Does supplementary health insurance play a role in the switching behaviour of citizens in the Netherlands?

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ABSTRACT

Background: Several healthcare systems have elements of managed competition in which citizens can choose between multiple insurers. In order for this principle to function properly, all citizens should have equal opportunities to switch insurer. Studies, conducted around 2015, have shown that the supplementary insurance policy is perceived by citizens as a barrier to switching, which could have negative consequences for the intended goals of the system. We aim to explore whether a supplementary insurance policy still has a restraining role on the opportunity to switch among citizens in the Netherlands from 2015 to 2020. Furthermore, we will examine if the extensiveness of the supplementary insurance policy relates to the switching behaviour of citizens. This element has not been addressed in previous studies.

Methods: We obtained information on the role of the supplementary health insurance policy in the switching behaviour of citizens by sending questionnaires, yearly in February from 2015–2020, to 1,500 members of the Dutch Health Care Consumer Panel (DHCCP) each year. As such, we were able to examine whether having a supplementary insurance policy plays a role in the decision of Dutch citizens to switch insurer. The response rates were consecutively from 2015 to 2020: 60% (n = 896), 47% (n = 703), 44% (n = 659), 50% (n = 751), 48% (n = 715), and 54% (n = 806).

Results: Citizens with a supplementary insurance policy switch less often than citizens without one. The extensiveness of the supplementary insurance policy is significantly associated with the decision of citizens to switch insurer; the more extensive citizens are insured, the less often they switch. Additionally, our results show that every year a small group of citizens does not switch insurer because they are concerned that they will not be accepted for a supplementary insurance policy.

Conclusions: Our results indicate that having a supplementary insurance policy holds citizens back from using their opportunity to switch. This contributes to the idea that having a supplementary insurance policy could be experienced by citizens as a barrier to switch. This raises questions about the extent to which the principle of managed competition in the Dutch healthcare system works as intended.

Background

The healthcare systems of several western countries (e.g., Belgium, Germany, Switzerland, and the US) have elements of managed competition in which citizens can choose between multiple health insurance policies from various private insurers [1–4]. The main goal of a healthcare system based on managed competition is to reduce central governance, to promote efficiency, and to improve access at acceptable societal costs [5]. In 2006, the Netherlands introduced a healthcare system based on this principle, which includes an obligatory basic health insurance policy together with a voluntary supplementary one. The basic insurance policy covers, among other things, the costs of visiting a general practitioner, hospital care, and medicines [6]. In general, the coverage of the basic health insurance policy in the Netherlands is extensive; a large majority of the available curative care for adults is reimbursed [7], including new technologies that conform with the criteria of ‘current scientific knowledge and practice’ (Dutch: ‘stand van wetenschap en praktijk’) [8]. It is obligatory for everyone aged 18 or over, living, or working, in the Netherlands to have a basic insurance policy. The national government regulates the system by supporting citizens on lower incomes financially and by determining the content of the basic insurance policy yearly. Health insurers are obliged to accept everyone...
for the basic health insurance. The voluntary supplementary insurance policy provides coverage for additional services such as dental care and physiotherapy [9]. There is no obligation to accept people for supplementary health insurance and health insurers are free to determine the content of the policy. Box 1 presents several aspects of the Dutch healthcare system.

An important aspect of the Dutch healthcare system is that it is possible for all citizens to switch between insurers every year. This is intended to stimulate insurers to provide good quality of care for a competitive price. The system is based on the idea that citizens switch from an insurer if they are dissatisfied, or if another insurer has a better offer [3,11]. Citizens are expected to take an active role in choosing an insurance policy best fitted to their particular situation. In 2020, there were 55 basic insurance policies to choose from [12]. In recent years, the number of citizens switching has been relatively constant at between 7–10% [13]. In other western countries with elements of managed competition in their healthcare system, the rates of switching are more or less the same [14,15].

**Supplementary health insurance**

As shown in box 1, insurers are allowed to sell supplementary insurance policies. However, other rules apply for these policies than for basic health insurance policies. Citizens are free to choose whether they take a supplementary insurance policy and insurers are free to determine the premium and coverage. Furthermore, insurers can, in contrast to the basic health insurance policy, deny citizens for their supplementary insurance policy. Although citizens are able to purchase a supplementary insurance policy through a different insurer than their basic health insurance policy, insurers often make it unattractive or even sometimes impossible to purchase a supplementary health insurance policy alone [16]. A high proportion of Dutch citizens have a supplementary insurance policy, 83% in 2020 [12]. Almost all citizens (99%) who have a supplementary insurance policy choose the same insurer as for their basic insurance policy [13]. There are indications that many citizens do not make a rational decision when choosing a supplementary insurance policy [17] resulting in a policy which is suboptimal for their situation [18]. This study will explore the role of the supplementary insurance policy with regards to switching health insurer in more detail.

**Barrier to switching**

Several studies have shown that the supplementary insurance policy is perceived by citizens as a barrier to switching [11,19,20,21], for example because citizens have the feeling that they will lose their favourable conditions when switching to another supplementary health insurance policy [20]. These studies were mostly carried out around 2015. The added value of our studies is that we look at new data from 2015 to 2020. In addition, we are also exploring the extent to which the extensiveness of the supplementary policy plays a role on the switching behavior of citizens. This element has not been addressed in previous studies.

**Aim**

The restraining effect of the supplementary policy remains an important barrier to the proper functioning of the Dutch health care system that deserves attention. The current study examines whether a supplementary insurance policy still has a restraining role on the opportunity to switch among citizens in the Netherlands. We will measure the switching rates of citizens with and without supplementary insurance in the Netherlands from 2015 until 2020. Furthermore, we will examine if the extensiveness of the supplementary insurance policy relates to the switching behaviour of citizens in these consecutive years. Lastly, we will explore whether there is a feeling of concern among citizens who indicated that they had not switched, about not being accepted for a supplementary insurance policy when they switch. This study will contribute to a better understanding of the role of the supplementary insurance policy in the healthcare system in the Netherlands.

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**Box 1. Aspects of the Dutch healthcare system based on managed competition, adapted from Bes, R. 2017, p. 11 [10].**

- Every year enrollees are allowed to switch health policies
- Health insurers have to accept all applicants for the basic insurance and are not allowed to drop enrollees
- Community rating, this means that health insurers are obligated to offer basic health insurance policies at the same price to all citizens without medical underwriting, regardless of their health status
- Health insurers are compensated for predictable variation in individual medical expenses
- A mandatory deductible of €385 per person per year for the basic insurance policy*
- A voluntary deductible up to €500 per person per year for the basic insurance policy
- Insurers are allowed to sell supplementary insurance policies at their own conditions
- Insurers are allowed to contract, selectively, care providers

* The government assesses the amount of the mandatory deductible every year. In 2020 it is €385.
Methods

We obtained information on the role of the supplementary health insurance policy in the switching behaviour of citizens by sending questionnaires, yearly in February in the period 2015–2020, to members of the Dutch Health Care Consumer Panel (DHCCP). The DHCCP is managed by Nivel (the Netherlands Institute for Health Services Research). In total, 1,500 members of the DHCCP have been approached each year. This sample of 1,500 consisted each year of a representative sample of the general adult population regarding gender and age. The response rates were 60% (n = 896) in 2015, 47% (n = 703) in 2016, 44% (n = 659) in 2017, 50% (n = 751) in 2018, 48% (n = 715) in 2019, and 54% (n = 806) in 2020.

Every year, the monitor ‘switching health insurer’ is carried out within the DHCCP. In this monitor, we examine, among other things, the number of citizens who switch and their reasons for switching/non-switching. For the purpose of this study, we used several questions (see below) from this monitor to examine the role of the supplementary insurance.

Panel

The DHCCP is a so-called access panel [22]. In the period 2015–2020, it consisted of approximately 10,000 to 12,000 people, aged 18 and older, who have agreed to answer questions on a regular basis related to experiences, opinions and expectations on healthcare. The background characteristics of these people, such as their sex, age and level of education are known. There is no possibility of people signing up for the panel on their own initiative. The panel is renewed on regular base to ensure that representative samples of the adult population in the Netherlands can continue to be drawn.

The data are analysed anonymously, and processed according to the panel’s privacy policy, which complies with the General Data Protection Regulation (GDPR). According to Dutch legislation, neither obtaining informed consent, nor approval by a medical ethics committee, is obligatory for carrying out research using the panel [23]. Participation is voluntary and members are not forced to participate in surveys. They can stop their membership at any time without giving a reason.

Measurements

Switching

The main outcome measure in this study is whether or not citizens switched insurer1 within the annual enrollment period for 2015, 2016, 2017, 2018, 2019 and 2020. This question consisted of five categories: 1) I did not switch but I did consider it; 2) I did not switch and I did not consider it; 3) I only switched the basic insurance policy; 4) I only switched the supplementary insurance policy; 5) I switched both the basic and supplementary insurance policy. Respondents could only choose one category of answer. In our analysis, ‘switching’ is divided into two categories, ‘not switched’ (answer categories 1, 2, coded as 0) and ‘switched’ (answer categories 3, 4, 5, coded as 1).

Insurance

The question of how citizens were insured consisted of four categories: 1) only a basic insurance policy; 2) a basic and supplementary insurance policy, with additional dental insurance; 3) a basic and supplementary insurance policy, without additional dental insurance; 4) a basic insurance policy and additional dental insurance, without another supplementary insurance policy. In our analysis, ‘insurance’ was divided into two categories, ‘basic insurance policy only’ (answer category 1, coded as 0) and ‘basic and supplementary insurance policy’ (answer categories 2, 3, 4, coded as 1). We used these two categories to examine if the rate of switching among citizens with a supplementary insurance policy differed from that of citizens without a supplementary insurance policy.

Extensiveness of supplementary insurance policy

Furthermore, to get a better understanding of the role of the supplementary insurance policy on the rate of switching, we asked all respondents with a supplementary insurance policy (coded as 1 in the variable insurance above) how extensive their insurance policy was. This question consisted of four categories in 2015 to 2018: 1) the most limited supplementary insurance policy provided by my insurer; 2) the most extensive supplementary insurance policy provided by my insurer; 3) a supplementary insurance policy by my insurer that lies in between (not the most limited, not the most extensive); 4) I don’t know. In 2019 and 2020 an extra category has been added, namely: 5) I have chosen a number of additional modules by my insurer. We used these five categories to examine if

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1The questions in this study have been answered from the respondent’s perspective, which means that both switching within a risk bearing insurance entity and switching to another risk bearing insurance entity can be experienced by respondents as switching health insurance policy.
the rate of switching among citizens with a supplementary insurance policy in each year differed according to the extensiveness of the insurance policy.

**Concern of not being accepted for a supplementary insurance policy**

In addition, we asked respondents each year to indicate one or more reasons why they did or did not switch health insurer. They could choose from a list of various statements. Respondents who indicated that they had not switched could choose, among others, the following statement: *I am concerned I will not be accepted for a supplementary insurance policy* (coded as 1 yes, and 0 no).

**Background characteristics**

Sex was divided in two categories (1 = man, 2 = woman), and age was divided in three categories (1 = 18–39 years, 2 = 40–64 years, 3 = 65 years and older). The level of education was classified as: low (none, primary school or pre-vocational education) (1); intermediate (secondary or vocational education) (2); and, high (professional higher education or university) (3). Self-assessed health status was divided in three categories (1 = excellent/very good, 2 = good, 3 = moderate/poor).

**Statistical analyses**

First, descriptive analyses were performed to examine the composition of the respondents in each year (2015–2020) (Table 1). To assess the role of the supplementary insurance policy in the rates of switching, a logistic regression analyses was performed. A model was estimated in which ‘switching’ functioned as a dependent variable, while sex, age, level of education, self-assessed health status, insurance, and year, functioned as independent variables (Table A3 in the Appendix). Furthermore, another logistic regression analyses was performed in which ‘switching’ functioned as a dependent variable, while sex, age, level of education, self-assessed health status, extensiveness of the supplementary insurance policy, and year, functioned as independent variables (Table 2). Additionally, descriptive analyses were performed to explore how many non-switchers experienced a feeling of concern about not being accepted for a supplementary insurance policy when they switch. The dataset was analysed using STATA version 15.0 and significance levels were set at 5%.

**Results**

(Table 1) shows the composition of the members of the DHCCP who responded to the questionnaire in each year (2015 until 2020). In total, the questionnaire was completed 4,530 times by 3,335 unique individuals. On average, 86% of the respondents (not in Table 1) had a supplementary insurance policy (ranging from 82% in 2015 to 90% in 2017) and 7% (not in Table 1) switched insurer (ranging from 6% in 2020 to 9% in 2015).

| Table 1. Composition of the respondents in each year (2015–2020). |
|---|---|---|---|---|---|---|---|---|
| | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
| n | % | n | % | n | % | n | % | n | % |
| **Sex** | | | | | | | | | | |
| Male | 480 | 54 | 351 | 50 | 321 | 49 | 374 | 50 | 325 | 45 | 399 | 50 |
| Female | 416 | 46 | 352 | 50 | 338 | 51 | 377 | 50 | 390 | 55 | 407 | 51 |
| **Age** | | | | | | | | | | |
| 18–39 | 222 | 25 | 148 | 21 | 131 | 20 | 124 | 17 | 133 | 19 | 129 | 16 |
| 40–64 | 416 | 46 | 352 | 50 | 333 | 51 | 413 | 55 | 355 | 50 | 435 | 54 |
| 65 and older | 258 | 29 | 203 | 29 | 195 | 30 | 214 | 29 | 227 | 32 | 242 | 30 |
| **Level of education** | | | | | | | | | | |
| Low | 147 | 17 | 103 | 15 | 117 | 18 | 127 | 17 | 126 | 18 | 90 | 11 |
| Intermediate | 418 | 48 | 368 | 54 | 319 | 49 | 370 | 50 | 333 | 48 | 364 | 46 |
| High | 297 | 34 | 214 | 31 | 210 | 33 | 242 | 33 | 238 | 34 | 340 | 43 |
| **Self-assessed health status** | | | | | | | | | | |
| Excellent/very good | 281 | 31 | 233 | 31 | 202 | 31 | 211 | 28 | 233 | 33 | 217 | 27 |
| Good | 442 | 49 | 370 | 53 | 322 | 49 | 372 | 50 | 368 | 51 | 393 | 49 |
| Moderate/poor | 165 | 18 | 100 | 14 | 113 | 17 | 149 | 20 | 103 | 14 | 147 | 18 |
| Unknown | 8 | 1 | 2 | 0 | 22 | 3 | 19 | 3 | 11 | 2 | 49 | 6 |
| **Insurance** | | | | | | | | | | |
| Basic insurance policy only | 160 | 18 | 88 | 13 | 65 | 10 | 99 | 13 | 99 | 14 | 108 | 14 |
| Basic and supplementary insurance policy | 733 | 82 | 605 | 87 | 589 | 90 | 649 | 87 | 601 | 86 | 668 | 86 |
| **Extensiveness of the supplementary insurance policy** | | | | | | | | | | |
| Most limited | 141 | 16 | 105 | 15 | 132 | 21 | 124 | 17 | 117 | 17 | 113 | 15 |
| Not most limited/ not most extensive | 437 | 50 | 347 | 51 | 314 | 49 | 370 | 51 | 298 | 44 | 335 | 44 |
| Most extensive | 103 | 12 | 110 | 16 | 85 | 13 | 97 | 13 | 85 | 13 | 99 | 13 |
| Additional modules | 37 | 4 | 31 | 5 | 42 | 7 | 33 | 5 | 37 | 6 | 41 | 5 |
| I do not know | 160 | 18 | 88 | 13 | 65 | 10 | 99 | 13 | 99 | 14 | 108 | 14 |
| N/A | 74 | 9 | 47 | 7 | 44 | 7 | 57 | 8 | 48 | 7 | 49 | 6 |
| **Switching** | | | | | | | | | | |
| Yes | 797 | 92 | 648 | 93 | 598 | 93 | 672 | 92 | 646 | 93 | 721 | 94 |

* Low = none, primary school or pre-vocational education. Intermediate = secondary or vocational education. High = professional higher education or university.

*The exact percentages are 49.5 and 50.5.

*The exact percentages are 8.5 and 91.5.
Table 2. Multivariate logistic regression to examine the association between switching and the extensiveness of a supplementary insurance policy.

|                          | Model 1:                             | Odds Ratio | P-value |
|--------------------------|--------------------------------------|------------|---------|
|                          | Dependent variable: Switching (1 = yes, 0 = no) |            |         |
|                          | n = 4,130 (3,067 unique respondents)   |            |         |
| Sex                      | Male                                 | reference  |         |
|                          | Female                               | 1.06       | 0.65    |
| Age                      | 18–39                                | reference  |         |
|                          | 40–64                                | 0.45       | 0.00*   |
|                          | 65 and older                         | 0.25       | 0.00*   |
| Level of education**     | Low                                  | reference  |         |
|                          | Intermediate                         | 1.37       | 0.16    |
|                          | High                                 | 1.66       | 0.03*   |
| Self-assessed health status | Excellent/very good                  | reference  |         |
|                          | Good                                 | 1.08       | 0.58    |
|                          | Moderate/poor                         | 1.46       | 0.04*   |
| Extensiveness of supplementary insurance policy | Basic insurance policy only |            |         |
|                          | Most limited                         | 0.82       | 0.30    |
|                          | A supplementary insurance policy      |            |         |
|                          | (not the most limited, not the most extensive) |            |         |
|                          | Most extensive                       | 0.59       | 0.01*   |
|                          | supplementary insurance policy        |            |         |
|                          | Additional modules***                | 0.61       | 0.28    |
|                          | Do not know                          | 0.53       | 0.07    |
| Year                     | 2015                                 | reference  |         |
|                          | 2016                                 | 0.81       | 0.30    |
|                          | 2017                                 | 0.86       | 0.47    |
|                          | 2018                                 | 0.99       | 0.96    |
|                          | 2019                                 | 0.85       | 0.43    |
|                          | 2020                                 | 0.74       | 0.14    |
|                          |                                      | 0.17       | 0.00    |

* Significant p-value.

** Low = none, primary school or pre-vocational education. Intermediate = secondary or vocational education. High = professional higher education or university.

*** Category included in the questionnaires of 2019 and 2020.

In line with previous studies, this study shows that having a supplementary insurance policy is significantly associated with the decision of citizens to switch insurer (Table A3 in the Appendix). Citizens with a supplementary insurance policy switch less often than citizens without a supplementary insurance policy (p-value = 0.00).

When focusing on the group of switchers in each year (2015–2020), we do not see a clear pattern with regard to the number of switchers with and without a supplementary insurance policy fluctuates every year. It stands out that in 2017 and 2019 the number of switchers is relatively high among citizens without a supplementary health insurance policy (respectively 16% and 13%), compared to citizens with a supplementary health insurance policy. However, in 2015 the number of switchers is more or less the same (around 9%). In addition, when focusing on the extensiveness of the supplementary insurance policy, we see that in 2016, 2017, 2018 and 2019 the number of switchers is relatively high among citizens with the most limited supplementary insurance policy, compared to citizens with the most extensive policy (Figure 1).

(Table 2) shows that the extensiveness of the supplementary insurance policy is significantly associated with the decision of citizens to switch insurer. Citizens with the most extensive supplementary insurance policy and citizens with not the most limited/not the most extensive supplementary insurance policy switch less often than citizens without a supplementary insurance policy (p-value ≤ 0.01). Besides the extensiveness of the supplementary insurance policy, age, the level of education and self-assessed health status also affect the choice to switch insurer. Older citizens, aged 40 years and over, switch significantly less often than younger citizens, aged 18 to 39 years. Furthermore, high educated citizens and citizens who indicate that they have a moderate/poor health status switch significantly more...
often than, respectively, low educated citizens and citizens who indicate that they have a very good/excellent health status. No significant differences were found in the rates of switching between the years (2015–2020).

Lastly, we explored whether there is a feeling of concern among citizens who indicated that they had not switched, about not being accepted for a supplementary insurance policy when they switch. Each year, three to five percent of the respondents who indicated that they did not switch insurer, chose the statement ‘I am concerned I will not be accepted for a supplementary insurance policy’ as reason why they did not switch (not in table). When focusing on the extensiveness of the supplementary insurance policy (all years together), it seems that citizens with the most extensive supplementary insurance policy indicated to a greater extent to be concerned about not being accepted for a supplementary insurance policy when switching (7%), than citizens with the most limited supplementary insurance policy (3%), (p-value < 0.01, not in figure).

**Discussion**

In order for the principle of managed competition to function properly all citizens should have equal opportunities to switch from their current insurer. Studies, conducted around 2015, have shown that the supplementary insurance policy is perceived by citizens as a barrier to switching, which could have negative consequences for the intended goals of the system. This study explores whether a supplementary insurance policy still has a restraining role on the opportunity to switch among citizens in the Netherlands from 2015 to 2020. Our results show that the rate of switching of citizens with a supplementary insurance policy is significantly lower than that of citizens without a supplementary insurance policy. This is in line with previous results [11,19,20] and confirms that citizens with a supplementary insurance policy switch less often than citizens without a supplementary insurance policy. Furthermore, our results show that the extensiveness of the supplementary insurance policy is significantly associated with the decision of citizens to switch insurer; the more extensive citizens are insured, the less often they switch. Our findings contribute to the idea that citizens with a supplementary insurance policy show certain behaviour that holds them back from using their opportunity to switch.

There may be several reasons why citizens with a supplementary insurance policy switch less often than
citizens without. Firstly, it could be that these citizens have already chosen a supplementary insurance policy best fitting their particular situation, making it unnecessary to switch. Secondly, it could be that differences between supplementary insurance policies are difficult to understand. Citizens will be less inclined to switch when it takes too much effort to find suitable information about alternative supplementary insurance policies. Our finding, that citizens with a more extensive supplementary insurance policy switch significantly less than citizens with a less extensive one, could be related to this reason. The more extensive the supplementary insurance policy is, the harder it could be to compare alternatives. Thirdly, insurers do not have to accept citizens for a supplementary insurance policy. Especially for the most extensive supplementary insurance policy citizens may have the feeling that they have to go through a process of acceptance and might have to answer questions related to their health. Based on the answers, insurers can set the premium or can decide not to accept citizens for their supplementary insurance policy. Our results confirm that citizens with the most extensive supplementary insurance policy are more likely to be concerned of not being accepted for another supplementary insurance policy than citizens with the most limited supplementary insurance policy, although a majority of insurers (68% (13 out of 19)) did not set conditions for acceptance [23] (see next paragraph). Fourthly, it may be because a limited number of supplementary policies have waiting periods (6 months to 2 years) for a select number of treatments, such as an eyelid correction or a crown. This means that citizens will only be reimbursed for this treatment if they have a certain supplementary policy for a longer period of time. Altogether, there are various possible explanations why citizens with a supplementary insurance policy switch less often than citizens without a supplementary insurance policy. The lower rate of switching among these citizens shows that having a supplementary insurance policy could be experienced as a barrier to switching for citizens. This study indicates that it is important to keep monitoring the role of the supplementary insurance policy in the upcoming years. Our results show that the number of switchers with and without a supplementary insurance policy fluctuates every year. Further research should keep paying attention to the restraining role that a supplementary insurance policy plays on the opportunity to switch. In a healthcare system with elements of managed competition, it is fundamentally important that citizens enjoy equal opportunities to switch their health insurer.

This study also explored whether there is a feeling of concern among citizens who indicated that they had not switched, about not being accepted for a supplementary insurance policy when they switch. Our results show that every year a small percentage of citizens (<5%) does not switch from insurer because they are concerned that they will not be accepted for a supplementary insurance policy. This may seem like a small percentage, but it concerns more than half a million citizens in the Netherlands each year. However, the concern by citizens of not being accepted for a supplementary insurance policy, might not be based on actual acceptance policy by insurers. The umbrella organization of health insurers in the Netherlands, Zorgverzekeraars Nederland (ZN), launched a plan in 2015 to improve the freedom of choice and transparency in the healthcare market for citizens. An important element of this plan was the intention by insurers to accept new enrollees for their supplementary insurance policy, without restrictions, if these enrollees had a similar supplementary insurance policy by another insurer [24]. In 2018, this intention was tested by sending mystery mails to all insurers, asking whether they would accept a new enrollee for the most extensive supplementary insurance policy, explicitly mentioning that he or she had a similar supplementary insurance policy by another insurer. A majority of the insurers (68% (13 out of 19)) responded that they did not set any conditions for acceptance [25], which indicates that most insurers still comply with the plan of the ZN. A study by Zorgweb also shows that the percentage of supplementary insurance policies with medical selection is limited [26]. However, the fact that, irrespective of this, a small percentage of citizens do experience this concern, indicates an actual barrier to switching. This once again confirms that attention must continue to be paid to the restraining role that a supplementary insurance policy plays on the opportunity to switch. Furthermore, it also highlights that the plan of ZN, to improve the freedom of choice and transparency in the healthcare market for citizens, is not yet well known. We therefore recommend making better and more accessible information about this plan in the coming years. This might help in reducing concerns among citizens of not being accepted for a supplementary insurance policy.

The mobility of citizens to switch insurer is an important pillar in the Dutch healthcare system because it creates competition between insurers [27]. It increases competition among health insurers for the basic insurance policy and provides incentives for health insurers to act as price- and quality-conscious purchasers of care on behalf of their insured. It is especially relevant that not only healthy insured switch, but also those in worse health who will make more use of healthcare. However, it is unclear how many citizens should switch each year in order to stimulate insurers in an appropriate manner [28]. The possibility of switching to another insurer might, in itself, be sufficient for insurers. On the other hand, extremely high rates of switching are not
desirable either. Switching brings administrative costs to an insurer, which could ultimately lead to higher premiums [27]. We strongly recommend that monitoring rates of switching should be continued in order to remain alert to new reasons which might emerge affecting whether citizens switch, or not, from their current insurers.

Conclusions

This article describes the role of the supplementary health insurance policy in the switching behaviour of citizens in the Netherlands. Our results show that citizens with a supplementary insurance policy switch less often than citizens without a supplementary insurance policy. Furthermore, our results show that the extensiveness of the supplementary insurance policy is significantly associated with the decision of citizens to switch insurer; the more extensive citizens are insured, the less often they switch. Additionally, our results show that every year a small percentage of citizens does not switch from insurer because they are concerned that they will not be accepted for a supplementary insurance policy. This concern is experienced relatively more often by citizens with the most extensive supplementary insurance policy than by citizens with the most limited one. Altogether, our findings suggest that having a supplementary insurance policy hold citizens back from using their opportunity to switch. Ultimately, our findings, in accordance with previous results, indicate that having a supplementary insurance policy could be experienced by citizens as a barrier to switching. This raises questions about the extent to which the principle of managed competition in the Dutch healthcare system works as intended.

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Authors’ contributions

LH drafted the manuscript and performed the statistical analyses. AB and JDJ were involved in collecting the data, in drafting the manuscript and critical revision of this manuscript. All authors have given final approval of the submitted manuscript.

Availability of data and material

The dataset supporting the findings of this study is available on request and subject to approval by the program committee of the panel. The Dutch Health Care Consumer Panel (DHCCP) has a program committee, which supervises processing the data of the Dutch Health Care Consumer Panel and decides about the use of the data. This program committee consists of representatives of the Dutch Ministry of Health, Welfare and Sport, Health and Youth Care Inspectorate, Zorgverzekeraars Nederland (Association of Health Care Insurers in the Netherlands), the National Health Care Institute, the Federation of Patients and Consumer Organisations in the Netherlands, the Dutch Healthcare Authority and the Dutch Citizens Association. All research conducted within the Consumer Panel has to be approved by this program committee. The committee assesses whether a specific research fits within the aim of the Consumer Panel, that is strengthen the position of the health care user. Data are available upon request from Professor Judith D. de Jong, PhD (j.d.jong@nivel.nl), project leader of the Dutch Health Care Consumer Panel.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Ethics approval and consent to participate

The data are analysed anonymously, and processed according to the panel’s privacy policy, which complies with the General Data Protection Regulation (GDPR). According to Dutch legislation, neither obtaining informed consent, nor approval by a medical ethics committee, is obligatory for carrying out research using the panel [23]. Participation is voluntary and members are not forced to participate in surveys. They can stop their membership at any time without giving a reason.

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Appendix

Table A3. Multivariate logistic regression to examine the association between switching and having a supplementary insurance policy.

|                        | Odds Ratio | P-value |
|------------------------|------------|---------|
| **Sex**                |            |         |
| Male                   | reference  |         |
| Female                 | 1.05       | 0.70    |
| Age                    |            |         |
| 18–39                  | reference  |         |
| 40–64                  | 0.44       | 0.00*   |
| 65 and older           | 0.24       | 0.00*   |
| **Level of education** |            |         |
| Low                    | reference  |         |
| Intermediate           | 1.41       | 0.12    |
| High                   | 1.73       | 0.02*   |
| **Self-assessed health status** | |         |
| Excellent/very good    | reference  |         |
| Good                   | 1.07       | 0.65    |
| Moderate/poor          | 1.40       | 0.07    |
| **Insurance**          |            |         |
| Basic insurance policy only | reference |         |
| Basic and supplementary insurance policy | 0.63 | 0.00* |
| **Year**               |            |         |
| 2015                   | reference  |         |
| 2016                   | 0.80       | 0.27    |
| 2017                   | 0.87       | 0.50    |
| 2018                   | 1.00       | 1.00    |
| 2019                   | 0.85       | 0.41    |
| 2020                   | 0.74       | 0.13    |
| **Constant**           | 0.17       | 0.00    |

* Significant p-value.
** Low = none, primary school or pre-vocational education. Intermediate = secondary or vocational education. High = professional higher education or university.