rules that applied from 1 January 2014 onwards or for not fulfilling administrative requirements (e.g. introducing the declaration of honour).³</p> <p>In this simulation, we considered changes in the eligibility to OMNIO based on data from 2012 and only for de facto households that could be divided into more than one reference household. Therefore, our results cannot be directly compared with those provided by RIZIV – INAMI.</p>

^a A more detailed analysis of the households that would lose the eligibility to increased reimbursement because their income is above the income threshold is presented in section 2.4.2.

Table 5 – Impact of changing the definition of the reference household for OMNIO beneficiaries

	Baseline situation (N_0) ^a	Change in reference household definition (N_2) ^a	Change N_2 – N_0
Persons with right to OMNIO in households affected by the measure^a			
N persons	8 211	3 837	-4 374
% of total OMNIO holders in the baseline situation	3.4%	1.6%	
Change in expenditures for households affected by the measure			
Co-payments (€)	521 235	942 744	421 509
MAB reimbursements (€)	78 240	243 741	165 501
Co-payments after MAB reimbursements (€)	442 994	699 002	256 008

^a The number of persons was estimated by allocating the weight of the de facto household to each of its members.



2.4 Simplification of the system of increased reimbursement

2.4.1 Increased reimbursement in 2014

Technical documentation	
Initial situation (N_0)	<p>Increased reimbursement of healthcare expenses is granted via two different status:</p> <ul style="list-style-type: none"> • Eligibility to preferential reimbursement (rechthebbende op de verhoogde verzekeringstegemoetkoming (RVV) – Bénéficiaire de l'intervention majorée (BIM)) is based on a specific allowance or based on a specific characteristic after means testing and is extended to members of the reference household. • Eligibility to OMNIO is granted to all members of de facto households with a low income after a means test.
Policy Change (N_3)	<p>Integration of preferential reimbursement (RVV – BIM) and OMNIO into a new status of increased reimbursement 2014 (see section 4 in the Technical Manual).</p> <ul style="list-style-type: none"> • Entitlement based on a specific allowance or condition. • Entitlement based on low income after a means test. • The entitlement is extended to members of the reference household only (see section 5.3.1 and 5.3.2 in the Technical Manual). • In correspondence with the transition measures, households that were previously entitled to preferential reimbursement keep their right, as well as persons entitled to OMNIO for whom the de facto household corresponds to the new reference household.
Steps for the simulation	<p>Starting point is the initial situation N_0.</p> <ul style="list-style-type: none"> • Persons entitled to preferential reimbursement (RVV – BIM) in N_0 are automatically entitled to the new status of increased reimbursement^a, since their conditions for entitlement generally are the same. This is the subgroup of individuals with the 3rd digit of PP0030 = 1 and PP1010 = 0. • When there is but one single reference household in the de facto household (perfect overlap), persons entitled to OMNIO (pp1010 = 1) in N_0 are automatically entitled to the new status of increased reimbursement. • The entitlement to increased reimbursement is evaluated for all other reference households. Entitlement to the new status of increased reimbursement is awarded to reference households whose gross taxable income (changing sum of IPCAL codes) in 2011 falls below the following threshold (2012): Threshold (€): $15\,606.71 + (\text{Number of members of the reference household} - 1) \times 2\,889.22$ • The level of co-payments (SS00160) and RIZIV – INAMI expenditures (SS00060) depend on the right to increased reimbursement. Using a specific algorithm, co-payments and RIZIV – INAMI expenditures are recalculated for all individuals in de facto households that gain or lose the right to OMNIO. • The right to the social MAB is re-evaluated (PP3001), MAB reimbursements (own calculations) and co-payments after MAB reimbursements are recalculated.



Technical documentation	
Impact of the policy	
Number of households and persons	<p>Compared to the baseline situation, an additional 1 039 710 persons are entitled to increased reimbursement (1 044 083 persons gained a right while 4 373 persons lost their right) (see simulation N_2 for a detailed explanation). The changes affect 715 500 households. In 668 643 of these households no member previously benefited from increased reimbursement.</p> <p>The percentage of all de facto households where at least one person benefits from increased reimbursement amounts to 21.28% and 34.70% before and after the introduction of the measure, respectively.</p> <p>The policy has an impact on the number of extreme payer households that decreased from 152 098 to 143 434 households, i.e. 5.70%.</p>
Difference in co-payments	The co-payments for these households decreased from € 259 125 169 to € 180 737 924. The reduction in the total amount of co-payments paid after the introduction of the policy amounts to € 78 387 245 (see Table 6).
MAB reimbursements	The MAB reimbursements decreased by € 27 120 274 (see Table 6). 33 848 households no longer receive MAB reimbursements (see Table 7).
Co-payments after MAB reimbursements	After taking into account the reimbursement of co-payments via the MAB, the co-payments for these households were reduced by € 51 266 971 (see Table 6).
Characteristics of households affected by the measure	<p>Table 9 shows the characteristics of the households that gain or lose under the new system.</p> <p>As in the case of complete take-up for OMNIO (simulation N_1) the households that had lower co-payments (winners) show:</p> <ul style="list-style-type: none"> • an overrepresentation of single parent households; • an overrepresentation of households affiliated to a sickness fund as self-employed or mixed (salaried and self-employed) and of households that live exclusively from unemployment benefits; • an underrepresentation of persons in retirement or in early retirement (the latter is less pronounced than in simulation N_1); • an underrepresentation of persons with an indicator of a long-term illness (i.e. lump sum allowance B or C, physiotherapy-E, integration allowance handicap, help for the elderly, long hospital stay, multiple hospital stays, MAB for the chronically ill and the status chronic illness); • a lower mean and median net taxable income (as expected given that the policy specifically targets low-income households). Please note that the mean and median taxable income in this simulation are higher than in the simulation for complete take-up for OMNIO (N_1) in the winners group. This is because eligibility is now computed at the level of the reference household. The household characteristics in the table are, however, computed at the level of the de facto households. In case that multiple eligible reference households coexist within one de facto household, the mean income at the level of the de facto household can be substantially higher. The effect is less pronounced for the median income; • an overrepresentation of extreme payer households, many of which have no or low income.
Conclusion/Key message	According to our estimates, a pro-active policy to grant increased reimbursement for low-income reference households significantly increases the number of persons and households benefiting from this protection mechanism. This estimate does not



Technical documentation

take into account the number of persons and households that could potentially lose the right to increased reimbursement after the systematic control of the household's income (see section 2.4.2 for a discussion of the latter).

A direct comparison between our estimates and the most recent data from RIZIV – INAMI (see Table 6 and Table 7) suggests that not all persons eligible for increased reimbursement may yet benefit from it. The latter is not surprising since the systematic identification of beneficiaries is still ongoing. The full implementation of the pro-active data flux between institutions is still ongoing.

The number of new beneficiaries of increased reimbursement who belong to reference households having no declared gross taxable income amounts to 201 607 (about 20% of the new cases) (see Table 12). Non take-up for this group in the baseline situation amounted to 57.79%.

Table 6 – Eligibility to increased reimbursement according to the rules implemented in 2014

	Baseline (N_0)	situation Increased reimbursement 2014 (N_3)	Change N_3 – N_0	Relative (N_0/ N_3)	take-up
Increased reimbursement					
N persons^a	1 667 038	2 706 748	1 039 710	0.62	
% of total	15.11%	24.54%			
N households	1 059 684	1 728 327	668 643	0.61	
% of total	21.28%	34.70%			
Change in expenditures for households affected by the measure					
Co-payments (€)	259 125 169	180 737 924	- 78 387 245	-	
MAB reimbursements (€)	51 246 071	24 125 797	-27 120 274	-	
Co-payments after MAB reimbursements (€)	207 879 097	156 612 126	-51 266 971	-	

^a The number of persons was estimated by allocating the weight of the de facto household to each of its members.

Table 7 – Number of persons entitled to increased reimbursement (RIZIV – INAMI)

	N	%
RIZIV – INAMI		
31/12/2012	1 841 113	16.81
31/12/2013	1 879 128	17.06
31/12/2014	1 930 202	17.45
31/12/2015	1 971 118	17.74
31/12/2016	2 051 383	18.36

Source: <http://www.riziv.fgov.be/FR/programmes-web/Pages/default.aspx#.WOtb3vI96po>



Table 8 – Reference household's income for persons entitled to increased reimbursement according to the rules implemented in 2014 and their status in the baseline situation

Difference between gross taxable income of the reference household and the income limit for increased reimbursement (IR)	New beneficiaries (1)		RVV – BIM (2)		OMNIO (3)		New cases per group (in %) 1/(1+2+3)
	N	% total IR	N	% total IR	N	% total IR	
-1%≤Dif<0%	25 657	0.95	13 149	0.49	2 728	0.10	61.77
-2%≤Dif<-1%	79 804	2.95	127 480	4.71	12 996	0.48	36.23
-3%≤Dif<-2%	590 347	21.81	643 749	23.78	162 030	5.99	42.28
-5%≤Dif<-3%	20 228	0.75	18 283	0.68	1 945	0.07	50.00
-10%≤Dif<-5%	21 268	0.79	19 752	0.73	2 166	0.08	49.25
-15%≤Dif<-10%	70 718	2.61	131 627	4.86	16 581	0.61	32.30
-15<Dif%	34 456	1.27	40 244	1.49	4 978	0.18	43.24
No income	201 607	7.45	140 528	5.19	6 712	0.25	57.79
All	1 044 084	38.57	1 134 812	41.93	210 138	7.76	43.70

^aThe number of persons was estimated by allocating the weight of the de facto household to each of its members.

The changes in the system of increased reimbursement lead to a shift in the entitlement of the income MAB towards the social MAB (see Table 10 and Table 11):

- The households that gained eligibility to the social MAB were in most cases entitled to the low and modest income MAB (i.e 64.65% for €450 and 28.51% for €650). In line with this, MAB reimbursements for the low-income MAB are substantially reduced (see Table 11).
- A shift from other income MAB thresholds towards the social MAB is also observed, but the effect is less significant than for the low and modest income MAB.
- A shift from the income MAB for all household members towards the 'mixed' social and income MAB is also present. This is due to the fact that the social MAB is only transferred to members of the same reference household within the de facto household.



Table 9 – Pro-active policy to grant increased reimbursement: characteristics of affected households

Variables		Statistic	Winner	Loser	All
Co-payments after MAB		N	520 192	1 893	4 980 113
		Mean (Change in €)	-99.08	144.71	-10.29
		P90 (Change in €)	-9.90	318.88	0.00
		P10 (Change in €)	-222.54	17.22	-4.50
NTI 2011 (€)		Mean (€)	29 745	30 240	37 002
		Median (€)	15 433	26 753	28 290
NTI 2011 - equivalised (€)		Mean (€)	17 363	15 444	24 828
		Median (€)	12 681	14 451	20 759
Extreme payers N_0	NTI equivalised=0	%	8.86	0.00	2.36
	0<NTI equivalised≤6000	%	2.27	0.00	0.59
	NTI equivalised>6000	%	0.34	0.00	0.11
Extreme payers N_3	NTI equivalised=0	%	8.66	0.00	2.34
	0<NTI equivalised≤6000	%	1.11	0.00	0.46
	NTI equivalised>6000	%	0.04	0.59	0.08
Change in extreme payers	NTI equivalised=0	N	-1 048	0	-1 048
	0<NTI equivalised≤6000	N	-6 068	0	-6 068
	NTI equivalised>6000	N	-1 559	11	-1 548
	All	N	-8 675	11	-8 664
MAB reimbursements N_0		%	10.33	12.33	13.06
MAB reimbursements N_3		%	3.79	22.31	12.38
Change in HH with MAB reimbursements		N	-34 037	189	-33 848
Household size		Mean	2.56	4.16	2.22
Single parent household		%	6.58	0.00	4.43
Young children (0-6 years)		%	10.68	13.41	13.24
Older persons (65-74 years)		%	9.81	4.70	15.07
Older persons (75 years +)		%	9.91	2.68	17.09



Variables		Statistic	Winner	Loser	All
Guaranteed income		%	2.68	5.23	4.57
Early retired		%	1.42	1.29	1.93
Retired		%	16.39	4.84	26.79
Disability		%	5.99	16.04	6.05
Incapacity for work		%	1.59	4.71	1.08
Unemployment		%	10.12	6.34	5.75
Affiliated to a sickness fund	Salaried	%	77.49	91.72	86.08
	Mixed (salaried, self-employed)	%	10.40	8.28	7.04
	Self-employed	%	9.95	0.00	6.10
	No head of the sickness fund in the HH	%	2.16	0.00	0.78
Lump sum allowance B or C		%	0.54	1.16	1.12
Physiotherapy-E		%	1.32	1.93	2.45
Increased child allowance		%	1.40	7.22	1.16
Integration allowance handicap		%	0.90	6.31	1.78
Help for the elderly		%	0.75	0.98	2.61
Long hospital stay		%	0.53	0.39	1.03
Multiple hospital stays		%	1.48	3.37	2.53
MAB for the chronically ill		%	5.10	1.59	8.37
Status chronic illness		%	8.77	13.51	15.37



Table 10 – Changes in the entitlement to the social and income MAB

Simplification of the system of increased reimbursement (N_3)												
		Social MAB for the household	Income MAB for the household					Social and Income MAB for different members of the household				
			€ 450	€ 650	€ 1 000	€ 1 400	€ 1 800	€ 450	€ 650	€ 1 000	€ 1 400	€ 1 800
Number of households		1 384 666	343 692	735 782	580 575	436 551	1 180 558	16 545	41 572	59 798	54 170	146 203
Initial situation (N_0)												
Social MAB	€450	64.64%	0.01%	0.01%	>0.01%	.	.	7.32%	1.20%	0.25%	0.03%	0.01%
	€450	28.57%	99.99%	.	.	.	.	52.03%	.	.	.	.
	€650	3.19%	.	99.99%	.	.	.	.	53.60%	.	.	.
	€1 000	0.77%	.	.	100.00%	.	.	.	.	58.40%	.	.
	€1 400	0.25%	.	.	.	100.00%	.	.	.	.	63.03%	.
	€1 800	0.35%	.	.	.	.	100.00%	.	.	.	.	77.55%
Social and Income MAB for different members of the household	€450	1.02%	.	.	.	.	.	40.65%	.	.	.	.
	€650	0.74%	.	.	.	.	.	.	45.20%	.	.	.
	€1 000	0.34%	.	.	.	.	.	.	.	41.35%	.	.
	€1 400	0.08%	.	.	.	.	.	.	.	.	36.94%	.
	€1 800	0.05%	.	.	.	.	>0.01%	.	.	.	.	22.44%


Table 11 – Number of households and MAB reimbursements at the level of the de facto household

		Situation as in 2012 (N_0)		Simplification IR (N_3)		Change (N_3 - N_0)/N_3 (%)	
		Households (N)	MAB Reimbursements (€)	Households (N)	MAB Reimbursements (€)	Households	MAB Reimbursements (€)
Social MAB for the household		897 082	66 598 786	1 384 666	80 397 302	54.35	20.72
Income MAB for the household	€450	747 906	71 208 495	343 692	41 295 108	-54.05	-42.01
	€650	802 151	116 396 396	735 782	108 778 761	-8.27	-6.54
	€1000	626 126	49 677 910	580 575	46 368 235	-7.28	-6.66
	€1400	474 198	16 117 733	436 551	14 345 700	-7.94	-10.99
	€1800	1 298 785	21 987 526	1 180 558	19 266 800	-9.10	-12.37
Social and Income MAB for different members of the household^a	€450	20 781	3 195 690	16 545	1 861 483	-20.38	-41.75
	€650	28 973	5 990 916	41 572	6 526 744	43.48	8.94
	€1000	29 466	4 348 375	59 798	5 621 203	102.94	29.27
	€1400	21 066	2 359 291	54 170	3 731 745	157.14	58.17
	€1800	33 577	3 948 559	146 203	6 516 320	335.42	65.03
All		4 980 113	361 829 676	4 980 113	334 709 402		-7.50

^a Includes social and income MAB reimbursements at the level of the de facto household.



2.4.2 Impact of a systematic control: households losing the right to increased reimbursements

The selection of households for whom the incomes were assessed in simulation N_3 reflects the transitional measures that were taken for the reform in 2014. After that transitional period, the systematic assessment of household composition and income by the sickness funds was applied to all households, except those who are entitled to a specific allowance (see simulation N_8 in section 3.3). The systematic assessment of 2014³ resulted in a loss of entitlement to increased reimbursement for 100 850 persons (or 11.91% of those that were assessed).

In our sample, there were 317 715 persons entitled to increased reimbursement (both RVV – BIM and OMNIO) (or 11.7% of the entitled population – see Table 12) who had an income above the threshold

applicable to the system of increased reimbursement. These persons live in 199 015 de facto households (i.e. 4.06% of the households in our sample). Note that before the simplification of the system of increased reimbursement in 2014, only children with a physical or mental handicap of at least 66% were entitled to preferential reimbursement (RVV – BIM) even if their reference household did not comply with the income conditions. We could identify 13 745 handicapped children among the 317 715 persons mentioned above.

The RIZIV – INAMI numbers³ and our estimates are not directly comparable. RIZIV – INAMI data are based on a systematic assessment of a part of the insured persons while our estimate covers the entire population. Please note, however, that both estimates point out that almost 12% of all persons entitled to increased reimbursement may lose their eligibility after an assessment of their income.

Table 12 – Number of persons entitled to RVV – BIM and OMNIO who live in households that have an income exceeding the limit applicable to the system of increased reimbursement 2014^a

Difference between the household income and the income limit for increased reimbursement (IR)	Preferential reimbursement (RVV – BIM)		OMNIO (one reference household per de facto household ^b)	
	N	% total IR	N	% total IR
0%<Dif<=1%	10 687	0.39	2.106	0.08
1%<Dif<=2%	10 510	0.39	1.771	0.07
2%<Dif<=3%	9.703	0.36	2.062	0.08
3%<Dif<=5%	16.989	0.63	2.472	0.09
5%<Dif<=10%	38.554	1.42	6.132	0.23
10%<Dif<=15%	26 973	1.00	4.457	0.16
Dif>15%	170.653	6.30	14.648	0.54
All	284 086	10.49	33 647	1.24

^a The number of persons was estimated by allocating the weight of the de facto household to each of its members. ^b Note that in this simulation (N_3) we assume that OMNIO households where the reference household corresponds to the de facto household, keep the right to increased reimbursement. ^c The weight of the de facto household is used to obtain the number of households.



2.4.3 Impact of changing the reference household definition

When comparing a complete take-up of OMNIO and entitlement to increased reimbursement after the 2014 control, our simulation shows that the policy impact is significantly influenced by the new definition of the reference household.

In simulation N_1 where RVV – BIM and complete take-up of OMNIO are assumed, 30.21% of all de facto households have a member entitled to increased reimbursement. This percentage is lower than that estimated after the simulation of complete take-up of increased reimbursement with the new reference household (N_3), i.e. 34.21%.

If we look closely at the differences between both simulations, we observe two opposite effects. First, compared to the results from the simulation for complete OMNIO take-up for de facto households, in the new system we obtained that 318 850 additional persons are entitled to increased reimbursement. The latter may be related to the fact that the sum of the incomes at the level of the reference household, living within a de facto household, falls more easily below the income threshold applicable to the system of increased reimbursement. Second, 12 507^d OMNIO beneficiaries would no longer benefit from increased reimbursement after limiting the extension of rights to all members of the de facto household.

Table 13 – Changes in the entitlement to increased reimbursement: limiting the right to members of the reference household

Complete take-up OMNIO (N_1)	Increased reimbursement according to the rules implemented in 2014 (N_3) ^a	
	No increased reimbursement	Increased reimbursement
No increased reimbursement	8 312 572	318 850
Preferential reimbursement (RVV – BIM)		1 418 879
OMNIO	12 507	969 018

^a The number of persons was estimated by allocating the weight of the de facto household to the each of its members.

^d Compared with simulation N_2, we have a larger number of persons in this group because we calculate the loss of the entitlement to OMNIO based on the sample after complete take-up.



2.5 Child MAB for handicapped children

Technical documentation	
Initial situation (N_3)	Children aged 18 years benefit from an individual ceiling of € 650 in the child MAB. Under specific conditions, i.e. having right to increased child allowance prior to 4 July 2002 (see section 4.2.1 in the Technical Manual) handicapped children entitled to increased reimbursement benefit from a reduced individual ceiling of € 450. This ceiling is not subject to indexation. This subgroup is identified as follows: (PP2004 = 1, 3 rd digit of PP0030 = 1, age between 10 and 18),
Policy Change (N_4)	All handicapped children (66%) with a right to increased child allowance and who are entitled to increased reimbursement, are awarded the social MAB. They benefit from an (indexed) ceiling of € 450.
Steps for the simulation	<p>Starting point is simulation N_3.</p> <ul style="list-style-type: none"> The subgroup of handicapped children (66%) who are entitled to increased reimbursement, is identified as follows: PP2004 = 1, 3rd digit of PP0030 = 1. See also section 5.1 in the Technical Manual. The right to the child MAB (PP3005) is re-evaluated. MAB reimbursements (own calculations) and co-payments after MAB reimbursements are recalculated.
Impact of the policy	
Number of households and persons	The extension of the € 450 ceiling to handicapped children affects 9 681 de facto households or an increase in eligibility of 57.9% (see Table 14).
MAB reimbursements	<p>MAB reimbursements via the child MAB increase from € 233 943 to € 344 481, i.e. € 110 538 (47.25%) (see Table 15). The latter is, however, accompanied by a reduction in MAB reimbursements via the income and social MAB of € 24 027 (3.8%). This is due to the fact that the new lower ceiling allows to reimburse co-payments for handicapped children directly via the child MAB, and therefore, they are not added to the household MAB counter. Taking into account both effects, MAB reimbursements increased by € 86 510.</p> <p>A total of 614 households received higher MAB reimbursements after the introduction of the measure. About one out of four of these households (i.e. 135) did not previously receive MAB reimbursements (see Table 16).</p>
Co-payments after MAB reimbursements	Total co-payments after MAB reimbursements for these households decreased from € 4 406 826 to € 4 320 336 (see Table 15).
Characteristics of households affected by the measure	<p>Table 16 shows the characteristics of the households having at least one handicapped child who could potentially benefit from the € 450 child MAB ceiling. Compared to all households that have a handicapped child, those that benefited from the € 450 MAB ceiling have:</p> <ul style="list-style-type: none"> an underrepresentation of single parent households and households living from unemployment benefits (unemployed); an overrepresentation of households with incapacity to work, being entitled to the lump sum allowance B or C, physiotherapy-E, long hospital stay or multiple hospital stays, entitlement to the MAB for the chronically ill and the status chronic illness; a higher mean and median net taxable income. This may be explained by the fact that the extension of the € 450 to all handicapped children is not means-tested.



Technical documentation	
Conclusion/Key message	<p>After the introduction of the measure, eligibility to the child MAB ceiling for handicapped children significantly increased (i.e. 60.07%). In absolute terms, more households also received higher MAB reimbursements. The percentage of households benefiting from reimbursements via the child MAB decreased from 7.11 % to 5.06%, reflecting both a larger pool of entitled households and the fact that only some handicapped children have individual co-payments that exceed €450.</p> <p>Please note that we may underestimate the reimbursements via the child MAB. In our simulation, the reimbursements for a handicapped child entitled to increased reimbursement who belongs to a social or low-income income MAB household are computed via the MAB for the household.</p>

Table 14 – Extension of the MAB ceiling of €450 to handicapped children

	Baseline situation (N_3)	New child MAB (N_4)	Gained eligibility (N_4 – N_3)	Change (%)
Entitlement to the child MAB €450				
N persons (child with right)^a	18 006	28 823	10 817	60.07
N households	16 720	26 401	9 681	57.90
MAB reimbursements via the child MAB (€450 or €650)^b				
N households	1 189	1 336	147 ^c	12.37
% of households with right to the child MAB	7.11	5.06	-	-

^a The number of persons was estimated by allocating the weight of the de facto household. ^b It may be the case that other children from the household benefit from the child MAB. However, the change in the number of households between the simulations can only be related to the new policy. ^c 12 out of 147 households did not have higher total MAB reimbursements (sum of MAB reimbursements via the child and social/income MAB).

Table 15 – Change in expenditures for households that gained eligibility to the child MAB of €450

	Baseline situation (N_3)	New child MAB (N_4)	Change N_4 – N_3	Change (%)
Co-payments (€)	5 273 493	5 273 493		
Child MAB reimbursements	233 943	344 481	110 538	47.25
MAB reimbursements via the social/income MAB	632 702	608 675	-24 027	-3.80
Co-payments after MAB (€)	4 406 846	4 320 336	-86 510	-1.96



Table 16 – Entitlement of €450 to handicapped children benefiting from increased reimbursements: characteristics of households

Variables		Statistic	Winner	All
Co-payments after MAB		N	614	26 401
		Mean (Change in €)	-140.95	-3.28
		P90 (Change in €)	-51.50	0.00
		P10 (Change in €)	-200.00	0.00
NTI 2011 (€)		Mean (€)	50 635	36 356
		Median (€)	45 157	27 982
NTI 2011 - equivalised (€)		Mean (€)	25 758	17 521
		Median (€)	24 368	13 116
Extreme payers N_3	NTI equivalised=0	%	0.00	4.90
	0<NTI equivalised<=6000	%	0.00	3.47
	NTI equivalised>6000	%	0.00	0.88
Extreme payers N_4	NTI equivalised=0	%	0.00	4.90
	0<NTI equivalised<=6000	%	0.00	3.47
	NTI equivalised>6000	%	0.00	0.88
Change in extreme payers	NTI equivalised=0	N	0	0
	0<NTI equivalised<=6000	N	0	0
	NTI equivalised>6000	N	0	0
	All	N	0	0
MAB reimbursements N_3		%	78.05	20.75
MAB reimbursements N_4		%	100.00	21.26
Change in MAB reimbursements		N	135	135
Household size		Mean	3.86	4.49
Single parent household		%	1.31	20.61
Young children (0-6 years)		%	73.48	41.76
Older persons (65-74 years)		%	0.00	2.21
Older persons (75 years +)		%	0.00	1.53
Guaranteed income		%	0.00	12.46



Variables		Statistic	Winner	All
Early retired		%	0.00	0.45
Retired		%	1.20	2.56
Disability		%	17.02	15.26
Incapacity for work		%	9.06	3.66
Unemployment		%	0.00	8.92
Affiliated to a sickness fund	Salaried	%	91.26	88.41
	Mixed (salaried, self-employed)	%	8.74	8.13
	Self-employed	%	0.00	3.37
	No head of the sickness fund in the HH	%	0.00	0.09
Lump sum allowance B or C		%	9.46	3.76
Physiotherapy-E		%	53.51	19.21
Integration allowance handicap		%	4.83	2.48
Help for the elderly		%	0.00	0.48
Long hospital stay		%	14.97	3.01
Multiple hospital stays		%	54.25	8.18
MAB for the chronically ill		%	34.84	7.86
Status chronic illness		%	47.02	33.13

2.6 Policies for persons with a chronic illness

2.6.1 *Situation before 2014: impact of the MAB for the chronically ill*

Before discussing the impact of the introduction of the status of a person with a chronic illness, we highlight hereafter the impact of the introduction of the MAB for the chronically ill on household healthcare expenditures. Please note that the results are presented in a way that allowed us to show the

reduction of patient co-payments after its implementation. In the initial situation (called here N_6), households are not entitled to the chronic MAB (the MAB ceilings are not reduced in case that a person in the household has for two consecutive years co-payments higher than € 450).



Technical documentation	
Initial situation (N_6)	Starting from the previous simulation (N_4), the right to the MAB for the chronically ill is revoked and hence the reduction of € 100 on the MAB ceiling is not applicable.
Policy Change (N_4)	Reduction of € 100 on the MAB ceiling is granted when a member of the de facto household is entitled to: <ul style="list-style-type: none"> • MAB for the chronically ill
Steps for the simulation	Starting point is the hypothetical situation created in N_6 without MAB for the chronically ill. <ul style="list-style-type: none"> • Individuals with a right to the chronic MAB are identified (PP3002). The ceiling in the relevant MAB system (social MAB, income MAB, child MAB) is reduced by € 100 for children entitled to or for households with one or more persons entitled to the MAB for the chronically ill. • MAB reimbursements (own calculations) and co-payments after MAB reimbursements are recalculated.
Impact of the policy	
Number of households and persons	A total of 8.37% (N=416 590) households were eligible for the MAB for the chronically ill. From this group, 58.81% (N=236 667) actually received a (higher) reimbursement via the chronic MAB system. In our simulation, the introduction of the chronic MAB resulted in 29 524 new households with MAB reimbursements.
MAB reimbursements	MAB reimbursements increased from € 139 400 225 to € 161 588 576, i.e. with € 22 188 351 (see Table 17).
Co-payments after MAB reimbursements	The co-payments for households that had a reduction on the MAB ceiling through the MAB for the chronically ill decreased from € 185 896 028 to € 163 707 677.
Characteristics of households affected by the measure	Table 18 shows the characteristics of the households that received higher MAB reimbursements because of the reduction of € 100 in the MAB ceiling ('winners'). Compared to all households in our sample, the winners have: <ul style="list-style-type: none"> • a lower mean and median net taxable income; • an underrepresentation of single parent households and unemployed households; • an overrepresentation of older persons and consequently, of retired persons. There is also an overrepresentation of households with disability or incapacity for work; • an overrepresentation of some indicators of a long-term illness (i.e. lump sum allowance B or C, physiotherapy-E, integration allowance for handicap, help for the elderly, long-hospital stays and multiple hospital stays). <p>Compared to the RIZIV – INAMI data, the number of households receiving higher reimbursements after the introduction of MAB for the chronically ill is slightly overestimated in our simulation, i.e. less than 1% (236 667 instead of 235 014).⁴</p>


Table 17 – Impact on expenditures for households that had a reduction in the MAB ceiling through the MAB for the chronically ill

	No chronic MAB (N_6)	Chronic MAB (N_4) ^a	Change (€) N_4 – N_6	Change (%)
Co-payments (€)	325 296 254	325 296 254		
MAB reimbursements (€)	139 400 225	161 588 576	22 188 351	15.92
Co-payments after MAB reimbursements (€)	185 896 028	163 707 677	-22 188 351	-11.94

^a Our starting point is the situation before the introduction of the status of a person with a chronic illness.

Table 18 – Introduction of the MAB for the chronically ill: characteristics of households with higher reimbursements

Variables	Statistic	Winner	All
Co-payments after MAB	N	236 667	4 980 113
	Mean (Change in €)	-93.75	-4.46
	P90 (Change in €)	-79.69	0.00
	P10 (Change in €)	-100.00	0.00
NTI 2011 (€)	Mean (€)	27 321	37 002
	Median (€)	22 984	28 290
NTI 2011 - equivalised (€)	Mean (€)	20 116	24 828
	Median (€)	17 843	20 759
Extreme payers N_6	NTI equivalised=0	%	1.23
	0<NTI equivalised<=6000	%	0.59
	NTI equivalised>6000	%	0.49
Extreme payers N_4	NTI equivalised=0	%	1.23
	0<NTI equivalised<=6000	%	0.39
	NTI equivalised>6000	%	0.37
Change in extreme payers	NTI equivalised=0	N	0
	0<NTI equivalised<=6000	N	-464
	NTI equivalised>6000	N	-280
	All	N	-744
MAB reimbursements N_6	%	87.53	11.79
MAB reimbursements N_4	%	100.00	12.38



Change in HH with MAB reimbursements		N	29 524	29 534
Household size	Mean		1.86	2.22
Single parent household	%		1.22	4.43
Young children (0-6 years)	%		2.88	13.24
Older persons (65-74 years)	%		30.78	15.07
Older persons (75 years +)	%		49.88	17.09
Guaranteed income	%		2.93	4.57
Early retired	%		1.48	1.93
Retired	%		62.91	26.79
Disability	%		15.07	6.05
Incapacity for work	%		1.46	1.08
Unemployment	%		4.90	5.75
Affiliated to a sickness fund	Salaried	%	91.02	86.08
	Mixed (salaried, self-employed)	%	4.38	7.04
	Self-employed	%	4.50	6.10
	No head of the sickness fund in the HH	%	0.10	0.78
Lump sum allowance B or C	%		8.26	1.12
Physiotherapy-E	%		17.76	2.45
Increased child allowance	%		1.19	1.16
Integration allowance handicap	%		6.48	1.78
Help for the elderly	%		12.46	2.61
Long hospital stay	%		7.50	1.03
Multiple hospital stays	%		17.10	2.53



2.6.2 Situation after 2014: introduction of the status of person with chronic illness

Households entitled to the MAB for the chronically ill or to the status of a person with a chronic illness may benefit from a reduction of €100 in the MAB ceiling. The MAB for the chronically ill and the status of a person with a chronic illness were introduced in 2009 and in 2014, respectively. Table 19 shows the characteristics of the households in our sample according to whether they are entitled to these systems.

In our simulation (N_5, see section 2.6.3), 765 402 de facto households (or 15.43%) have at least one person entitled to the status of person with a chronic illness (see Figure 1). Of these households, 327 255 were entitled to the MAB for the chronically ill. A total of 89 335 additional households were entitled to the MAB for the chronically ill without right to the status of person with a chronic illness. Figure 1 illustrates that 80% of all households entitled to the MAB for the chronically ill have at least one person in the household who satisfies the criteria of person with chronic illness, whereas only about 43% of all households with at least one person in the new status had previously access to the MAB for the chronically ill. The total number of households that could benefit from the reduction of €100 in the MAB ceilings amounts to 854 737 (17.16% of all households).



Figure 1 – Number of households entitled to the statuses for a chronic illness and number having MAB reimbursements (simulation N_5)

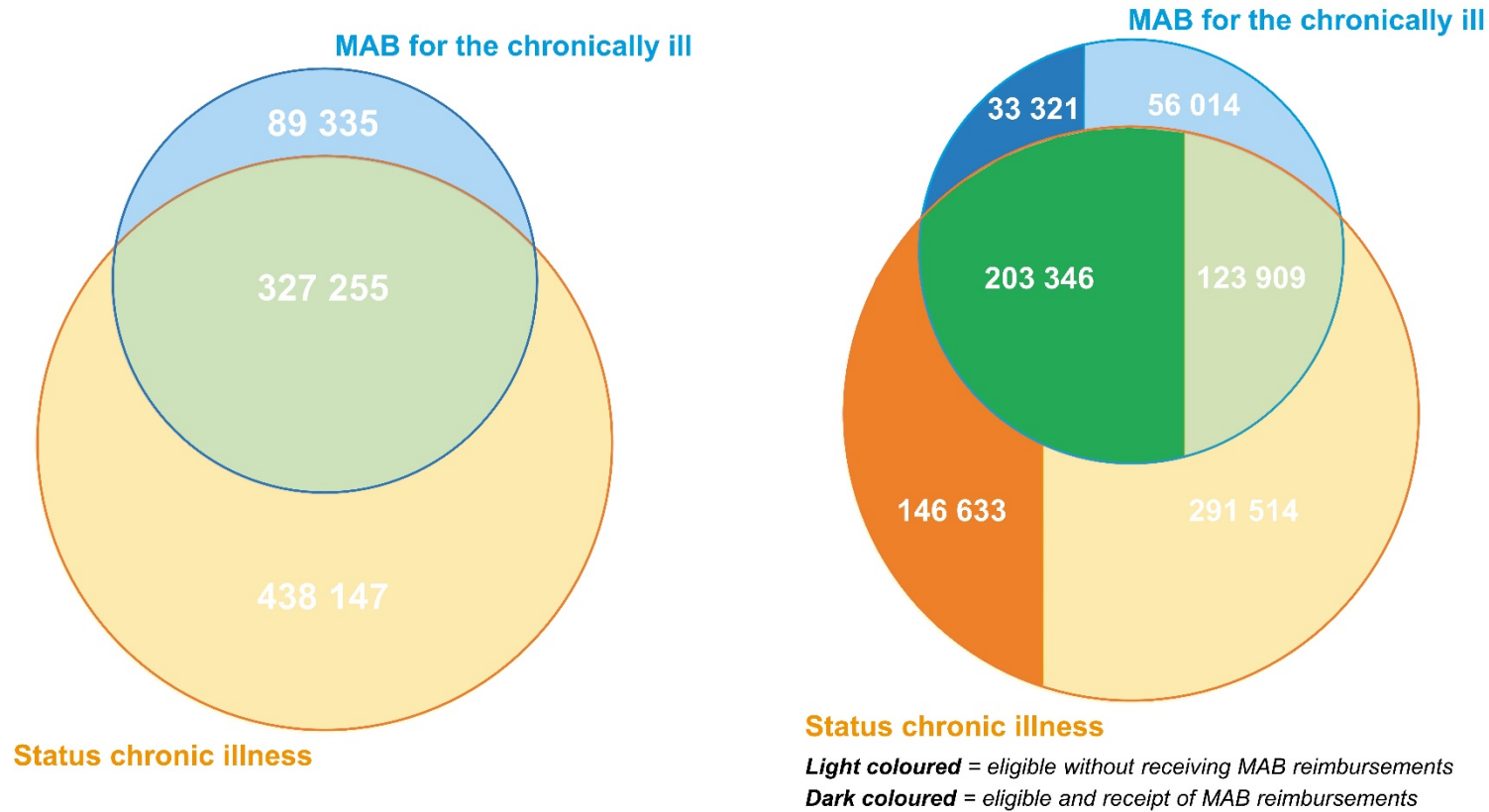




Table 19 shows that households with at least one person entitled to the MAB for the chronically ill and/or the status of a person with a chronic illness have different characteristics (columns 2 to 6) than households not entitled to those systems (column 1):

- higher mean and 'extreme (P90)' healthcare expenditures. The latter is not surprising since both systems are linked to either a patient's co-payments or to the total amount of a person's healthcare expenditures.
- an overrepresentation of older persons, retired persons and disabled persons. The large share of persons aged 75 years or older is a particularly striking feature for the households with a person entitled to the status of chronic illness.
- a lower mean and median net taxable income for households having at least one person with the status of chronic illness. A substantial larger part of this group relies on means-tested benefits such as guaranteed income and help for the elderly compared to non-entitled households. Additionally, these households have a high percentage of people in retirement.
- an underrepresentation of single parent households and unemployed households.
- households with a right to the MAB for the chronically ill but without entitlement to the new status have a mean and median income in line with the general population. The fraction of households that benefit from

means-tested benefits is in line with or even below the share in the non-entitled households.

- an overrepresentation of households with multiple hospital stays. This might be one of the main reasons for high healthcare expenditures that (partly) explains the entitlement to one of the systems.

Compared to the households entitled to the MAB for the chronically ill only (column 2), those entitled to the status of a person with a chronic illness only (column 3) have:

- a lower mean and median net taxable income.
- an overrepresentation of persons entitled to the lump sum allowance B or C, six months of physiotherapy (physiotherapy-E), increased child allowance, integration allowance for handicap, help for the elderly and long hospital stay. The latter is not surprising given that the eligibility to the status of person with a chronic illness is directly linked to those lump sums and allowances.

There is an important difference in actual receipt of reimbursements through the MAB. About 62% of households with at least one (possibly the same) person in both systems (column 4) have MAB reimbursements. Households entitled to the MAB for the chronically ill only (column 2) receive an additional reimbursement in 37% of the cases and households in the new status only (column 3) in 33% of the cases.


Table 19 – Household characteristics according to the entitlement to the MAB for the chronically ill or status of a person with chronic illness

		No entitlement (1)	Only MAB for the chronically ill (2)	Only person with a chronic illness (3)	Both statuses (4)	All MAB for the chronically ill (5)	All person with a chronic illness (6)
Households	N	4 125 376	89 335	438 147	327 255	416 590	765 402
RIZIV – INAMI reimbursements N_5	Mean (€)	2324.35	5477.63	10984.87	12794.23	11225.23	11758.48
	P90(€)	4900.96	11911.04	22771.19	26565.98	24555.57	24159.74
Patient's co-payments N_5	Mean (€)	332.90	839.94	552.47	1137.99	1074.07	802.82
	P90(€)	752.11	1601.97	1101.43	2136.22	2038.39	1675.88
NTI 2011 (€)	Mean(€)	38 373	39 238	26 282	33 459	34 698	29 350
	Median(€)	29 995	31 380	17 356	26 007	27 013	21 040
NTI 2011 - equivalised (€)	Mean (€)	25 480	26 582	19 045	23 872	24 453	21 109
	Median(€)	21 709	22 597	14 992	19 725	20 228	17 128
Extreme payers N_5	%	2.85	1.10	4.03	2.05	1.85	3.19
MAB reimbursements N_5	%	6.62	37.44	33.46	62.30	56.97	45.79
Household size	Mean	2.28	2.22	1.83	1.94	2.00	1.87
Single parent household	%	4.96	2.02	2.34	1.16	1.35	1.84
Young children (0-6 years)	%	15.07	9.61	4.18	3.31	4.66	3.81
Older persons (65-74 years)	%	13.27	26.79	19.78	28.20	27.89	23.38
Older persons (75 years +)	%	11.44	31.61	47.30	43.88	41.25	45.84
Guaranteed income	%	4.31	1.33	9.11	2.58	2.32	6.32
Early retired	%	1.95	2.44	1.50	2.07	2.15	1.75
Retired	%	21.82	49.74	45.62	58.01	56.24	50.92
Disability	%	4.38	11.33	13.23	16.09	15.07	14.45
Incapacity for work	%	1.09	1.88	0.84	1.10	1.26	0.95
Unemployment	%	5.97	4.48	4.84	4.50	4.50	4.69
Affiliated to a sickness fund							
Salaried	%	85.26	87.61	90.07	90.73	90.06	90.35
Mixed (salaried, self-employed)	%	7.51	7.64	4.03	4.96	5.54	4.43



		No entitlement (1)	Only MAB for the chronically ill (2)	Only person with a chronic illness (3)	Both statuses (4)	All MAB for the chronically ill (5)	All person with a chronic illness (6)
Self-employed	%	6.34	4.68	5.62	4.13	4.25	4.98
No head of the sickness fund	%	0.89	0.07	0.28	0.18	0.16	0.24
Lump sum allowance B or C	%	0.24	0.82	5.03	6.97	5.65	5.86
Physiotherapy-E	%	0.72	1.17	7.89	17.31	13.85	11.92
Increased child allowance	%	0.95	0.83	2.90	1.51	1.36	2.30
Integration allowance handicap	%	0.77	0.55	8.10	6.46	5.19	7.40
Help for the elderly	%	0.63	1.05	15.07	11.40	9.18	13.50
Long hospital stay	%	0.38	1.13	2.82	6.74	5.54	4.50
Multiple hospital stays	%	1.25	4.36	4.84	15.08	12.78	9.22

2.6.3 Status of a person with a chronic illness

Technical documentation	
Initial situation (N_4)	Reduction of € 100 of the MAB ceiling when a member of the de facto household is entitled to: <ul style="list-style-type: none"> MAB for the chronically ill
Policy Change (N_5)	Reduction of € 100 of the MAB ceiling when a member of the de facto household is entitled to: <ul style="list-style-type: none"> MAB for the chronically ill Status of a person with a chronic illness
Steps for the simulation	Starting point is simulation N_4. <ul style="list-style-type: none"> Individuals are assessed whether or not they are entitled to the status of a person with a chronic illness (see eligibility criteria in section 5.2 of the Technical Manual). The ceiling in the relevant MAB system (social MAB, income MAB, child MAB) is reduced by € 100 for children entitled to or households with one or more persons entitled to either the MAB for the chronically ill or the status of a person with a chronic illness or both. MAB reimbursements (own calculations) and co-payments after MAB reimbursements are recalculated.
Impact of the policy	
Number of households and persons	A total of 15.43% (N=765 402) of all de facto households have at least one person entitled to the status of a person with a chronic illness (see Figure 1). A total of 438 147 households did not benefit from the MAB for the chronically ill and from these households around 35% (N=146 633) benefited thanks to the new status from higher MAB reimbursements. After the introduction of the status for a chronic



Technical documentation	
	illness, there was an increase of 6.6% in the number of households with MAB reimbursements, i.e. 40 704 households did previously not receive any MAB reimbursement. The reduction in extreme payers is relatively small and amounts to less than 1%.
MAB reimbursements	The MAB reimbursements increased by € 12 477 387.
Co-payments after MAB reimbursements	The co-payments for households that had a reduction in the MAB ceiling through the introduction of the status of a person with a chronic illness decreased from € 86 635 754 to € 74 158 368.
Characteristics of households affected by the measure	Table 21 shows the characteristics of the households that benefit from higher MAB reimbursements after the introduction of the status 'person with a chronic illness' ('winners'). Among the households entitled to the new status only (see Table 19, column 3), those who really receive a benefit (increased MAB reimbursements, 'winners' in Table 21) have a lower income and have an overrepresentation of those entitled to the lump sum allowance B or C, physiotherapy-E, the integration allowance for handicap, help for the elderly, a long hospital stay or multiple hospital stays.
Conclusion/Key message	<p>Two different systems for the chronically ill allow to benefit from a reduction of € 100 in the MAB ceilings. According to our estimates, the overlap between both measures amounts to almost 40% (see also Figure 1). In other words, two out five households with a chronically ill person are entitled to both systems. The characteristics of the 'winners' are in line with the general profile of the households entitled to the status that was described in section 2.6.1.</p> <p>Due to the introduction of both systems, MAB reimbursements increased by € 34 665 738 (€ 22 188 351 for the MAB for the chronically ill and € 12 477 387 for the status of a person with a chronic illness). These estimates are in line with those calculated by RIZIV – INAMI.⁴</p>

Table 20 – Impact on expenditures for households that had a reduction in the MAB ceiling after the introduction of the status of a person with a chronic illness

	Comparator simulation ^a (N_4)	Introduction status chronic illness (N_5)	Change N_5– N_4	Change (%)
Co-payments (€)	136 386 873	136 386 873	-	-
MAB reimbursements (€)	49 779 008	62 256 395	12 477 387	25.07
Co-payments after MAB reimbursements (€)	86 635 754	74 158 368	-12 477 387	-14.41

^a Before 2014, a household could benefit from a reduction of € 100 in the MAB ceiling if a person benefited from the MAB for the chronically ill.


Table 21 – Introduction of the status of a person with a chronic illness: characteristics of households benefiting from the measure

Variables		Statistic	Winner	All
Co-payments after MAB		N	146 633	4 980 113
		Mean (Change in €)	-85.09	-2.51
		P90 (Change in €)	-31.84	0.00
		P10 (Change in €)	-100.00	0.00
NTI 2011 (€)		Mean (€)	21 442	37 002
		Median (€)	17 226	28 290
NTI 2011 - equivalised (€)		Mean (€)	15 949	24 828
		Median (€)	14 355	20 759
Extreme payers N_4	NTI equivalised=0	%	2.98	2.34
	0<NTI equivalised<=6000	%	0.85	0.46
	NTI equivalised>6000	%	0.33	0.08
Extreme payers N_5	NTI equivalised=0	%	2.98	2.34
	0<NTI equivalised<=6000	%	0.65	0.46
	NTI equivalised>6000	%	0.25	0.08
Change in extreme payers	NTI equivalised=0	N	0	0
	0<NTI equivalised<=6000	N	-305	-305
	NTI equivalised>6000	N	-109	-109
	All	N	-414	-414
MAB reimbursements N_4		%	72.24	12.38
MAB reimbursements N_5		%	100.00	13.20
Change in HH with MAB reimbursements		N	40 704	40 704
Household size		Mean	1.86	2.22
Single parent household		%	2.11	4.43
Young children (0-6 years)		%	3.23	13.24
Older persons (65-74 years)		%	24.42	15.07
Older persons (75 years +)		%	53.48	17.09
Guaranteed income		%	10.01	4.57



Variables		Statistic	Winner	All
Early retired		%	1.20	1.93
Retired		%	53.96	26.79
Disability		%	14.98	6.05
Incapacity for work		%	1.29	1.08
Unemployment		%	5.30	5.75
Affiliated to a sickness fund	Salaried	%	89.29	86.08
	Mixed (salaried, self-employed)	%	4.01	7.04
	Self-employed	%	6.38	6.10
	No head of the sickness fund in the HH	%	0.32	0.78
Lump sum allowance B or C		%	7.79	1.12
Physiotherapy-E		%	10.85	2.45
Increased child allowance		%	2.33	1.16
Integration allowance handicap		%	9.41	1.78
Help for the elderly		%	17.02	2.61
Long hospital stay		%	5.71	1.03
Multiple hospital stays		%	10.78	2.53



3 INTRODUCTION OF NEW CHANGES IN SOCIAL PROTECTION MECHANISMS

3.1 Summary of new policy measures

Table 22 gives the global impact of recent or hypothetical changes in the design of current protection measures. A description of the measures as well as their distributional effects are provided in sections 3.2 to 3.9.

Simulations N_7 to N_16 start from simulation N_5 in Chapter 2, reflecting regulations in 2016 (with complete take-up of the right to increased reimbursement of medical costs).

Table 22 – Overview of new policy measures

	Total co-payments	Total MAB reimbursements	Co-payments after MAB	Out-of-pocket payments after MAB	Number of de facto households MAB reimbursements	Extreme payers ^a	Number of persons with right to increased reimbursement ^b
Introduction status chronic illness (N_5)	2 062 836 149	347 273 298	1 715 562 850	2 399 170 063	657 171	143 020	2 706 748
Restricting the MAB for the chronically ill (N_7)	2 062 836 149	344 253 926	1 718 582 222	2 402 189 436	651 107	143 116	2 706 748
Comparison N_7 and N_5	0.00%	-0.87%	0.18%	0.13%	-0.92%	0.07%	0.00%
Abolishing the right to increased reimbursement for households with an income above the threshold (N_8)	2 102 364 135	366 033 499	1 736 330 635	2 419 937 849	673 214	143 203	2 507 536
Comparison N_8 and N_5	1.92%	5.40%	1.21%	0.87%	2.44%	0.13%	-7.36%



	Total co-payments	Total MAB reimbursements	Co-payments after MAB	Out-of-pocket payments after MAB	Number of de facto households MAB reimbursements	Extreme payers ^a	Number of persons with right to increased reimbursement ^b
Inclusion of stays in a psychiatric hospital for more than one year (N_9)	2 062 836 149	351 128 196	1 711 707 952	2 395 315 165	658 783	141 698	2 706 748
Comparison N_9 and N_5	0.00%	1.11%	-0.22%	-0.16%	0.25%	-0.92%	0.00%
Estimation of the MAB ceiling based on the net income of the previous year (N_10)	2 062 836 149	340 933 421	1 721 902 727	2 405 509 941	636 941	141 378	2 706 748
Comparison N_10 and N_5	0.00%	-1.83%	0.37%	0.26%	-3.08%	-1.15%	0.00%
Estimation of the impact of the recent fiscal reforms (tax reform) on MAB right (N_11)	2 062 836 149	343 609 130	1 719 227 018	2 402 834 232	648 043	143 606	2 706 748
Comparison N_11 and N_5	0.00%	-1.06%	0.21%	0.15%	-1.39%	0.41%	0.00%
Introduction of a MAB ceiling of €250 for low-income households based on the income of 2009 (N_12)	2 062 836 149	343 160 269	1 719 675 879	2 403 283 093	661 837	142 103	2 706 748
Comparison N_12 and N_5	0.00%	-1.18%	0.24%	0.17%	0.71%	-0.64%	0.00%
Introduction of a MAB ceiling of €250 for low-income households based on the income of 2011 (N_13)	2 062 836 149	331 667 754	1 731 168 394	2 414 775 608	621 558	138 992	2 706 748
Comparison N_13 and N_10	0.00%	-4.49%	0.91%	0.65%	-5.42%	-2.82%	0.00%



	Total co-payments	Total MAB reimbursements	Co-payments after MAB	Out-of-pocket payments after MAB	Number of de facto households MAB reimbursements	Extreme payers ^a	Number of persons with right to increased reimbursement ^b
Indexation of the income MAB ceilings							
(N_14)	2 062 836 149	339 370 146	1 723 466 003	2 407 073 216	639 370	143 324	2 706 748
Comparison N_14 and N_5	0.00	-2.28%	0.46%	0.33%	-2.71%	0.21%	0.00%
Indexation of the income thresholds for the income MAB							
(N_15)	2 062 836 149	353 171 900	1 709 664 248	2 393 271 462	667 624	142 805	2 706 748
Comparison N_15 and N_5	0.00%	1.70%	-0.34%	-0.25%	1.59%	-0.15%	0.00%
Introduction of a deductible							
(N_16)							
Comparison N_16 and N_5^c	/	/	/	/	/	/	/

^a Extreme payers are de facto households whose co-payments are higher than 10% of their net equivalised income of 2011. De facto households without co-payments and whose net equivalised income is equal to zero are not considered as extreme payers. ^b The number of persons with right to increased reimbursement was calculated by attributing the weight of the household to each individual. Out-of-pocket payments consist of co-payments and supplements recorded in the variable SS00165. All amounts are in 2012 euro. ^c In simulation N_16 the MAB system is replaced by a deductible in a budget-neutral way for RIZIV – INAMI, which makes a comparison in terms of the variables in Table 22 irrelevant.



3.2 Restricting the MAB for the chronically ill (N_7) to avoid overlap with the status of a person with a chronic illness

Technical documentation	
Initial situation (N_5)	Reduction of € 100 of the MAB ceiling when a member of the de facto household is entitled to: <ul style="list-style-type: none"> • MAB for the chronically ill • Status of a person with a chronic illness
Policy Change (N_7)	Reduction of € 100 of the MAB ceiling when a member of the de facto household is entitled to: <ul style="list-style-type: none"> • Status of a person with a chronic illness
Steps for the simulation	Starting point is simulation (N_5). <ul style="list-style-type: none"> • Children entitled to or households with one or more persons entitled to either the MAB for the chronically ill or the status of a person with a chronic illness or both, benefit from a reduction of the MAB ceiling of € 100. • The reduced ceiling is limited to children entitled to and households with one or more persons entitled to the status of a person with a chronic illness. • MAB reimbursements (own calculations) and co-payments after MAB reimbursements are recalculated.
Impact of the policy	
Number of households and persons	As an illustration of a possible simplification of the system, we simulated that a reduction of the MAB ceiling of € 100 is only granted to persons (and their household) entitled to the status of a person with a chronic illness. In this case, 89 335 households would no longer be entitled to a reduction in the MAB ceilings (see the characteristics in Table 19, column 2).
MAB reimbursements	Table 22 and Table 23 present the impact of the simplification. As one out of three households would no longer benefit from the MAB for the chronically ill (N=33 321), MAB reimbursements would be lower. Of these households, 6 064 would no longer have any MAB reimbursements. The reduction in MAB reimbursements amounts to a total of €3 019 372 with a mean reduction per household of €90.62.
Co-payments after MAB reimbursements	The co-payments for households that are impacted by the simplification increased from €23 365 454 to €26 384 826 (see Table 23).
Characteristics of households affected by the measure.	Table 22 shows the characteristics of the households with reduced MAB reimbursements ('losers'). These households have a lower mean income and there is a large overrepresentation of households with long hospital stays or multiple hospital stays compared to all households entitled to the MAB for the chronically ill, but not necessarily receiving MAB reimbursements (see Table 19, column 2).

**Table 23 – Budgetary impact of restricting the MAB for the chronically ill**

	Status chronic illness & MAB for the chronically ill (N_5)	Status chronic illness alone (N_7)	Change (€) (N_7-N_5)	Change (%)
Co-payments (€)	41 859 596	41 859 596		
MAB reimbursements (€)	18 494 142	15 474 770	-3 019 372	-16.33
Co-payments after MAB reimbursements (€)	23 365 454	26 384 826	3 019 372	12.92

Table 24 – Restricting the MAB for the chronically ill: characteristics of households affected by the measure

Variables	Statistic	Loser	All
Co-payments after MAB	N	33 321	4 980 113
	Mean (Change in €)	90.62	0.61
	P90 (Change in €)	100.00	0.00
	P10 (Change in €)	50.26	0.00
NTI 2011 (€)	Mean (€)	28 705	37 002
	Median (€)	24 264	28 290
NTI 2011 - equivalised (€)	Mean (€)	20 576	24 828
	Median (€)	18 072	20 759
Extreme payers N_5	NTI equivalised=0	%	0.39
	0<NTI equivalised<=6000	%	0.44
	NTI equivalised>6000	%	0.40
Extreme payers N_7	NTI equivalised=0	%	0.39
	0<NTI equivalised<=6000	%	0.62
	NTI equivalised>6000	%	0.51
Change in extreme payers	NTI equivalised=0	N	0
	0<NTI equivalised<=6000	N	58
	NTI equivalised>6000	N	38
	All	N	96
MAB reimbursements N_5	%	100.00	13.20
MAB reimbursements N_7	%	81.80	13.07



Variables	Statistic	Loser	All
Change in HH with MAB reimbursements	N	-6 064	-6 064
Household size	Mean	2.02	2.22
Single parent household	%	2.02	4.43
Young children (0-6 years)	%	6.37	13.24
Older persons (65-74 years)	%	31.83	15.07
Older persons (75 years +)	%	45.74	17.09
Guaranteed income	%	1.61	4.57
Early retired	%	1.31	1.93
Retired	%	61.49	26.79
Disability	%	11.53	6.05
Incapacity for work	%	3.41	1.08
Unemployment	%	4.93	5.75
Affiliated to a sickness fund	Salaried	89.24	86.08
	Mixed (salaried, self-employed)	5.51	7.04
	Self-employed	5.13	6.10
	No head of the sickness fund in the HH	0.12	0.78
Lump sum allowance B or C	%	1.58	1.12
Physiotherapy-E	%	1.92	2.45
Increased child allowance	%	0.90	1.16
Integration allowance handicap	%	0.76	1.78
Help for the elderly	%	2.27	2.61
Long hospital stay	%	2.97	1.03
Multiple hospital stays	%	9.25	2.53



3.3 Abolishing the right to increased reimbursement for households with an income above the threshold (N_8)

Technical documentation	
Initial situation (N_5)	<p>Eligibility to increased reimbursement (simplified system in 2014) depends on:</p> <ul style="list-style-type: none"> • Entitlement based on a specific allowance or condition • Entitlement based on low income after means test • Entitlement is extended to members of the reference household • In simulation N_5, we assumed that persons who were previously entitled to preferential reimbursement or OMNIO (and the de facto household is the same as the new reference household) did not lose eligibility to increased reimbursement even if the reference household's income exceeds the maximum threshold of the system. This is in line with the transition measures set out as part of the reform.
Policy Change (N_8)	<p>Persons may lose eligibility to increased reimbursement, if the right to increased reimbursement is conditional on a means test and the reference household's income exceeds the maximum threshold of the system. This is in line with the provision for the systematic control by the RIZIV-INAMI. Persons automatically entitled to increased reimbursement because they receive a specific (means-tested) allowance, such as guaranteed income or an allowance for handicap and the members of their reference household remain eligible for increased reimbursement even if the reference household's income exceeds the threshold of the system. The allowances taken into account are:</p> <ul style="list-style-type: none"> • Subsistence income ('leefloon'/'revenu d'intégration') • Support from public welfare centres ('steun verleend door een openbaar centrum voor maatschappelijk welzijn (OCMW)'/'secours accordés par les centres publics d'action sociale (CPAS)') • Income guarantee for the elderly ('inkomensgarantie voor ouderen of gewaarborgd inkomen voor bejaarden'/'garantie de revenus aux personnes âgées ou revenu garanti aux personnes âgées') • Allowance for handicapped persons: income-replacement allowance, integration allowance or allowance for assistance to the elderly ('inkomensvervangende tegemoetkoming, integratietegemoetkoming en tegemoetkoming voor hulp aan bejaarden'/'allocation de remplacement de revenus, allocation d'intégration et allocation d'aide aux personnes âgées') • Children with a physical or mental handicap of at least 66% ('lichamelijke of geestelijke ongeschiktheid van ten minste 66% van een kind'/'incapacité physique ou mentale d'au moins 66 % dont est atteint un enfant')
Steps for the simulation	<p>Starting point is simulation N_5.</p> <ul style="list-style-type: none"> • We identify persons benefiting from the aforementioned allowances using variables from the IMA population dataset (PP1008, PP1009, PP2004, PP3010, PP3011, PP3013). They and the members of their reference household maintain eligibility to increased reimbursement as in the initial situation (N_5). • We assess the gross taxable income (changing sum of IPCAL codes) in 2011 of all other reference households that benefit from increased reimbursement in N_5. When the income is above the following threshold, they are no longer entitled to increased reimbursement: Threshold (€): $15\,606.71 + (\text{Number of members of the reference household} - 1) \times 2\,889.22$ • The level of co-payments (ss00160) and RIZIV – INAMI expenditures (ss00060) depend on the right to increased reimbursement. Using a specific algorithm, co-payments and RIZIV – INAMI expenditures are recalculated for all individuals that lose the right to increased reimbursement.



Technical documentation		
<ul style="list-style-type: none"> The right to the social MAB is re-evaluated (PP3001), MAB reimbursements (own calculations) and co-payments after MAB reimbursements are recalculated. 		
Impact of the policy		
Number of households and persons		About 63% of the persons belonging to a reference household with an income below the threshold of the system lose the eligibility to increased reimbursement. The remaining 37% are eligible for increased reimbursement because they or one person of their reference household are entitled to a specific allowance (i.e. guaranteed income or an allowance for handicapped). A total of 199 212 persons living in 118 924 households are affected by the measure and lose the entitlement to increased reimbursement. Please note that the persons losing the entitlement to increased reimbursement may belong to de facto households with more than one reference household. As such they may lose the eligibility to the social MAB but may obtain reimbursements via the income MAB.
Difference in co-payments		The effect on total co-payments is substantial with a twofold increase of the amount paid by affected households (from €46 819 763 to €86 347 749).
MAB reimbursements		The increase in co-payments and the loss of the social MAB (see Table 26) resulted in higher MAB reimbursements for these households, i.e. from €14 164 552 to €32 924 754 (Table 27). There is almost a doubling in the number of affected households that benefit from MAB reimbursements, i.e. up to 16 403 households or 34.07% of the affected households (see Table 28).
Co-payments after MAB reimbursements		Co-payments and MAB reimbursements are affected by the policy change. Most of the de facto households affected by the measure end up with higher co-payments, i.e. 103 898 (87.4%). In total, co-payments after MAB of the affected households increase by €20 767 784, from €32 655 211 to €53 422 995. On average, this is an increase of almost €200 per affected household. The policy measure, however, has a small increase in the number of extreme payer households, i.e. 184 households more.
Characteristics of households affected by the measure		Table 28 shows the characteristics of the households according to whether they are affected by the policy measure. Households losing the entitlement to increased reimbursement are characterized by: <ul style="list-style-type: none"> lower mean and median taxable income, an overrepresentation of single parent households, households with retired or unemployed persons, or persons with a disability; and an overrepresentation of some indicators of a long-term illness, i.e. physiotherapy-E, long hospital stay, multiple hospital stays, MAB for the chronically ill and the status chronic illness.
Conclusion/Key message		<p>The policy change has large budgetary consequences at the macro and micro level. The affected households have an important increase in co-payments that can amount up to €400 for those consuming more healthcare services. For RIZIV – INAMI, the net effect after MAB reimbursements is a budgetary reduction of more than 20 million euro.</p> <p>Affected households are potentially vulnerable and cover some groups that were previously entitled to increased reimbursement after means testing: pensioners, single parent households, disabled persons, unemployed and older persons. In the new system, these household characteristics are considered as a 'specific condition' ('indicator'/'indicateur') related to low income.</p> <p>Please note that the low income of the affected households in this simulation is much higher than the income of the households that gained the entitlement to increased reimbursement in simulation N_1 and N_3. As such, the systematic control of the income can be considered as a necessary tool to guarantee that increased reimbursement is targeted at the lowest income households.</p>

**Table 25 – Persons losing entitlement to increased reimbursement and number of households affected by the measure**

	Potential group losing eligibility (N_5) ^a	Group losing eligibility to increased reimbursement (N_8)		
	N	N	% (N_8/N_5)	% total sample
Persons	317 733	199 212	62.70	1.81
Households	199 015	118 924	59.76	2.39

a See Table 12 for details on their income level.

Table 26 – MAB Income for ceiling for households affected by the measure

MAB ceiling N_8											Total
€ 450		€ 650		€ 1 000		€ 1 400		€ 1 800			
MAB ceiling N_5	N	%	N	%	N	%	N	%	N	%	N
Social MAB €450	52 216	41.9	30 751	39.4	9 289	13.6	2 214	3.3	1 364	1.9	95 837
€450	1 462	100.0	.	.	.	.	.	.	.	.	1 462
€650	.	.	5 116	100.00	.	.	.	.	.	.	5 116
€1 000	.	.	.	.	6 172	100.0	.	.	.	.	6 172
€1 400	.	.	.	.	.	.	3 964	100.0	.	.	3 964
€1 800	.	.	.	.	.	.	.	.	6 369	100.0	6 369
Total	53 679	30.9	35 867	33.3	15 461	17.0	6 179	7.7	7 734	11.1	118 923

Table 27 – Budgetary impact for households affected by the measure

	Baseline situation (N_5)	Losing eligibility to increased reimbursement (N_8)	Change N_8 – N_5
Co-payments (€)	46 819 763	86 347 749	39 527 986
MAB reimbursements (€)	14 164 552	32 924 754	18 760 202
Co-payments after MAB reimbursements (€)	32 655 211	53 422 995	20 767 784

Note: The number of households affected by the measure are included in Table 26.



Table 28 – Limiting the eligibility to increased reimbursement to households with an income below the threshold of the system: characteristics of affected households

Variables		Statistic	Loser	All
Co-payments after MAB		N	103 898	4 980 113
		Mean (Change in €)	199.89	4.17
		P90 (Change in €)	394.54	0.00
		P10 (Change in €)	32.61	0.00
NTI (€)		Mean (€)	26 408	37 002
		Median (€)	20 661	28 290
NTI - equivalised (€)		Mean (€)	18 727	24 828
		Median (€)	16 324	20 759
Extreme payers N_5	NTI equivalised=0	%	0.00	2.34
	0<NTI equivalised<=6000	%	0.00	0.46
	NTI equivalised>6000	%	0.04	0.08
Extreme payers N_8	NTI equivalised=0	%	0.00	2.34
	0<NTI equivalised<=6000	%	0.00	0.46
	NTI equivalised>6000	%	0.22	0.08
Change in extreme payers	NTI equivalised=0	N	0	0
	0<NTI equivalised<=6000	N	0	0
	NTI equivalised>6000	N	184	184
	All	N	184	184
MAB reimbursements N_5		%	18.63	13.20
MAB reimbursements N_8		%	34.07	13.52
Change in HH with MAB reimbursements		N	16 043	16 043
Household size		Mean	2.14	2.22
Single parent household		%	6.70	4.43
Young children (0-6 years)		%	9.13	13.24
Older persons (65-74 years)		%	20.76	15.07
Older persons (75 years +)		%	20.24	17.09



Variables		Statistic	Loser	All
Guaranteed income		%	0.73	4.57
Early retired		%	2.89	1.93
Retired		%	35.19	26.79
Disability		%	21.05	6.05
Incapacity for work		%	2.79	1.08
Unemployment		%	7.14	5.75
Affiliated to a sickness fund	Salaried	%	93.88	86.08
	Mixed (salaried, self-employed)	%	3.45	7.04
	Self-employed	%	2.62	6.10
	No head of the sickness fund in the HH	%	0.05	0.78
Lump sum allowance B or C		%	1.28	1.12
Physiotherapy-E		%	5.19	2.45
Increased child allowance		%	1.25	1.16
Integration allowance handicap		%	0.79	1.78
Help for the elderly		%	0.35	2.61
Long hospital stay		%	1.84	1.03
Multiple hospital stays		%	4.55	2.53
MAB for the chronically ill		%	9.00	8.37
Status chronic illness		%	27.16	15.37



3.4 Including stays in a psychiatric hospital in the MAB counter

Technical documentation	
Initial situation (N_5)	Co-payments for stays of more than one year in a psychiatric hospital are excluded in the MAB counter and hence do not give rise to MAB reimbursements.
Policy Change (N_9)	Co-payments for stays of more than one year in a psychiatric hospital are included in the MAB counter.
Steps for the simulation	<p>Starting point is simulation N_5.</p> <ul style="list-style-type: none"> Co-payments related to the following nomenclature codes provided by psychiatric hospitals are added to the MAB counter: 799746, 799761, 799783, 799805, 799820, 799842, 799886, 799923, 766426, 766441, 766463, 766485, 766500, 766522 (see also appendix 3 of the Technical Manual) MAB reimbursements (own calculations) and co-payments after MAB reimbursements are recalculated for all households.
Impact of the policy	
Number of households and persons	We identified 5 572 households (total number of persons 9 147) who had at least one person with a stay in a psychiatric hospital between one and six years. The total number of persons with a long stay in a psychiatric hospital amounts to 5 576. One out of three of these persons (i.e. 1 379) did not pay any co-payments during their stay in the hospital. Patients with stays of more than six years were not identified in the database.
MAB reimbursements	The MAB reimbursements increased by €3 854 898 (see Table 29) and 3 959 households received higher MAB reimbursements (see Table 30). Among the latter, 1 613 households did not previously benefit from MAB reimbursements when the co-payments for their stay in the psychiatric hospital were not included in the MAB counter.
Co-payments after MAB reimbursements	After taking into account the reimbursement of co-payments via the MAB, the co-payments for these households were reduced from €5 981 404 to €2 126 506 (see Table 29). Compared to other simulations, the reduction in co-payments is large with a mean of €973.76
Characteristics of households affected by the measure.	<p>The percentage of extreme payers among persons with stays of more than one year in a psychiatric hospital decreased substantially from 53% to 19% (see Table 30).</p> <p>The households that benefit from the measure have a lower mean and median net taxable income. These households are mostly constituted by only one person (70%). As expected, indicators of a long-term illness are overrepresented in this population (e.g. long hospital stays or multiple hospital stays, entitlement to the MAB for the chronically ill).</p>
Conclusion/Key message	<p>This measure provides additional protection to a specific high-risk group of patients having a long-term illness and a low income. A striking finding from the analysis is that about one third of the patients do not have co-payments for their stay in the psychiatric hospital.</p> <p>In order to validate our results, we collected data from the MPG – RPM ('Minimale Psychiatrische Gegevens' – 'Résumé Psychiatrique Minimum')⁵ on the number of persons with a long stay in a psychiatric hospital.</p> <p>We considered persons admitted to a psychiatric hospital before 2011 who were discharged or who were still hospitalised in 2012. According to the MPG – RPM data, 6 424 persons had a hospital stay between one and six years. There are 848 more persons (i.e. 15.2%) in comparison to our estimate. Moreover, the MPG – RPM data ('Minimale Psychiatrische Gegevens'/Résumé Psychiatrique Minimum') show that 1 307 (7 731 – 6 424) patients were hospitalised in psychiatric hospitals for more than six years</p>



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in 2012. Given that our data included a smaller number of patients than that reported in the MPG – RPM reports and that patients with stays longer than six years are not identified, the additional MAB reimbursements for including psychiatric stays of more than one year in the MAB counter may be underestimated. Table 31 presents an extrapolation of the cost of the measure taking into account the difference in the number of patients between our sample and the MPG – RPM data. Covering all patients with long stays in a psychiatric hospital could increase MAB reimbursements up to € 5 344 730.

Table 29 – Impact of including hospital stays of more than a year in a psychiatric hospital in the MAB counter

	Baseline situation (N_5)	Inclusion in the MAB counter (N_9)	Change	N_9 – N_5
Co-payments (€)	8 099 083	8 099 083		
MAB reimbursements (€)	2 117 679	5 972 577		3 854 898
Co-payments after MAB reimbursements (€)	5 981 404	2 126 506		-3 854 898

Table 30 – Including psychiatric stays of more than a year in the MAB counter: characteristics of households affected by the measure

Variables	Statistic	Winner	All
Co-payments after MAB	N	3 959	4 980 113
	Mean (Change in €)	-973.76	-0.77
	P90 (Change in €)	-130.75	0.00
	P10 (Change in €)	-1699.75	0.00
NTI 2011 (€)	Mean (€)	18 170	37 002
	Median (€)	13 045	28 290
NTI 2011 - equivalised (€)	Mean (€)	13 357	24 828
	Median (€)	12 784	20 759
Extreme payers N_5	NTI equivalised=0	%	14.87
	0<NTI equivalised<=6000	%	5.93
	NTI equivalised>6000	%	32.20
Extreme payers N_9	NTI equivalised=0	%	14.87
	0<NTI equivalised<=6000	%	3.70



Variables		Statistic	Winner	All
Change in extreme payers	NTI equivalised>6000	%	1.06	0.05
	NTI equivalised=0	N	0	0
	0<NTI equivalised<=6000	N	-88	-88
	NTI equivalised>6000	N	-1 233	-1 233
	All	N	-1 321	-1 321
MAB reimbursements N_5		%	59.27	13.20
MAB reimbursements N_9		%	100.00	13.23
Change in HH with MAB reimbursements		N	1 613	1 613
Household size		Mean	1.65	2.22
Single parent household		%	3.04	4.43
Young children (0-6 years)		%	1.59	13.24
Older persons (65-74 years)		%	9.23	15.07
Older persons (75 years +)		%	6.29	17.09
Guaranteed income		%	12.39	4.57
Early retired		%	0.77	1.93
Retired		%	17.72	26.79
Disability		%	54.97	6.05
Incapacity for work		%	5.21	1.08
Unemployment		%	4.23	5.75
Affiliated to a sickness fund	Salaried	%	95.50	86.08
	Mixed (salaried, self-employed)	%	2.18	7.04
	Self-employed	%	2.31	6.10
	No head of the sickness fund in the HH	%	0.00	0.78
Lump sum allowance B or C		%	1.80	1.12
Physiotherapy-E		%	1.80	2.45
Increased child allowance		%	4.12	1.16



Variables	Statistic	Winner	All
Integration allowance handicap	%	17.06	1.78
Help for the elderly	%	3.58	2.61
Long hospital stay	%	99.92	1.03
Multiple hospital stays	%	40.05	2.53
MAB for the chronically ill	%	52.71	8.37
Status chronic illness	%	82.85	15.37

Table 31 – Cost of including co-payments for long stays in a psychiatric hospital based on the difference in the size of the target population

	Sample	MPG – RPM	
	1-6 years	1-6 years	>1 years
Target population			
N	5 576	6 424	7 731
% difference with sample	-	15.2%	38.6%
Extrapolation			
Persons with benefits	3 958	4 560	5 488
Budget impact	3 854 898	4 441 152	5 344 730

MPG – RPM: Minimale Psychiatrische Gegevens – Résumé Psychiatrique Minimum



3.5 Estimation of the MAB ceiling based on the net income of the previous year

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Initial situation (N_5)	The ceilings for the income MAB are a function of the net taxable income (NTI) of year T-3 .
Policy Change (N_10)	The ceilings for the income MAB are determined by more recent information (year T-1) on the NTI .
Steps for the simulation	<p>Starting point is simulation N_5.</p> <ul style="list-style-type: none"> • Eligibility to the social MAB remains unaffected by the policy change, since it depends on gross taxable income (changing sum of IPCAL codes) of T-1. • New ceilings for the income MAB are determined. The NTI of 2011 (the sum of IPCAL codes 7555 and 7557) is calculated at the level of the de facto households. In order to take into account the changes in cost of living over time, income thresholds based on the taxable income of 2011 for the income MAB system were used (see Table 32). • MAB reimbursements (own calculations) and co-payments after MAB reimbursements are recalculated.
Impact of the policy	
Number of households and persons	<p>The overwhelming majority of 96% of the households (N=4 777 485) has a different NTI in 2011 than in 2009. Of the 202 628 households with the same NTI, 99.5% has NTI equal to 0 in both years.</p> <p>The difference in NTI in combination with the adapted thresholds (see Table 32) leads to a change in the income MAB ceilings for 922 961 households, i.e. 22.8% of all households (see Table 33 and Table 34).</p> <ul style="list-style-type: none"> • For 332 737 households (or 36.1% of the households with a different MAB ceiling), the MAB ceiling is lowered. • For 590 224 households (or 63.9% of the households with a different MAB ceiling) the ceiling is raised. <p>As not all households benefit from MAB reimbursements, the actual policy impact is limited to 117 168 households, i.e. 2.4% of all households or 12.7% of all households with a change in MAB ceiling (see Table 35).</p> <ul style="list-style-type: none"> • 41 449 households (or 35.4% of the affected households) benefit from the change; • 75 719 households (or 64.6% of the affected households) are negatively affected.
MAB reimbursements	<p>The net effect of the measure is a reduction in MAB reimbursements of €6 339 877 (see Table 33). The MAB reimbursements for the 41 449 households which benefit from the policy change increase by €11 616 664 or €280.3 on average per household. The reduction in MAB reimbursements for the 75 719 households which are negatively affected is equal to €17 956 541 or €237.2 on average per household.</p>
Co-payments after MAB reimbursements	<p>As only the MAB reimbursements are affected by the policy change, the co-payments after MAB reimbursements change in a similar fashion. In total, co-payments after MAB increase by €6 339 877, due to an increase of €17 956 541 in co-payments after MAB for losing households and a decrease in co-payments after MAB amounting to €11 616 664 for winning households.</p> <p>All losing households benefit from the MAB in the baseline and 43.3% continues to do so, despite being attributed to a higher ceiling. They will pay the entire difference between the new and old ceiling.</p> <p>There is an important reduction in the number of extreme payers in the group of households that benefit from the policy change (except for those without income). On the other hand, almost no losing household becomes extreme payer as a result of the policy change.</p>



Technical documentation		
		<p>Among the winning households, 45% benefit from the MAB before the introduction of the policy. They gain the entire difference between the lower new ceiling and the baseline ceiling.</p>
Characteristics of winners/losers	of the	<p>Table 35 shows the characteristics of the households that gain or lose reimbursements via the MAB system. Households affected by the measure (winners and losers confounded) have:</p> <ul style="list-style-type: none"> • a lower mean and median NTI. This is normal given that households with higher NTI already have the highest MAB income ceiling (over 25% of all households) and are largely unresponsive to the policy changes (see Table 34). The mean and median NTI is however not situated at the very bottom of the income distribution as households benefitting from the social MAB are not affected by the policy and households with the lowest income MAB ceiling cannot be worse off. • an overrepresentation of households affiliated to the sickness fund as self-employed or mixed households (i.e. households with self-employed and salaried persons), households with younger children and households with persons in early retirement. • an overrepresentation of households with an indicator of a long-term illness which might have higher co-payments and consequently might benefit from MAB reimbursements: disability, lump sum allowance B or C, physiotherapy-E, increased child allowance, integration allowance handicap, long hospital stay, multiple hospital stays, MAB for the chronically ill and the status chronic illness. <p>When we look at the difference between the winners and losers of this simulation, compared to the households receiving higher MAB reimbursements (winners), those which have lower reimbursements (losers) via the MAB system have:</p> <ul style="list-style-type: none"> • a higher mean and median net taxable income. This is normal as households with a higher income are more likely to be eligible for a higher MAB ceiling; • an overrepresentation of single parent households and households with younger children; • an underrepresentation of households with only unemployment benefits, who are retired or with disability; and • a lower percentage of households with an indicator of a long-term illness.
Conclusion/Key message		<p>The policy change has minor budgetary consequences at a macro level. With 117 168 affected households (i.e. 2.4% of all households), the policy has a modest impact. There are more households that lose than households that benefit. Given that income thresholds for 2011 are used in the simulations, this implies that NTI increases at a faster pace than the indexation applied to the MAB thresholds.</p> <p>At the micro level the results are, however, relatively large for those affected. Given the design of the MAB system, where a relatively minor change in NTI might generate an important jump in income MAB ceiling, the effect on co-payments after MAB for affected households is quite important at the household level. There is on average a reduction in co-payments of €280.3 for winning households and an increase in co-payments by €237.2 for losing households.</p> <p>Affected households are potentially vulnerable or experience a period of change. They are more likely to have an increased volatility of their taxable income (e.g. households affiliated to the sickness fund with at least one self-employed) or may have suffered an income shock in the recent past (e.g. change in labour time for households with young children, newly retired, people (temporarily) leaving the labour market (unemployed, disabled or incapacity to work)).</p> <p>The impact of any change in the design of the MAB systems affects households that are more likely to have higher healthcare costs (e.g. with indicators of chronic illness).</p> <p>The new situation might better reflect the actual situation, and therefore be preferable especially for winning households.</p>



Table 32 – Income thresholds for the MAB system

Ceilings (€)	Income 2009 (€)	Income 2011 (€)
450	NTI 2009 ≤ 17 039.73	NTI 2011 ≤ 17 719.92
650	17 039.73 < NTI 2009 ≤ 26 195.40	17 719.92 < NTI 2011 ≤ 27 241.07
1 000	26 195.40 < NTI 2009 ≤ 35 351.10	27 241.07 < NTI 2011 ≤ 36 762.25
1 400	35 351.10 < NTI 2009 ≤ 44 125.29	36 762.25 < NTI 2011 ≤ 45 886.69
1 800	NTI 2009 ≥ 44 125.29	NTI 2011 ≥ 45 886.07

RIZIV – INAMI (2017)⁶

Table 33 – Budgetary impact of calculating the ceiling for the income MAB based on the net taxable income (NTI) of the year T-1

New ceiling	Variable	Baseline situation (N_5)	Income Change (N_10)	Change N_10 – N_5
No impact	N households (% total sample)	805 793 (16.18%)		
	Co-payments (€)	240 164 005	240 164 005	
	MAB reimbursements (€)	2 431 736	2 431 736	
	Co-payments after MAB reimbursements (€)	237 732 269	237 732 269	
Lower MAB ceiling	N households (% total sample)	41 449 (0.83%)		
	Co-payments (€)	55 821 648	55 821 648	
	MAB reimbursements (€)	12 153 428	23 770 092	11 616 664
	Co-payments after MAB reimbursements (€)	43 668 220	32 051 556	-11 616 664
Higher MAB ceiling	N households (% total sample)	75 719 (1.52)		
	Co-payments (€)	85 551 615	85 551 615	
	MAB reimbursements (€)	36 642 915	18 686 374	-17 956 541
	Co-payments after MAB reimbursements (€)	48 908 700	66 865 241	17 956 541
Net effect	N households (% total sample)	922 961 (18.53)		
	Co-payments (€)	381 537 268	381 537 268	
	MAB reimbursements (€)	51 228 079	44 888 202	-6 339 877
	Co-payments after MAB reimbursements (€)	330 309 189	336 649 066	6 339 877


Table 34 – Correspondence between the MAB ceiling based on the NTI of 2009 (N_5) with that based on the income of NTI of 2011 (N_10)

N		New MAB ceiling N_10 (row percentage %)				
		€ 450	€ 650	€ 1 000	€ 1 400	€ 1 800
MAB ceiling N_5						
€450	360 237	52.83	33.27	8.29	2.81	2.81
€650	777 354	4.46	76.01	14.03	3.43	2.07
€1 000	640 373	0.85	11.04	66.01	15.38	6.72
€1 400	490 720	0.33	2.7	14.85	56.24	25.88
€1 800	1 326 761	0.15	1.05	2.36	6.55	89.88

Eligibility to the social MAB remains unaffected by the policy. Therefore households eligible for the social MAB only are not included in the table.

Table 35 – Households that had a change in MAB reimbursements following a change in the MAB ceiling (N_5, income 2011)

N		New MAB ceiling N_10 (row percentage %)				
		€ 450	€ 650	€ 1 000	€ 1 400	€ 1 800
MAB ceiling N_5						
€450	34 558		68.62	18.55	6.53	6.31
€650	31 984	19.31		59.84	13.21	7.63
€1 000	24 849	3.39	52.62		31.01	12.98
€1 400	14 931	3.01	15.80	51.57		29.63
€1 800	10 846	6.38	26.18	29.82	37.62	

Eligibility to the social MAB remains unaffected by the policy. Therefore households eligible for the social MAB only are not included in the table.



Table 36 – Household characteristics after changing the income used for the eligibility to the income MAB from T-3 to T-1

Variables		Statistic	Winner	Loser	All
Co-payments after MAB		N	41 449	75 719	4 980 113
		Mean (Change in €)	-280.26	237.15	1.27
		P90 (Change in €)	-49.53	400.00	0.00
		P10 (Change in €)	-400.00	42.69	0.00
NTI 2011 (€)		Mean (€)	26 586	35 277	37 002
		Median (€)	25 844	30 016	28 290
NTI 2011 - equivalised (€)		Mean (€)	18 402	23 641	24 828
		Median (€)	17 818	20 146	20 759
Extreme payers N_5	NTI equivalised=0	%	0.08	0.00	2.34
	0<NTI equivalised<=6000	%	0.47	0.00	0.46
	NTI equivalised>6000	%	4.17	0.05	0.08
Extreme payers N_10	NTI equivalised=0	%	0.08	0.00	2.34
	0<NTI equivalised<=6000	%	0.23	0.00	0.46
	NTI equivalised>6000	%	0.26	0.15	0.05
Change in extreme payers	NTI equivalised=0	N	0	0	0
	0<NTI equivalised<=6000	N	-99	0	-99
	NTI equivalised>6000	N	-1 619	76	-1 543
	All	N	-1 718	76	-1 642
MAB reimbursements N_5		%	45.24	100.00	13.20
MAB reimbursements N_10		%	100.00	43.30	12.79
Change in HH with MAB reimbursements		N	22 700	-42 929	-20 230
Household size		Mean	2.36	2.56	2.22
Single parent household		%	2.50	4.15	4.43
Young children (0-6 years)		%	15.68	21.29	13.24
Older persons (65-74 years)		%	22.65	19.98	15.07
Older persons (75 years +)		%	11.87	15.94	17.09



Variables		Statistic	Winner	Loser	All
Guaranteed income		%	0.86	1.24	4.57
Early retired		%	6.07	1.46	1.93
Retired		%	39.92	30.92	26.79
Disability		%	19.47	13.10	6.05
Incapacity for work		%	4.98	4.17	1.08
Unemployment		%	7.83	4.32	5.75
Affiliated to a sickness fund	Salaried	%	80.30	78.33	86.08
	Mixed (salaried, self-employed)	%	10.64	12.50	7.04
	Self-employed	%	9.01	9.17	6.10
	No head of the sickness fund in the HH	%	0.05	0.00	0.78
Lump sum allowance B or C		%	2.64	1.76	1.12
Physiotherapy-E		%	8.11	5.30	2.45
Increased child allowance		%	2.85	2.68	1.16
Integration allowance handicap		%	4.13	2.48	1.78
Help for the elderly		%	1.79	1.85	2.61
Long hospital stay		%	4.48	2.46	1.03
Multiple hospital stays		%	13.85	8.59	2.53
MAB for the chronically ill		%	36.41	26.34	8.37
Status chronic illness		%	39.31	31.40	15.37



3.6 Fiscal reforms: shift from tax deductions to tax reductions

Technical documentation	
Initial situation (N_5)	The ceilings of the income MAB are a function of the net taxable income (NTI) of the year T-3 . NTI is computed as the sum of IPCAL codes 7555 and 7557 (as in all previous simulations).
Policy Change (N_11)	<p>As part of the sixth State Reform, the regions are empowered to collect taxes through the personal income tax. To that end, the income tax design has changed. In general, tax deductions (i.e. a reduction of income that will be taxed) are replaced by tax reductions (i.e. a reduction in the amount of due taxes). Some of the items that were affected by the new tax rules include: child care expenses, mortgage loan payments, donations, pension fund contributions and service vouchers.</p> <p>This modification in the tax code increases the net taxable income of persons/households using any of the former tax deductions. The ceilings of the income MAB depend on the net taxable income. We adjust the calculations of NTI of the year T-3 to simulate the change in tax design.</p>
Steps for the simulation	<p>Starting point is simulation N_5.</p> <ul style="list-style-type: none"> • Eligibility to the social MAB remains unaffected by the policy change, since it depends on gross taxable income (changing sum of IPCAL codes) of T-1. • New ceilings for the income MAB are determined. The net taxable income before tax deductions is calculated at the level of the de facto households as the sum of IPCAL codes 7440 and 7557. This is compared to income thresholds based on the taxable income of 2009 for the income MAB system. • MAB reimbursements (own calculations) and co-payments after MAB reimbursements are recalculated.
Impact of the policy	
Number of households and persons	<p>The switch from tax deductions to tax reductions increases the net taxable income of 34.32% of the households in our sample (N=1 709 027, Table 40 – columns 2 to 4).</p> <ul style="list-style-type: none"> • Households in the highest income bracket before the policy change, i.e. those with an income MAB ceiling equal to €1 800, are unaffected by the policy change as their ceiling cannot increase (see Table 31). There are 1 326 761 (26.64%) households in this situation. • Households eligible for the social MAB only are equally unaffected by the policy change since we did not modify their situation. There are 1 384 667 (27.8%) households in this situation. • 1 524 572 (30.61%) households have a higher NTI after the policy change, however, without affecting their income MAB ceiling (see Table 40). • The remaining 184 455 (3.7%) households have an increase in NTI that results in a higher income MAB ceiling. For 167 487 households (90.8%), there is no impact on their co-payments as they did not reach their MAB ceiling for the de facto household in the baseline situation. Please note that some of these households received MAB reimbursements via the child MAB or the social MAB for some members of the household. In the end, 16 968 households (9.2%) are affected by the policy change (see Table 38).
MAB reimbursements	<ul style="list-style-type: none"> • The MAB reimbursements granted through the income MAB decrease by €3 664 168 from €7 862 858 to €4 198 690. On average, this is a decrease of €216 per affected household.



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		<ul style="list-style-type: none"> All losing households receive payments from the MAB in the baseline. This is a necessary condition to be able to lose from the policy change. Using the higher NTI, 54% of the households no longer receive MAB reimbursements. On the other hand, 46% of the households still receives MAB reimbursements and has to pay additional co-payments equal to the difference between the new and the baseline MAB ceiling. On average losing households pay €216. This is a substantial amount and affects the number of extreme payers among the affected households. This group quadruples from 1.06% up to 4.52% (only for households with an equivalised NTI>0)
Co-payments after MAB reimbursements		The co-payments after MAB reimbursements for the affected households increase from €12 872 395 to €16 536 563. On average, this is an increase of €216 per affected household.
Characteristics of the winners/losers		<p>Table 40 shows the characteristics of the households according to whether they are affected by the policy measure. Compared to households without a change in NTI (column 1), households with an increase in NTI (columns 2 to 4) are characterized by:</p> <ul style="list-style-type: none"> usage of tax deductions, e.g. larger households with young children (deductible for child care expenditures), younger persons that are more likely to have mortgage loan payments or make contributions in a pension fund (there are fewer households with retired persons and older persons, also fewer persons with help for the elderly); an overrepresentation of households affiliated to a sickness fund as self-employed; and having labour income, with an underrepresentation of households in unemployment, disability or incapacity for work. <p>The increase in NTI only leads to a higher MAB ceiling for low to middle income households (columns 3 and 4):</p> <ul style="list-style-type: none"> Eligibility to the social MAB remains unaffected by the policy change. Low or very low income households (such as the winners identified in simulation N_1) that benefit from the social MAB are unaffected by the policy change (e.g. there is an underrepresentation of guaranteed income households). High income households are also unaffected by the policy change, since these households already fall in the highest income bracket before the change. <p>Compared to households which have an increase in MAB ceiling but are not impacted (column 3), households that are negatively affected (column 4) are characterized by:</p> <ul style="list-style-type: none"> a higher percentage of single parent households. high healthcare costs. There is an overrepresentation of households with elderly persons, disability and entitlement to MAB for the chronically ill or the status chronic illness. The losing households have more and longer hospital stays and have a higher propensity to have physiotherapy. A lower income level, e.g. a lower mean and median NTI, more disability and incapacity to work.
Conclusion/Key message		Consisting of about 17 000 households, the affected group is rather small. The effect on public means is equally small at a macro level, with a saving of €3 664 168 in MAB reimbursements. However, the impact at the level of the household is large, with an average increase in co-payments of €216. Moreover, the affected group is vulnerable, given their high healthcare expenditures (many and long hospital stays, status chronic illness ...), their lower ability to derive their income from labour (disability, unemployment, incapacity for work ...) and the presence of young children. The share of extreme payers in this group quadruples due to the modification in the tax code. Even with a higher income MAB ceiling, 46% of the affected households still relies on the MAB after policy change to mitigate their co-payments.


Table 37 – Correspondence between the MAB ceiling based on the NTI of 2009 (N_5) with that based on the income after the tax reform (N_11)

N		New MAB ceiling N_11 (row percentage %)				
		€ 450	€ 650	€ 1 000	€ 1 400	€ 1 800
MAB ceiling N_5						
€450	360 237	94.65	5.32	0.02	0.01	<0.01
€650	777 354	.	94.33	5.64	0.02	<0.01
€1 000	640 373	.	.	91.56	8.40	0.04
€1 400	490 720	.	.	.	86.34	13.66
€1 800	1 326 761	.	.	.	.	100

Table 38 – Households that had a change in MAB reimbursements following a change in the MAB ceiling (N_11, tax reform)

N		New MAB ceiling N_11 (row percentage %)			
		€ 650	€ 1 000	€ 1 400	€ 1 800
MAB ceiling N_5					
€450	4 307	98.59	1.02		0.39
€650	6 929		99.68	0.32	
€1000	4 019			99.57	0.43
€1400	1 713				100.0



Table 39 – Budgetary impact of a shift from tax deductions to tax reductions on net taxable income (NTI) used to calculate the ceiling for the income MAB year T-3

New ceiling	Variable	Baseline situation (N_5)	Income change (N_11)	Change N_11 – N_5
Higher MAB ceiling, no impact	N households (% total sample)	167 487 (3.36%)		
	Co-payments (€)	56 307 369	56 307 369	
	MAB reimbursements (€)	436 808	436 808	
	Co-payments after MAB reimbursements (€)	55 870 561	55 870 561	
Higher MAB ceiling, loser	Households (N)	16 968 (0.34%)		
	Co-payments (€)	20 735 253	20 735 253	
	MAB reimbursements (€)	7 862 858	4 198 690	-3 664 168
	Co-payments after MAB reimbursements (€)	12 872 395	16 536 563	3 664 168
Net effect (new ceiling)	Households (N)	184 455 (3.70%)		
	Co-payments (€)	77 042 622	77 042 622	
	MAB reimbursements (€)	8 299 666	4 635 498	-3 664 168
	Co-payments after MAB reimbursements (€)	68 742 956	72 407 124	3 664 168



Table 40 – Household characteristics according to the impact of the shift from tax deductions to tax reductions

			Same NTI		Higher NTI	
Statistics		No impact – Same MAB ceiling (1)	No impact – Same MAB ceiling (2)	No impact – Higher MAB ceiling (3)	Loser– Higher MAB ceiling (4)	All (5)
Co-payments after MAB	N	3 271 086	1 524 572	167 487	16 968	4 980 113
	Mean (Change in €)				216.0	0.7
	P90 (Change in €)				400.0	0.0
	P90 (Change in €)				36.77	0.0
NTI 2011 (€)	Mean (€)	29 602	52 897	37 432	31 215	37 002
	Median(€)	22 044	45 970	37 345	29 037	28 290
NTI 2011- equivalised (€)	Mean (€)	21 342	32 437	24 210	19 109	24 828
	Median(€)	17 669	28 167	22 972	17 663	20 759
Extreme payers N_5	NTI equivalised=0	%	3.44	0.24	0.04	2.34
	0<NTI equivalised<=6000	%	0.60	0.20	0.01	0.46
	NTI equivalised>6000	%	0.08	0.08	0.02	0.08
Extreme payers N_11	NTI equivalised=0	%	3.44	0.24	0.04	2.34
	0<NTI equivalised<=6000	%	0.60	0.20	0.01	0.46
	NTI equivalised>6000	%	0.08	0.08	0.02	0.09
Change in extreme payers	NTI equivalised=0	N	0	0	0	0
	0<NTI equivalised<=6000	N	0	0	7	7
	NTI equivalised>6000	N	0	0	580	580
	All	N	0	0	587	587
MAB reimbursements N_5	%	15.58	8.48	0.89	100.00	13.20
MAB reimbursements N_11	%	15.58	8.48	0.89	46.21	13.01
Change in MAB reimbursements	N				-9127	-9127
Household size	Mean	1.89	2.84	2.81	3.11	2.22
Single parent household	%	3.94	5.50	4.22	5.26	4.43
Young children (0-6 years)	%	6.67	23.96	41.29	39.70	13.24



			Same NTI		Higher NTI			
Statistics			No impact – Same MAB ceiling (1)	No impact – Same MAB ceiling (2)	No impact – Higher MAB ceiling (3)	Loser– Higher MAB ceiling (4)	All (5)	
Older persons (65-74 years)			%	18.15	9.82	3.15	9.86	15.07
Older persons (75 years or more)			%	21.47	9.41	2.23	8.45	17.09
Guaranteed income			%	6.36	1.21	0.48	1.21	4.57
Early retired			%	2.25	1.36	0.69	1.54	1.93
Retired			%	31.95	18.17	5.49	16.50	26.79
Disability			%	6.93	4.34	3.53	15.30	6.05
Incapacity for work			%	1.09	1.06	0.60	6.68	1.08
Unemployment			%	7.31	2.94	1.04	2.42	5.75
Affiliated to a sickness fund	Salaried	%	87.71	83.06	82.45	80.33	86.08	
	Mixed (salaried, self-employed)	%	4.97	10.93	11.37	12.70	7.04	
	Self-employed	%	6.17	5.94	6.19	6.97	6.10	
	No head of the sickness fund in the HH	%	1.15	0.07	0.00	0.00	0.00	
Lump sum allowance B or C			%	1.42	0.58	0.18	1.03	1.12
Physiotherapy-E			%	2.60	2.25	0.95	6.75	2.45
Increased child allowance			%	0.74	1.92	1.82	6.11	1.16
Integration allowance handicap			%	2.27	0.89	0.44	1.90	1.78
Help for the elderly			%	3.59	0.82	0.16	0.32	2.61
Long hospital stay			%	1.25	0.63	0.14	2.36	1.03
Multiple hospital stays			%	2.87	1.96	0.67	7.84	2.53
MAB for the chronically ill			%	9.08	7.26	2.78	24.01	8.37
Status chronic illness			%	18.22	10.32	4.09	29.84	15.37



3.7 Modification to the MAB system: abolishing the social MAB and introducing a ceiling of €250 for low-income households

3.7.1 Abolishing the social MAB and introducing a ceiling of €250 for low-income households based on the net taxable income (NTI) of 2009

Technical documentation	
Initial situation (N_5)	<p>The social MAB and income MAB coexist.</p> <ul style="list-style-type: none"> • The ceiling for the income MAB for the de facto household depends on the net taxable income (NTI) of the year T-3 (see Table 32). • Persons (households) entitled to increased reimbursement are eligible for the social MAB (except certain exceptions as explained in the Technical Manual). • Currently, the lowest ceiling in the income MAB and social MAB amounts to €450.
Policy Change (N_12)	<p>The system of the social MAB for households which are entitled to increased reimbursement, is abolished. Hence, the system of the income MAB is applied to all de facto households.</p> <ul style="list-style-type: none"> • In addition to the existing ceiling, a ceiling of €250 is introduced for low income households, defined as de facto households with a NTI below €10 000. • As in the baseline, the ceiling of the income MAB for the de facto household depends on NTI of the year T-3.
Steps for the simulation	<p>Starting point is simulation N_5.</p> <ul style="list-style-type: none"> • Entitlement to the social MAB (PP3001) is abolished. • For all de facto households, an income MAB ceiling is determined. The NTI of 2009 (the sum of IPCAL codes 7555 and 7557) is calculated at the level of the de facto households. This is compared to income thresholds based on the taxable income of 2009 for the income MAB system. However, an additional threshold is introduced, i.e. a ceiling of €250 in case household NTI does not exceed €10 000. • MAB reimbursements (own calculations) and co-payments after MAB reimbursements are recalculated.
Impact of the policy	
Number of households and persons	<ul style="list-style-type: none"> • A total of 588 217 households are eligible for the €250 ceiling, with 84% of these households previously benefiting from the social MAB. The remaining 16% are in the baseline entitled to the low-income MAB (ceiling €450). • The majority of households (86.3%, N=1 195 340) that benefit from the social MAB in the baseline, are categorized in the €250 or €450 income MAB ceiling. However, due to the policy measure 189 325 households (13.7%) are attributed to a MAB ceiling of €650 or higher (see Table 41). Three out of four of the latter are entitled to the €650 MAB ceiling. • For 174 152 households (3.50% of the total sample) there is an impact on their co-payments. For 96 003 households (55%), MAB reimbursements increased while for the remaining 78 149 (45%) they decreased.
MAB reimbursements	<p>The net effect of the measure led to a reduction in the number of extreme payers (i.e. 917) and an increase in the number of households that benefited from MAB reimbursements (i.e. 4 666). The net budgetary gain of this policy for RIZIV – INAMI amounts to €4 113 029. There are two different effects on the amount of MAB reimbursements paid after the introduction of the policy:</p>



Technical documentation		
		<ul style="list-style-type: none"> 96 003 households benefit from increased MAB reimbursements due to the introduction of the €250 ceiling. In this group, 48 442 (51.06%) households did not receive any MAB reimbursements in the baseline. There was a reduction of 2 090 in the number of extreme payers. The budgetary cost for RIZIV – INAMI is €13 252 031, with a mean gain per winning household of €138. 78 149 households are negatively impacted by the policy change. All of them received the social MAB in the baseline but are now assigned a ceiling of €650 or higher. A total of 43 776 households do no longer benefit from MAB reimbursements and the group of extreme payers expands by 1 173 households. The budgetary gain for RIZIV – INAMI is €17 365 060, with a mean reduction in MAB reimbursements per losing household of €222.2.
Co-payments after MAB reimbursements		<ul style="list-style-type: none"> As only the MAB reimbursements are affected by the policy change, the co-payments after MAB reimbursements change in a similar fashion. In total, co-payments after MAB of the affected households increase by €4 113 029, from €74 942 108 to €79 055 137.
Characteristics of the winners/losers	of the	<p>The policy has opposite effects on two different groups of comparable size. Therefore, the comparison between the characteristics of the winners and losers is particularly relevant.</p> <ul style="list-style-type: none"> While the mean and median income of the households affected by the measure (winners and losers confounded) is substantially lower than those of the general population, for the winning households the NTI is strikingly low. All these households are attributed the €250 ceiling; however, the mean NTI in 2011 (= €12 072) is well above the income threshold of €10 000 calculated on the NTI in 2009. Even the median NTI in 2011 nearly equals the threshold. This implies that many of the winning households actually saw their NTI increase in recent years and for about 50% of the households NTI in 2011 exceeds the €10 000 threshold. Among the households affected by the measure (winners and losers confounded) there is an overrepresentation of those with indicators for a long-term illness (e.g. the lump sum allowance B or C, the MAB for the chronically ill or the status of a person with a chronic illness) and high age. There is, however, a difference between the winners and the losers in the simulation, with the losers having an even higher risk for a long-term illness than the winners. Compared to the households that see their MAB reimbursements lowered, those that benefit from the measure are smaller in size, have an overrepresentation of single parent households, are more often self-employed and rely more on guaranteed income. There is also a very high overrepresentation of extreme payer households.
Conclusion/Key message		<p>A generalisation of the income MAB and the introduction of a ceiling of €250 impacts on the groups protected by the system. The group receiving additional coverage consists of small households with an extremely low income, depending on income replacement allowances (guaranteed income, integration allowance, help for the elderly etc.) and with severe indicators of a long-term illness. Given their small size, the (moderate) indications of having a long-term illness and their increased reimbursement status, the combined household income is low and their co-payments do not exceed the €450 threshold in the baseline. These households do however benefit from a lower threshold. For many of the winning households, the NTI has increased in recent years, with the NTI in 2011 exceeding the MAB income threshold of €10 000.</p> <p>The households that suffer a cutback in MAB reimbursements consist of older households with an important presence of retired individuals and individuals affected by a long-term illness. On average, the losing households have about three members implying a higher combined household income and given their severe health status and increased reimbursement status, also have very high co-payments. 44% of the losing households continues to receive MAB reimbursements after the increase in threshold.</p>



Table 41 – Entitlement to the income MAB after abolishing the social MAB and introducing a ceiling of €250 based on the net taxable income 2009

		Income MAB for the household (N_12)												Total
		€250		€450		€650		€1 000		€1 400		€1 800		
MAB right (N_5)	MAB ceiling (N_5)	N	%	N	%	N	%	N	%	N	%	N	%	N
Social MAB	Social MAB €450	495 231	35.76	700 109	50.56	142 114	10.26	31 424	2.26	7 831	0.56	7 954	0.57	1 384 666
Income MAB	€450	88 604	25.78	255 086	74.21	.	.	.	.	.	.	.	.	343 691
	€650	.	.	.	.	735 782	100	.	.	.	.	.	.	735 782
	€1 000	.	.	.	.	.	.	580 575	100	.	.	.	.	580 575
	€1 400	.	.	.	.	.	.	.	.	436 550	100	.	.	436 550
	€1 800	.	.	.	.	.	.	.	.	.	.	1 180 558	100	1 180 558
Social and Income MAB	€450	4 380	26.47	12 165	73.52	.	.	.	.	.	.	.	.	16 545
	€650	.	.	.	.	41 571	100.	.	.	.	.	.	.	41 571
	€1 000	.	.	.	.	.	.	59 798	100	.	.	.	.	59 798
	€1 400	.	.	.	.	.	.	.	.	54 169	100	.	.	54 169
	€1 800	.	.	.	.	.	.	.	.	.	.	146 202	100	146 202
Total	-	588 217	11.81	967 361	19.42	919 469	18.46	671 797	13.48	498 551	10.01	1 334 716	26.8	4 980 113



Table 42 – Budgetary impact of modifying the MAB system: abolishing the social MAB and introducing a ceiling of €250 based on the net taxable income 2009

Impact	Variable	Baseline situation (N_5)	Modification of the MAB system (N_12)	Change N_12 – N_5
Winner	Households (N)	96 003 (1.93%)		
	Co-payments (€)	56 453 480	56 453 480	
	MAB reimbursements (€)	20 481 376	33 733 406	13 252 031
	Co-payments after MAB reimbursements (€)	35 972 104	22 720 074	- 13 252 031
Loser	Households (N)	78 149 (1.57%)		
	Co-payments (€)	72 733 732	72 733 732	
	MAB reimbursements (€)	33 763 728	16 398 668	-17 365 060
	Co-payments after MAB reimbursements (€)	38 970 004	56 335 064	17 365 060
Net effect	Households (N)	174 152 (3.50%)		
	Co-payments (€)	129 187 212	129 187 212	
	MAB reimbursements (€)	54 245 104	50 132 074	-4 113 029
	Co-payments after MAB reimbursements (€)	74 942 108	79 055 137	4 113 029


Table 43 – Household characteristics: abolishing the social MAB and introducing a ceiling of €250 based on the net taxable income 2009

Variables		Statistic	Winner	Loser	All
Co-payments after MAB		N	96 003	78 149	4 980 113
		Mean (Change in €)	-138.04	222.20	0.83
		P90 (Change in €)	-26.47	516.59	0.00
		P10 (Change in €)	-200.00	32.66	0.00
NTI 2011 (€)		Mean (€)	12 072	31 019	37 002
		Median (€)	9 957	24 530	28 290
NTI 2011 - equivalised (€)		Mean (€)	10 344	18 932	24 828
		Median (€)	9 352	16 427	20 759
Extreme payers N_5	NTI equivalised=0	%	20.53	0.70	2.34
	0<NTI equivalised<=6000	%	6.44	1.14	0.46
	NTI equivalised>6000	%	0.11	0.16	0.08
Extreme payers N_12	NTI equivalised=0	%	20.53	0.70	2.34
	0<NTI equivalised<=6000	%	4.30	1.61	0.42
	NTI equivalised>6000	%	0.08	1.20	0.09
Change in extreme payers	NTI equivalised=0	N	0	0	0
	0<NTI equivalised<=6000	N	-2 058	364	-1 694
	NTI equivalised>6000	N	-32	810	777
	All	N	-2 090	1 173	-917
MAB reimbursements N_5		%	49.54	100.00	13.20
MAB reimbursements N_12		%	100.00	43.98	13.29
Change in HH with MAB reimbursements		N	48 442	-43 776	4 666
Household size		Mean	1.43	2.89	2.22
Single parent household		%	4.69	2.69	4.43
Young children (0-6 years)		%	5.68	11.50	13.24
Older persons (65-74 years)		%	14.42	27.93	15.07
Older persons (75 years +)		%	29.36	42.03	17.09



Variables		Statistic	Winner	Loser	All
Guaranteed income		%	20.09	9.04	4.57
Early retired		%	0.07	2.35	1.93
Retired		%	23.73	53.34	26.79
Disability		%	10.03	23.12	6.05
Incapacity for work		%	2.47	3.73	1.08
Unemployment		%	4.95	8.72	5.75
Affiliated to a sickness fund	Salaried	%	84.87	85.86	86.08
	Mixed (salaried, self-employed)	%	2.56	9.35	7.04
	Self-employed	%	10.57	4.68	6.10
	No head of the sickness fund	%	2.00	0.11	0.78
Lump sum allowance B or C		%	3.83	10.65	1.12
Physiotherapy-E		%	6.59	16.01	2.45
Increased child allowance		%	1.22	3.53	1.16
Integration allowance handicap		%	10.58	9.09	1.78
Help for the elderly		%	6.90	21.24	2.61
Long hospital stay		%	6.91	6.81	1.03
Multiple hospital stays		%	8.03	15.36	2.53
MAB for the chronically ill		%	16.86	31.68	8.37
Status chronic illness		%	47.07	62.61	15.37



3.7.2 Abolishing the social MAB and introducing a ceiling of € 250 for low-income households based on the net taxable income (NTI) of 2011

Technical documentation			
Initial situation (N_10)		<p>The social MAB and income MAB coexist.</p> <ul style="list-style-type: none">• The ceiling for the income MAB for the de facto household depends on the net taxable income (NTI) of the year T-1.• Persons (households) entitled to increased reimbursement are eligible for the social MAB (except certain exceptions as explained in the Technical Manual).• Currently, the lowest ceiling in the income MAB and social MAB amounts to €450.	
Policy Change (N_13)		<p>The system of the social MAB for households which are entitled to increased reimbursement, is abolished. Hence, the system of the income MAB is applied to all de facto households.</p> <ul style="list-style-type: none">• In addition to the existing ceiling, a ceiling of €250 is introduced for low income households, defined as de facto households with a NTI below €10 000.• As in the baseline, the ceiling of the income MAB for the de facto household depends on NTI of the year T-1.	
Steps for the simulation		<p>Starting point is simulation N_10</p> <ul style="list-style-type: none">• Entitlement to the social MAB is abolished• For all de facto households, an income MAB ceiling is determined. The NTI of 2011 (the sum of IPCAL codes 7555 and 7557) is calculated at the level of the de facto households. This is compared to income thresholds based on the taxable income of 2011 for the income MAB system. However an additional threshold is introduced, i.e. a ceiling of €250 in case household NTI does not exceed €10 000.• MAB reimbursements (own calculations) and co-payments after MAB reimbursements are recalculated.	
Impact of the policy			
Number of persons	of households and		<ul style="list-style-type: none">• A total of 434 126 households are eligible for the €250 ceiling, with 98.8% of these households previously benefiting from the social MAB. The remaining 1.2% are in the baseline entitled to the low-income MAB (ceiling €450).• The majority of households (88.2%, N=1 221 459) that benefit from the social MAB in N_10, are categorized in the €250 or €450 income MAB ceiling in simulation N_13.• Due to the policy measure 163 204 households (11.8%) are attributed to a MAB ceiling of €650 or higher (see Table 44). Over 80% of the latter are entitled to the €650 MAB ceiling.
MAB reimbursements		<p>The net effect of the measure led to a reduction in the number of extreme payers (i.e. 2 386) and a decrease in the number of households that benefited from MAB reimbursements (i.e. 15 383). The number of extreme payers is reduced considerably among households having an equalised income below €6 000.</p>	
Co-payments reimbursements	after MAB	<p>As only the MAB reimbursements are affected by the policy change, the co-payments after MAB reimbursements change in a similar way. The net budgetary gain of this policy for RIZIV – INAMI amounts to €9 265 667. There are two different effects on the amount of MAB reimbursements paid after the introduction of the policy:</p>	



Technical documentation		
		<ul style="list-style-type: none"> The budgetary cost for RIZIV – INAMI is €7 926 738, with a mean gain per winning household of €140.7. 56 334 households benefit from increased MAB reimbursements thanks to the introduction of the €250 ceiling. In this group, 28 057 households did not receive any MAB reimbursements in simulation N_10. 77 327 households are negatively impacted by the policy change. All of them received the social MAB in the baseline but now have a ceiling of €650 or higher. A total of 43 441 (56.2%) households no longer benefit from MAB reimbursements and the remaining 33 886 (43.8%) have lower MAB reimbursements than in simulation N_10. The group of extreme payers expands by 271 households. The budgetary gain for RIZIV – INAMI is €17 192 405, with a mean reduction in MAB reimbursements per losing household of €222.3.
Characteristics winners/losers	of	the Compared to the general population, among the households affected by the measure (winners and losers confounded) there is an overrepresentation of those with indicators for a long-term illness (e.g. the lump sum allowance B or C, the MAB for the chronically ill or the status of a person with a chronic illness and high age (75+). There are remarkable differences between the winners and the losers in this simulation: <ul style="list-style-type: none"> the losing group has more households with indicators of long-term illness, young children, older persons (and consequently more retired), disabled or unemployed than the winners; the NTI is strikingly low (= €4 386) for the winning households; the winning group has households with a smaller size, more single parent households, self-employed, beneficiaries of a guaranteed income and extreme payers than the losing group.
Conclusion/Key message		A generalisation of the income MAB based on the most recent income (T-1) and the introduction of a ceiling of €250 lead to changes in the groups protected by the system. About two out of five households affected by the policy benefited from a lower MAB ceiling. Given their small size and their eligibility to increased reimbursement, these households did not exceed the €450 social MAB threshold. It is particularly striking that the winning households have a very low equalised NTI. The reasons behind this very low income cannot be retrieved from our database. The simulation shows, however, that the introduction of a MAB ceiling of €250 reduces considerably the number of extreme payers among the households with the lowest incomes.



Table 44 – Entitlement to the income MAB after abolishing the social MAB and introducing a ceiling of €250 based on the net taxable income 2011

		Income MAB for the household (N_13)												Total	
		€250		€450		€650		€1 000		€1 400		€1 800			
MAB (N_10)	right	MAB ceiling (N_10)	N	%	N	%	N	%	N	%	N	%	N	%	N
Social MAB		Social MAB €450	429 129	31.0	792 330	57.2	133 810	9.7	23 011	1.7	4 096	0.3	2 287	0.2	1 384 666
Income MAB		€450	4 291	1.9	223 553	98.1	.	.	.	.	.	.	.	.	227 845
		€650	.	.	.	.	774 192	100	.	.	.	.	.	.	774 192
		€1 000	.	.	.	.	.	.	603 008	100	.	.	.	.	603 008
		€1 400	.	.	.	.	.	.	.	.	443 177	100	.	.	443 177
		€1 800	.	.	.	.	.	.	.	.	.	.	1 228 934	100	1 228 934
Social and Income MAB for different members of the household		€450	705	11.3	5 532	88.7	.	.	.	.	.	.	.	.	6 237
		€650	.	.	.	.	34 433	100	.	.	.	.	.	.	34 433
		€1 000	.	.	.	.	.	.	62 823	100	.	.	.	.	62 823
		€1 400	.	.	.	.	.	.	.	.	54 941	100	.	.	54 941
		€1 800	.	.	.	.	.	.	.	.	.	.	159 851	100	159 851
Total		-	434 126	8.7	1 021 416	20.5	942 436	18.9	688 844	13.8	502 215	10.1	1 391 073	27.9	4 980 113



Table 45 – Budgetary impact of modifying the MAB system: entitlement to the income MAB after abolishing the social MAB and introducing a ceiling of €250 based on the net taxable income 2011

Impact	Variable	Baseline situation (N_10)	Modification of the MAB system (N_13)	Change N_13 – N_10
Winner	Households (N)	56 334.49 (1.13%)		
	Co-payments (€)	33 651 048	33 651 048	
	MAB reimbursements (€)	12 665 581	20 592 319	7 926 738
	Co-payments after MAB reimbursements (€)	20 985 467	13 058 729	-7 926 738
Loser	Households (N)	77 327 (1.55%)		
	Co-payments (€)	72 506 789	72 506 789	
	MAB reimbursements (€)	33 718 719	16 526 314	-17 192 405
	Co-payments after MAB reimbursements (€)	38 788 070	55 980 475	17 192 405
Net effect	Households (N)	133 661 (2.68%)		
	Co-payments (€)	106 157 837	106 157 837	
	MAB reimbursements (€)	46 384 300	37 118 633	-9 265 667
	Co-payments after MAB reimbursements (€)	59 773 537	69 039 204	9 265 667



Table 46 – Household characteristics: abolishment of the social MAB and introduction of a MAB ceiling of €250

Variables		Statistic	Winner	Loser	All
Co-payments after MAB		N	56 334	77 327	4 980 113
		Mean (Change in €)	-140.71	222.33	1.86
		P90 (Change in €)	-29.17	520.36	0.00
		P10 (Change in €)	-200.00	35.61	0.00
NTI 2011 (€)		Mean (€)	4 386	32 123	37 002
		Median (€)	4 177	25 125	28 290
NTI 2011 - equivalised (€)		Mean (€)	4 041	19 650	24 828
		Median (€)	3 561	17 280	20 759
Extreme payers N_10	NTI equivalised=0	%	37.48	0.54	2.34
	0<NTI equivalised<=6000	%	13.86	0.72	0.46
	NTI equivalised>6000	%	0.07	0.10	0.05
Extreme payers N_13	NTI equivalised=0	%	37.48	0.54	2.34
	0<NTI equivalised<=6000	%	9.18	0.78	0.40
	NTI equivalised>6000	%	0.03	0.39	0.05
Change in extreme payers	NTI equivalised=0	N	0	0	0
	0<NTI equivalised<=6000	N	-2 635	45	-2 590
	NTI equivalised>6000	N	-21	226	204
	All	N	-2 656	271	-2 386
MAB reimbursements N_10		%	50.19	100.00	12.79
MAB reimbursements N_13		%	100.00	43.82	12.48
Change in HH with MAB reimbursements		N	28 057	-43 441	-15 383
Household size		Mean	1.36	2.90	2.22
Single parent household		%	4.80	1.99	4.43
Young children (0-6 years)		%	3.77	9.59	13.24
Older persons (65-74 years)		%	13.68	29.01	15.07
Older persons (75 years +)		%	22.18	43.69	17.09
Guaranteed income		%	27.53	9.44	4.57



Variables		Statistic	Winner	Loser	All
Early retired		%	0.01	2.29	1.93
Retired		%	21.11	54.95	26.79
Disability		%	11.06	23.63	6.05
Incapacity for work		%	2.47	3.92	1.08
Unemployment		%	6.56	8.38	5.75
Affiliated to a sickness fund	Salaried	%	85.34	87.18	86.08
	Mixed (salaried, self-employed)	%	1.32	9.17	7.04
	Self-employed	%	9.92	3.62	6.10
	No head of the sickness	%	3.43	0.03	0.78
Lump sum allowance B or C		%	4.50	10.86	1.12
Physiotherapy-E		%	8.36	16.87	2.45
Increased child allowance		%	1.71	3.41	1.16
Integration allowance handicap		%	15.61	9.48	1.78
Help for the elderly		%	5.32	22.39	2.61
Long hospital stay		%	11.10	6.68	1.03
Multiple hospital stays		%	10.41	15.51	2.53
MAB for the chronically ill		%	18.48	31.59	8.37
Status chronic illness		%	54.41	65.10	15.37



3.8 Indexation on the income MAB thresholds and ceilings

3.8.1 Indexation of the MAB ceilings

Technical documentation	
Initial situation (N_5)	The ceiling for the social and income MAB are not subject to an indexation.
Policy Change (N_14)	From 2017 onwards, the ceilings for all MAB sub-systems (social, income, child MAB and the reduction of the MAB ceiling linked to the MAB chronically ill/ status chronic illness) are indexed (see Table 47). An indexation of 2% is applied in this simulation, which gives the ceilings applied in 2017.
Steps for the simulation	<p>The starting point is simulation N_5.</p> <ul style="list-style-type: none">• All MAB ceilings were raised by 2%. The exact levels can be found in Table 47.• MAB reimbursements (own calculations) and co-payments after MAB reimbursements are recalculated.
Impact of the policy	
Number of households and persons	As expected, the indexation leads to a change in the income MAB ceilings for households entitled to the income MAB. The actual policy impact is limited to 405 231 households (see Table 48 and Table 49), i.e. 8.14% of the total sample or 62% of the households with MAB reimbursements in the baseline situation.
MAB reimbursements	The net effect of the measure is a reduction in MAB reimbursements of €6 383 317 (see Table 48). The average reduction in MAB reimbursements per household is small and amounts to €15.75.
Co-payments after MAB reimbursements	As only MAB reimbursements are affected by the policy change, the co-payments after MAB reimbursements change by €6 383 317. All losing households benefit from the MAB in the baseline. Of these households, 11 570 (1.76%) no longer receive reimbursements via the MAB system. Since most households receiving MAB reimbursements are entitled to the €450 and €650 ceiling, we observed that almost 70% of the losing households belong to these categories (see Table 47).
Characteristics of the winners/losers	<p>Table 49 shows the characteristics of households affected by the measure. These households have:</p> <ul style="list-style-type: none">• a lower mean and median NTI that is not situated at the bottom of the distribution. This is normal given that households benefitting from the social MAB are not affected by the policy. In line with the latter, there is an underrepresentation of households benefitting from allowances or indicators that may lead to the entitlement of increased reimbursement (e.g. single parent households, guaranteed income).• an overrepresentation of households with an indicator of a long-term illness which might have higher co-payments and consequently might benefit from MAB reimbursements (e.g. disability, lump sum allowance B or C, physiotherapy-E, increased child allowance, integration allowance handicap, long hospital stay, multiple hospital stays, MAB for the chronically ill and the status chronic illness)• an overrepresentation of households with retired persons and older persons.
Conclusion/Key message	The policy change has modest budgetary consequences at a macro and micro level. The number of affected households, however, is large. Because the impact of the indexation is small, the effect on co-payments after MAB reimbursements for affected households is limited.


Table 47 – Income MAB ceilings

Income thresholds	Ceilings (€ (N_5))	Indexed ceilings (N_14)	Households losing MAB reimbursements	
			N	%
Social MAB	450	459	219 046	33.38
NTI 2009 ≤ 17 039.73	450	459	85 873	13.09
17 039.73 < NTI 2009 ≤ 26 195.40	650	663	190 896	29.09
26 195.40 < NTI 2009 ≤ 35 351.10	1 000	1 020	83 000	12.65
35 351.10 < NTI 2009 ≤ 44 125.29	1 400	1 428	31 187	4.75
NTI 2009 ≥ 44 125.29	1 800	1836	46 190	7.04
All	-	-	656 192	100.00

RIZIV – INAMI (2017)⁶. After applying the 2% indexation, the ceiling for the child MAB amounts to € 663 (there is no indexation of the ceiling of € 450 for handicapped children). The reduction applicable to the MAB ceilings for households benefiting from the MAB chronically ill and the status chronic illness amount to € 102.

Table 48 – Budgetary cost of introducing an indexation for the income MAB ceilings

New ceiling	Variable	Baseline situation (N_5)	New MAB ceilings(N_14)	Change N_14– N_5
Higher MAB ceiling, no impact	N households (% total sample)			4 323 921 (86.82%)
	Co-payments (€)	1 280 594 200	1 280 594 200	0
	MAB reimbursements (€)	563 591	563 591	0
	Co-payments after MAB reimbursements (€)	1 280 030 609	1 280 030 609	0
Higher MAB ceiling, loser	Households (N)			656 192 (13.18%)
	Co-payments (€)	782 241 949	782 241 949	0
	MAB reimbursements (€)	346 709 708	338 806 555	-7 903 152
	Co-payments after MAB reimbursements (€)	435 532 241	443 435 394	7 903 152
Net effect (new ceiling)	Households (N)	4 980 113	100.00%	
	Co-payments (€)	2 062 836 149	2 062 836 149	0
	MAB reimbursements (€)	347 273 299	339 370 146	-7 903 153
	Co-payments after MAB reimbursements (€)	1 715 562 850	1 723 466 003	7 903 153



Table 49 – Household characteristics according to the impact of the indexation of the MAB ceiling

Variables		Statistic	Loser	All
Co-payments after MAB		N	656 192	4 980 113
		Mean (Change in €)	12.04	1.59
		P90 (Change in €)	20.00	7.00
		P10 (Change in €)	7.00	0.00
NTI (€)		Mean (€)	26 177	37 002
		Median (€)	21 573	28 290
NTI - equivalised (€)		Mean (€)	18 730	24 828
		Median (€)	16 683	20 759
Extreme payers N_5	NTI equivalised=0	%	1.70	2.34
	0<NTI equivalised<=6000	%	0.84	0.46
	NTI equivalised>6000	%	0.34	0.08
Extreme payers N_14	NTI equivalised=0	%	1.70	2.34
	0<NTI equivalised<=6000	%	0.86	0.46
	NTI equivalised>6000	%	0.37	0.08
Change in extreme payers	NTI equivalised=0	N	0.00	0.00
	0<NTI equivalised<=6000	N	134	134
	NTI equivalised>6000	N	170	170
	All	N	305	305
MAB reimbursements N_5		%	100	13.20
MAB reimbursements N_14		%	97.29	12.84
Change in HH with MAB reimbursements		N	-17 790	-17 790
Household size		Mean	2.03	2.22
Single parent household		%	2.62	4.43
Young children (0-6 years)		%	7.50	13.24
Older persons (65-74 years)		%	27.24	15.07
Older persons (75 years +)		%	43.19	17.09
Guaranteed income		%	5.45	4.57



Variables	Statistic	Loser	All
Early retired	%	1.52	1.93
Retired	%	53.71	26.79
Disability	%	12.84	6.05
Incapacity for work	%	2.85	1.08
Unemployment	%	5.54	5.75
Affiliated to a sickness fund	Salaried	88.56	86.08
	Mixed (salaried, self-employed)	5.28	7.04
	Self-employed	5.98	6.10
	No head of the sickness fund in the HH	0.18	0.78
Lump sum allowance B or C	%	5.52	1.12
Physiotherapy-E	%	9.99	2.45
Increased child allowance	%	1.78	1.16
Integration allowance handicap	%	5.26	1.78
Help for the elderly	%	9.59	2.61
Long hospital stay	%	5.74	1.03
Multiple hospital stays	%	12.82	2.53
MAB for the chronically ill	%	36.11	8.37
Status chronic illness	%	53.33	15.37



3.8.2 Indexation of the MAB income thresholds

Technical documentation			
Initial situation (N_5)		The income thresholds of the income MAB are adjusted to inflation annually.	
Policy Change (N_15)		The income thresholds of the income MAB are not only adjusted to the inflation in consumer prices, but also to the development of living standards (evolutie van de welvaart/l'évolution du bien-être). In this simulation, the adjustment to the development of living standards is set at 2% (see Table 50).	
Steps for the simulation		<p>The starting point is simulation N_5.</p> <ul style="list-style-type: none">• The income thresholds of the income MAB were raised by 2%. The exact thresholds applied in the means-test can be found in Table 50.• MAB reimbursements (own calculations) and co-payments after MAB reimbursements are recalculated.	
Impact of the policy			
Number of households and persons		A total of 151 701 households (i.e. 3.05 % of all households) are eligible for a lower MAB ceiling, with 24 615 households (i.e. 16 % of the affected households) benefiting from higher MAB reimbursements (see Table 51 and Table 52).	
MAB reimbursements		<p>The measure led to a small reduction in the number of extreme payers (i.e. 215) and increase in the number of households that benefited from MAB reimbursements (i.e.10 453).</p> <p>Households benefiting from the indexation of the threshold have a mean gain of €239.63. The budgetary cost for RIZIV – INAMI is €5 898 602.</p> <p>The distribution of the affected households differs according to their income (see Table 53):</p> <ul style="list-style-type: none">• The number of households entitled to a lower MAB ceiling increases with income.• The households that benefit from higher MAB reimbursements are concentrated among those with low income (i.e. 73.1% entitled to the ceiling €450 and €650).	
Co-payments reimbursements	after	MAB	As only MAB reimbursements are affected by the policy change, the co-payments after MAB reimbursements change by €5 898 602.
Characteristics winners/losers	of	the	<p>Table 52 shows the characteristics of households affected by the measure. Compared with the general population, winning and losing households are characterised by</p> <ul style="list-style-type: none">• a lower mean and median NTI. As pointed out in the previous section households benefitting from the social MAB are not affected by the policy and therefore the NTI of the affected households is not situated at the bottom of the distribution.• an overrepresentation of households with an indicator of a long-term illness that have higher co-payments and consequently that benefit from MAB reimbursements.• an overrepresentation of households with retired persons and older persons.
Conclusion/Key message		<p>The policy change has minor budgetary consequences at a macro level. However, the impact at the household level is large. Most households benefiting from the measure are concentrated in the lowest income groups.</p> <p>From this simulation we learn that the indexation of the income MAB thresholds (or the lack of) can potentially affect vulnerable households given that they are likely to have large healthcare expenditures and belong to low-income groups.</p>	


Table 50 – Income MAB thresholds

Indexed ceilings (N_5)	Income thresholds (N_5)	Income thresholds (N_15)
€450	Social MAB, eligibility to increased reimbursement	Social MAB, eligibility to increased reimbursement
€450	NTI 2009 ≤ 17 039.73	NTI 2009 ≤ 17 380.52
€650	17 039.73 < NTI 2009 ≤ 26 195.40	17 380.52 < NTI 2009 ≤ 26 719.31
€1 000	26 195.40 < NTI 2009 ≤ 35 351.10	26 719.31 < NTI 2009 ≤ 36 058.12
€1 400	35 351.10 < NTI 2009 ≤ 44 125.29	36 058.12 < NTI 2009 ≤ 45 007.80
€1 800	NTI 2009 ≥ 44 125.29	NTI 2009 ≥ 45 007.80

RIZIV – INAMI (2017)⁶
Table 51 – Budgetary cost of the indexation of the thresholds for the income MAB

New ceiling	Variable	Baseline situation (N_5)	Income change (N_15)	Change N_15– N_5
Lower ceiling, no impact	N households (% total sample)	127 086 (2.55%)		
	Co-payments (€)	41 929 355	41 929 355	
	MAB reimbursements (€)	437 573	437 573	
	Co-payments after MAB reimbursements (€)	41 491 782	41 491 782	
Lower ceiling, winner	N households (% total sample)	24 615 (0.49%)		
	Co-payments (€)	31 413 054	31 413 054	
	MAB reimbursements (€)	8 508 730	14 407 332	5 898 602
	Co-payments after MAB reimbursements (€)	22 904 324	17 005 722	-5 898 602
Net effect (new ceiling)	Households (N)	151 701 (3.05%)		
	Co-payments (€)	73 342 409	73 342 409	
	MAB reimbursements (€)	8 946 303	14 844 905	5 898 602
	Co-payments after MAB reimbursements (€)	64 396 106	58 497 504	-5 898 602



Table 52 – Household characteristics according to the impact of the indexation of the MAB thresholds

Variables		Statistic	Winner	All
Co-payments after MAB		N	24 615	4 980 113
		Mean (Change in €)	-239.63	-1.18
		P90 (Change in €)	-51.70	0.00
		P10 (Change in €)	-400.00	0.00
NTI (€)		Mean (€)	29 682	37 002
		Median (€)	27 685	28 290
NTI - equivalised (€)		Mean (€)	21 490	24 828
		Median (€)	19 559	20 759
Extreme payers N_5	NTI equivalised=0	%	0.00	2.34
	0<NTI equivalised<=6000	%	0.00	0.46
	NTI equivalised>6000	%	1.04	0.08
Extreme payers N_15	NTI equivalised=0	%	0.00	2.34
	0<NTI equivalised<=6000	%	0.00	0.46
	NTI equivalised>6000	%	0.16	0.07
Change in extreme payers	NTI equivalised=0	N	0	0
	0<NTI equivalised<=6000	N	0	0
	NTI equivalised>6000	N	-215	-215
	All	N	-215	-215
MAB reimbursements N_5		%	57.54	13.20
MAB reimbursements N_15		%	100.00	13.41
Change in HH with MAB reimbursements		N	10 453	10 453
Household size		Mean	2.09	2.22
Single parent household		%	1.82	4.43
Young children (0-6 years)		%	8.34	13.24
Older persons (65-74 years)		%	31.02	15.07
Older persons (75 years +)		%	39.10	17.09
Guaranteed income		%	0.73	4.57



Variables		Statistic	Winner	All
Early retired		%	1.90	1.93
Retired		%	56.01	26.79
Disability		%	12.30	6.05
Incapacity for work		%	2.95	1.08
Unemployment		%	5.24	6.10
Affiliated to a sickness fund	Salaried	%	88.25	86.08
	Mixed (salaried, self-employed)	%	6.43	7.04
	Self-employed	%	5.24	6.10
	No head of the sickness fund in the HH	%	0.08	0.78
Lump sum allowance B or C		%	3.05	1.12
Physiotherapy-E		%	6.96	2.45
Increased child allowance		%	1.30	1.16
Integration allowance handicap		%	3.23	1.78
Help for the elderly		%	3.73	2.61
Long hospital stay		%	3.62	1.03
Multiple hospital stays		%	11.34	2.53
MAB for the chronically ill		%	39.54	8.37
Status chronic illness		%	45.93	15.37

**Table 53 – Distribution of households having a lower MAB ceiling according to whether they are affected by the measure**

Income thresholds (N_15)	MAB ceiling (N_15)	All households (1)		New MAB ceiling		% Winners (2/1)
		N	%	Winners (2)	N	
					%	
NTI 2009 ≤ 17 380.52	€450	24 524	16.2	7 597	30.9	30.98
17 380.52 < NTI 2009 ≤ 26 719.31	€650	40 583	26.8	10 422	42.3	25.68
26 719.31 < NTI 2009 ≤ 36 058.12	€1 000	41 555	27.4	4 778	19.4	11.50
36 058.12 < NTI 2009 ≤ 45 007.80	€1 400	45 039	29.7	1 818	7.4	4.04
All households		151 701	100	24 615	100	6.23

3.8.3 *Changes in the number of households entitled to the social and income MAB: analysis in light of the simulation results*

RIZIV – INAMI⁴ points out that the number of persons entitled to the low-income MAB (€450 ceiling and to a lesser extent to the €650 ceiling) has decreased. Between 2006 and 2015, the opposite trend was reported for the middle and high-income MAB (i.e. €1000, €1400 and €1800) with a rising number of beneficiaries found in the three categories.

These trends may result from several factors including changes in the eligibility to increased reimbursement and the indexation policy of the MAB system. Based on the results of different simulations, hereafter we discuss the trends mentioned by RIZIV – INAMI.

Impact of policies enhancing eligibility to increased reimbursement

Simulation N_3 confirms that a policy enhancing the access to increased reimbursement, such as OMNIO or the simplification of the systems of increased reimbursement, creates a shift in eligibility from the low-income MAB (€450 ceiling) towards the social MAB. This effect is particularly visible among households that were entitled to the low-income MAB.

Indexation of the MAB ceilings

The first indexation of the MAB ceilings since the transition from the social and fiscal exemption to the MAB system took place in 2017. As shown in simulation N_14, the indexation of the MAB ceilings affects the level of reimbursements as well as the number of households benefiting from the MAB system. The lack of indexation of the ceilings combined with the indexation of healthcare services, may have allowed households to more rapidly reach the MAB ceilings. The latter may explain why we see a persistent upward trend in the number of middle and high-income households with MAB reimbursements. It is possible that this trend is not visible among low-income households because of the massive shift towards the social MAB from households that previously benefited from the low and modest income MAB.



Indexation of the MAB thresholds

Simulation N_15 shows that adapting the income MAB thresholds to the development of living standards may potentially benefit more low and modest income households. The overall impact of the indexation of the thresholds, however, will depend on the real income growth of the

households. For instance, simulation N_10 indicates that between 2009 and 2010 the net taxable income increased at a faster pace than the indexation applied to the MAB income thresholds. These results point out that the protective effect of the MAB system may be affected by establishing an indexation policy that fits as much as possible to the evolution of the household's income.

3.9 Income-related deductible excluding GP services

Technical documentation	
Initial situation (N_5)	The cost of care reimbursed by the health insurance is immediately shared by the patient (in the form of co-payments) and RIZIV – INAMI. The MAB system puts a limit to the amount of co-payments a patient needs to pay in function of the insurance status and the taxable income.
Policy Change (N_16)	<p>The current system with co-payments and MAB is replaced by a system with deductibles. In a deductible system, the patient initially pays the entire cost of healthcare. The deductible is the amount patients have to pay before health insurance begins. For example, with a deductible of €300, the patient pays the first €300 of healthcare costs (current co-payment and RIZIV – INAMI part), after which health insurance coverage starts.</p> <p>The simulation adds two further adjustments to a simple deductible system:</p> <ul style="list-style-type: none"> Costs for visits and consultations by general practitioners are paid entirely by the health insurance. These costs are not taken into account for the calculation of the patient's expenses eligible for the deductible. Ten deductibles are defined depending on the deciles of the net taxable income of 2009. The ten deductibles (and corresponding net taxable income limits) are chosen to be budget neutral for RIZIV – INAMI compared to the current MAB system. The ten deductibles were defined according to the following algorithm: <ul style="list-style-type: none"> From the net taxable income of 2009 distribution, take the following percentiles: 10, 20, 30, 40, 50, 60, 70, 80, 90, 95. Take as start deductibles 1% of each of these percentiles and round to the nearest €5. Use these starting deductibles in an numerical optimisation algorithm (L-BFGS-B) to find deductibles that are budget neutral. To this end, the optimisation algorithm minimises the difference between the RIZIV – INAMI budget for the system with co-payments after MAB and the RIZIV – INAMI budget with a deductible. Additionally, a deductible for a higher income bracket needs to be larger than a deductible for a lower income bracket.
Steps for the simulation	<p>Starting point is simulation N_5.</p> <ul style="list-style-type: none"> The expenses eligible for the deductible are the current RIZIV – INAMI part (SS00060) and the current co-payment part (SS00160), with the exclusion of the GP visits and consultations nomenclature. The patient and RIZIV – INAMI shares are calculated as: $\text{patient share} = \begin{cases} \text{expenses without GP,} & \text{if expenses without GP} \leq \text{deductible} \\ \text{deductible,} & \text{if expenses without GP} > \text{deductible} \end{cases}$

**Technical documentation**

$$\text{RIZIV-INAMI share} = \begin{cases} \text{expenses for GP,} & \text{if expenses without GP} \leq \text{deductible} \\ \text{expenses without GP} - \text{deductible} + \text{expenses for GP,} & \text{if expenses without GP} > \text{deductible} \end{cases}$$

- The following deductibles and corresponding income limits are used:

Net income 2009 interval		Deductible after optimisation
Lower income limit	Upper income limit	
€ 0.00	€ 8 635.50	€ 85.01
€ 8 635.51	€ 12 869.75	€ 130.00
€ 12 869.76	€ 16 493.73	€ 165.01
€ 16 493.74	€ 21 114.61	€ 210.01
€ 21 114.62	€ 26 369.29	€ 265.01
€ 26 369.30	€ 32 849.49	€ 330.02
€ 32 849.50	€ 41 210.30	€ 410.02
€ 41 210.31	€ 51 298.77	€ 515.04
€ 51 298.78	€ 67 667.50	€ 675.04
€ 67 667.51		€ 966.14

- Patient expenditures are calculated at the de facto household level.

Impact of the policy**Number of households and persons**

- About half of the households (54.5%) have more expenses in this simulation, compared to 41% that have less expenses than their current situation.

Co-payments after MAB versus deductible

- On average, households that benefit from a deductible system pay 264 euro less, while households that lose pay 199 euro more. The figures below show a great variation in how much households gain or lose (both in euro and % net income).



Technical documentation

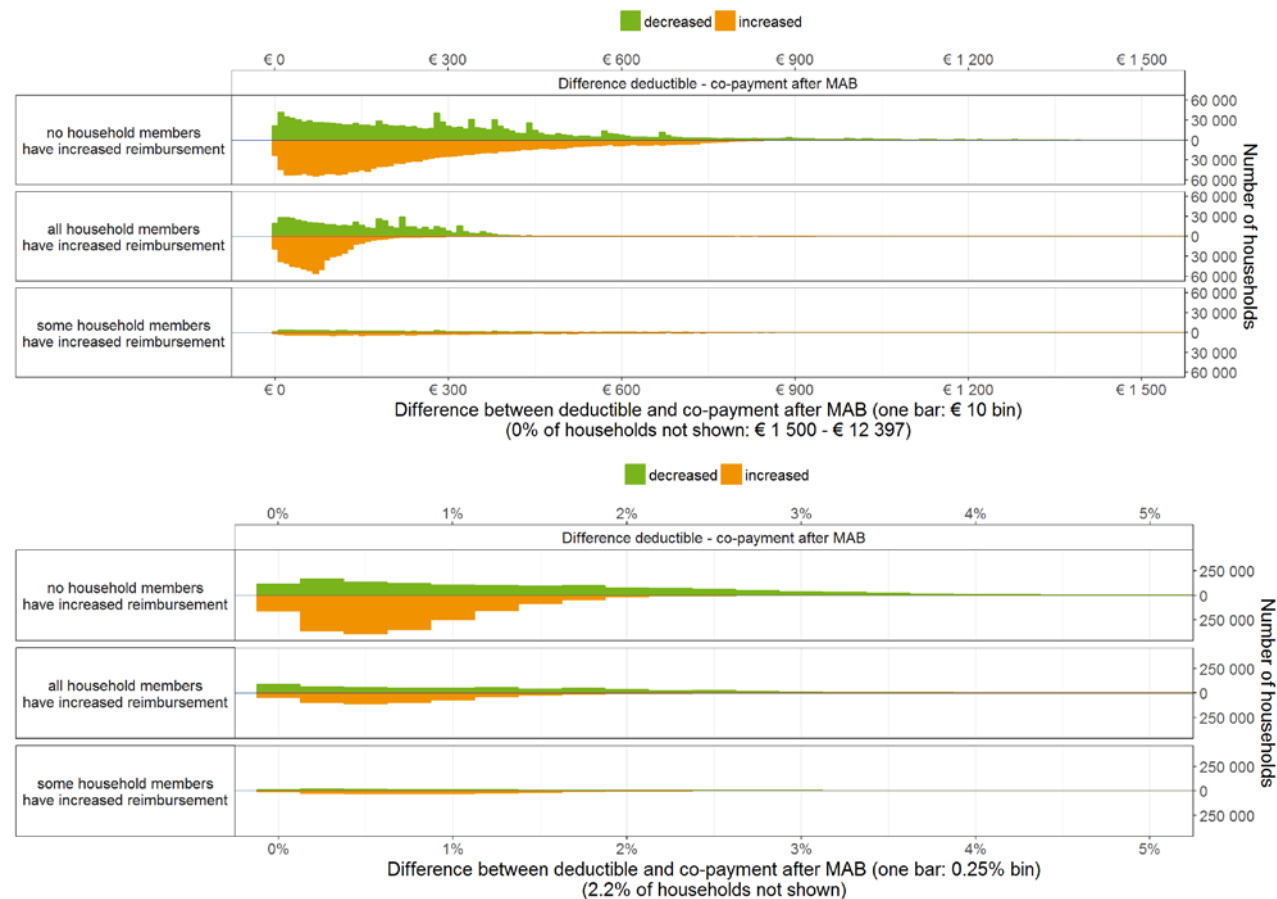
**Characteristics of the winners/losers**

Table 54 shows the characteristics of households affected in the simulation.

Conclusion/Key message

Replacing the current MAB system and co-payments with an income-related deductible excluding GP visits and consultations would entail important changes, both positive and negative, in the amounts paid by patients for healthcare use.



Technical documentation

Households with a higher net taxable income pay more in the deductible system than in the current system, while households with a lower income pay less. Households with young children or elderly are overrepresented in those that gain in the deductible system. A similar overrepresentation exists for households with guaranteed income, retired members or members in disability or incapacity for work. Other indicators of long-term illness like eligibility to lump sum B or C, physiotherapy, increased child allowance, integration allowance handicap or chronically ill are similarly overrepresented in the households that pay less in a deductible system. This overrepresentation suggests that an income-related deductible system reduces patient shares in more vulnerable households, and increases patient shares in households with a relative higher taxable income and relative low current expenses.

Table 54 – Household characteristics income related deductible without GP services

Variables		Statistic	Winner	Loser	All
Co-payments after deductible compared to MAB		N	2 092 291	2 665 334	4 980 113
		Mean (Change in €)	-263	206	
		P90 (Change in €)	-29.20	494.06	
		P10 (Change in €)	-570.96	28.62	
NTI 2011 (€)		Mean (€)	26 565	42 693	34 504
		Median (€)	21 763	35 186	26 369
NTI 2011 - equivalised (€)		Mean (€)	20 340	29 530	24 828
		Median (€)	17 863	25 747	20 759
Extreme payers N_5	NTI equivalised=0	%	2.37	2.50	2.34
	0<NTI equivalised<=6000	%	0.82	0.21	0.46
	NTI equivalised>6000	%	0.18	<0.01	0.08
Extreme payers deductible	NTI equivalised=0	%	2.30	2.62	2.37
	0<NTI equivalised<=6000	%	0.41	0.45	0.41
	NTI equivalised>6000	%	<0.01	0.02	<0.01
Change in extreme payers	NTI equivalised=0	N	-1 492	3 358	
	0<NTI equivalised<=6000	N	-8 693	6 473	
	NTI equivalised>6000	N	-3 855	450	
	All	N	-14 040	10 281	
Household size		Mean	2.21	2.31	2.22



Variables		Statistic	Winner	Loser	All
Single parent household		%	4.49	4.67	4.43
Young children (0-6 years)		%	13.20	14.33	13.24
Older persons (65-74 years)		%	21.67	10.39	15.07
Older persons (75 years +)		%	28.87	8.56	17.09
Guaranteed income		%	5.47	3.85	4.57
Early retired		%	1.92	2.03	1.93
Retired		%	39.67	17.59	26.79
Disability		%	9.67	3.51	6.05
Incapacity for work		%	2.02	0.42	1.08
Unemployment		%	5.83	5.52	5.75
Affiliated to a sickness fund	Salaried	%	87.43	85.25	86.08
	Mixed (salaried, self-employed)	%	6.26	8.20	7.04
	Self-employed	%	6.02	5.97	6.10
	No head of the sickness	%	0.29	0.58	0.78
Lump sum allowance B or C		%	2.32	0.27	1.12
Physiotherapy-E		%	4.85	0.77	2.45
Increased child allowance		%	1.69	0.83	1.16
Integration allowance handicap		%	3.08	0.89	1.78
Help for the elderly		%	4.94	1.00	2.61
Long hospital stay		%	2.20	0.19	1.03
Multiple hospital stays		%	5.52	0.40	2.53
MAB for the chronically ill		%	17.53	1.87	8.37
Status chronic illness		%	29.83	5.29	15.37



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