



Health insurance for the healthy? Voluntary health insurance in Sweden



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ABSTRACT

Background: In Sweden, voluntary health insurance is held only by a very small part of the population, but uptake has grown rapidly since 2000. So far, little is known about who purchases this insurance and what the insurance plans contain.

Aim: To provide a comprehensive description of the coverage and content of voluntary health insurance in Sweden.

Methods: Data from a national survey (Riks-SOM 2016) were used to estimate insurance coverage in different population groups. Additionally, a qualitative content analysis of the voluntary health insurance plans from seven of the largest insurance companies in Sweden was conducted.

Results: Voluntary health insurance was found to be more common among high income-earners, individuals employed in the private sector, business owners, and white-collar workers. Insurance benefits varied from visiting a general practitioner to more specialised treatments like knee or hip surgery. Pre-existing medical conditions, emergency medicine, highly specialised care and ongoing chronic care was excluded from the insurance plans.

Conclusion: Work-related factors such as employment sector, occupation and income appeared to be key determinants for VHI uptake in Sweden. Since the insurance plans included several restrictions, individuals with high care needs are excluded. Taken together, the results indicate that voluntary health insurance in Sweden provide benefits foremost for the healthy and wealthy.

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1. Introduction

Voluntary health insurance (VHI) is becoming more common in Europe [1]. Recent OECD data indicates that the number of individuals purchasing such insurance grew between 2005 and 2015 in most European countries, including Germany, France, Belgium, Portugal, Denmark and Finland [2]. VHI is distinguished from public, or social, health insurance in that individuals purchase coverage against health risks with private means. In Europe, where most statutory healthcare systems are universal, VHI plays a secondary role to public health insurances [3]. VHI is typically more prevalent in countries with social health insurance systems than in countries with so-called NHS systems, where healthcare is organised as a public service available to all citizens [1,2]. In contrast to statutory

healthcare systems, VHI premiums are often based on individual's health status, which also serve as a screening mechanisms for unwanted clients [4,5]. Thus, voluntary VHI is not available to all individuals; but only those who can pay for it and who are considered 'good risks' by the private voluntary health insurance industry. The concern with good risks, which implies healthy people with a low probability to fall ill, relates to the so-called adverse selection problem in health insurance markets. According to the adverse selection logic, the individuals most interested in purchasing a health insurance are the least desirable customers because they might have, or anticipate, health problems [6,7]. Therefore, insurance companies try to detect and avoid such clients or let them pay more to compensate for the bad risks that they represent. This market logic is, of course, the opposite of the political logic which underpins public healthcare systems, namely that healthcare services should be available to all citizens, regardless of their wealth or health status. VHI thus serves to undermine the principles of equity and social solidarity in public healthcare systems [8–10]. VHI can either be purchased by individuals or groups, for instance through employers or trade unions.

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Due to its negative implications for equity, the tendency for VHI markets to grow in European countries has been seen as problematic, particularly in healthcare systems of NHS-type [11–13] where equitable access to, and solidaristic financing of, health services are central policy goals [14]. In NHS-type systems, voluntary health insurance is most often duplicating, often called *supplementary*, which indicates that it covers services already included in public healthcare systems but may offer fast access to these or a wider range of care providers. *Complementary* VHI, in contrast, provides coverage for services excluded from the statutory system or for co-payments, such as user fees [1,15]. Supplementary VHI thus imply that some groups pay twice for health services: first through their mandatory taxes and secondly by private means. Voluntary health insurance exists in all NHS-type systems, although, the share of the population with coverage differs. In most NHS-type countries, between 5% and 17% of the populations holds a VHI. Although there are exceptions; Ireland and Denmark with 47% and 44% respectively [1].

In Sweden, VHI has always played a highly marginal role. Prior to year 2000, it was extremely rare to have a private health insurance; in 2001 it had reached the modest level of 125 000 insured individuals, less than 1,5% of the total population [16]. However, during the following decades Sweden joined the European trend of growing VHI markets and uptake rose quite rapidly, reaching about 8% in the most recent estimations [17]. The growth of VHI in Sweden between 2000 and 2017, represents a novel development in Swedish healthcare, not least in relation to the egalitarian values underpinning the public healthcare system, which state that healthcare services should be accessible to all citizens on equal terms [12,18]. The recent growth in VHI uptake in countries with NHS-type healthcare systems represents something of a puzzle. Why do individuals who enjoy broad access to publicly financed healthcare services in universal healthcare systems purchase additional voluntary health insurance? This question is salient not least in the Nordic context, where virtually all types of health services are covered by the public healthcare systems [19,20].

This article focuses on the growth in the VHI market in Sweden during the 2000s and attempts to uncover the driving forces behind this development. Sweden might be seen as an “extreme case” with regards to voluntary health insurance, given that this type of insurance has been and still is less common than in most other European countries. This implies that if the reasons behind the recent growth of VHI in Sweden can be understood, we may learn something about the driving forces behind such developments in other NHS-type healthcare systems as well. Two questions in particular are asked in the paper: *who* purchases voluntary health insurance in Sweden today and *what benefits* are provided through standard insurance plans? Methodologically, the study is based on national survey data from approximately 1650 individuals as well as written and on-line materials from the major voluntary health insurance companies in the country.

1.1. Voluntary health insurance in NHS systems

Previous research on VHI in healthcare systems of NHS-type found that this type of insurance is purchased foremost by groups with high socio-economic status. Already in the 1990's, Besley et al [21,22] showed that individuals with VHI in the UK tended to be richer, better educated, and vote more conservatively than the general population. About half of the individuals with VHI had received it through their employment, and half had bought it individually [21,22]. A few years later, this result was verified in other studies. It was also found that individuals with VHI were generally healthier [23,24]. Similar pattern of socioeconomic determinants of VHI uptake has been found in Spain where education and income

tended to be higher among VHI holders compared to non-holders [25].

In the Nordic countries, the situation is more varied. Danish and Finnish VHI markets are larger and have a longer history, compared to Norway and Sweden. Complementary VHI is also more common in Denmark and Finland than in the other Nordic countries [20,26]. Similar to results from the UK and the Mediterranean countries, studies from Denmark and Norway have found that VHI is more common in groups with high education, and among individuals working in sectors like information and communication [27] and finance and insurance [27,28]. In both countries, it is more common to have group-based VHI, obtained through employers or unions, than to purchase it individually [20]. This is also the case in Sweden, where it was estimated in 2018 that 90% of all VHI was group-based [29]. In Finland, the pattern is different in that self-purchased VHI is by far the most common type, only 15% holds a group-based insurance, and that children are the largest insured group [30]. Regarding motives for VHI purchase in NHS-type systems, several studies have found dissatisfaction with the public healthcare system to be an important determinant for insurance uptake [23,25,31–33]. In particular waiting times to public healthcare has been positively correlated with increased uptake [22,24]. Similarly, in a Norwegian study, Aarbu [33] found a significant association between local waiting-time in the public system and individually purchased VHI. However, this relationship was not as strong for employer-paid VHI. A Finnish study found that the most important motives for purchasing duplicating VHI was belief that it would provide faster access to care, better quality of health services, and offer more choice of providers compared to the public healthcare system [30]. Finally, VHI markets can also have been stimulated by political initiatives like tax exemptions.

2. Materials, methods and case setting

The Swedish healthcare system is a NHS-type system, which offers a generous basket of health services to all permanent residents. User fees are among the lowest in Europe and medical quality is high, according to international evaluations [34]. Secondary and hospital care is predominantly publicly provided while about 40 percent of the primary care is provided by private GPs or health centres but funded through the public system [35]. VHI plays a highly marginal role, despite the recent growth in uptake: in 2016 it accounted only for 0,6 percent of total healthcare expenditure [36]. Private care providers thus receive the majority of their income from the public sector.

To answer the first research question of who has a voluntary health insurance in Sweden, a national survey called Riks-SOM was used. Riks-SOM is an annual survey covering themes regarding society, opinions, and mass media conducted by the University of Gothenburg. Riks-SOM 2016 comprised six parallel questionnaires each covering 55–61 questions. The data used in this study is based on questionnaire IV covering information about health and healthcare. 2016 was the first year where questions about VHI coverage were included in Rik-SOM. Each questionnaire was sent to 3400 randomly selected individuals from the population registry, between age 16 and 85. The population registry covers Swedish and non-Swedish citizens with a permanent address in Sweden [37]. The fieldwork took place between September 2016 and January 2017 and included a series of reminders via mail, telephone, and text messages. The survey had 1636 respondents, corresponding to a response rate of 51%. The response rate among women was somewhat higher compared to men and the youngest and oldest age categories responded to a lower extent [37]. The identities of the individuals in the study were de-identified and not revealed to the authors at any point. The SOM-survey were approved by a Swedish Regional Ethical Review Board.

The number of individuals in Sweden holding a VHI plan was measured by the survey question: ‘Do you have a voluntary (private) health insurance?’, the respondents could choose one of the following responses; ‘yes’, ‘no’, ‘do not know’, with the final category omitted in the analysis. To examine possible determinants of VHI purchase, the following demographic and socioeconomic variables were identified: sex; age; educational level; area of residence; occupation; employment sector; household income and political orientation. Political orientation was measured through a question about political identification with five alternatives: strongly towards the left, moderately towards the left, neither left nor right, moderately towards the right, strongly towards the right.

To analyse the data, cross tables were generated to provide descriptive statistics on the share of insurance holders for each demographic and socioeconomic background variable. Chi-squared tests were used to check for significant differences between variable levels. Percentages are shown with 95% confidence intervals (CI). To examine which characteristics were of greater importance for the likelihood of having VHI, a binary logistic regression analysis was carried out. Since previous studies indicate that a majority of the Swedish VHI holders have an employer-paid VHI [38], work-related factors such as occupation and employment sector were thought to correlate strongly with the outcome of having VHI. To discern the potential effects of such an association, two models were constructed. In the first model, both occupation and employment sector were omitted. In the second model, all variables were included. The results are presented as Odds Ratios (OR) with 95% CI. In addition, Likelihood-ratio tests (LR-test) were also performed in order to estimate the impact of each variable in each of the models. The analyses were conducted in STATA/SE 14.2.

The second research question, what benefits are included in the VHI plans sold in Sweden, was investigated through a content analysis of documents provided by the largest Swedish companies selling VHI. There is no complete register over insurance companies selling voluntary health insurances in Sweden. However, the following seven big companies are the largest actors on the Swedish market and were consequently selected for the study: Folksam, Länsförsäkringar, TryggHansa, Skandia, If, EuroAccident, and SEB. Each insurance company offered between three to eight different insurance plans, often directed both towards individual purchasers, and towards companies purchasing insurance for their employees. Product information and insurance terms, valid for 2017, for each plan were downloaded from the companies’ webpages in January 2017 (see Appendices for a list of source references). The material was categorised and analysed based on the following themes: *scope and content* (i.e. what benefits were included / excluded), *subscription and eligibility*, and *prices*. After an initial reading of all documents, the material was coded based on the themes and summarised into an excel sheet [39]. In addition, two complementary interviews with informants, a registered nurse working as a care-coordinator at one of the insurance companies and a communicator at another insurance company, were conducted in order to clarify and deepen the understanding of the material. The interviews were conducted over telephone on 2017-05-12 and 2018-10-29.

3. Results

3.1. Who has a voluntary health insurance in Sweden?

The results from the survey data showed that 15% (Confidence interval (CI): 13–17%) of the individuals between 16 and 84 years in Sweden said that they had a voluntary health insurance at the end of 2016/beginning of 2017. This number is higher than indicated by previous studies [1,29]. Previously known data on the number of VHI holders in Sweden, indicating a 5–7% uptake, is based on

information provided by Insurance Sweden, a trade organisation covering most, but not all, of the insurance companies selling VHI in the country. The fact that not all insurers are included might explain the lower number. Another factor, potentially explaining the difference, is that the SOM-survey is reported to under-represent younger individuals, individuals residing in less affluent neighbourhoods and those with poor language skills; a tendency, leading to a possible overrepresentation of VHI holders in this sample. The analysis of the data also indicated that holding VHI was more common among men than women. As can be seen in Table 1, 18% of the men in the survey reported that they had a VHI compared to 13% of the women. VHI was most common among groups aged 30–64, with very few individuals holding insurance in the 65–85 age group. Looking at the variables related to employment, the results point toward that VHI is significantly more common in the private sector and among white-collar workers and business-owners. Only 8% of blue-collar workers reported having VHI, as compared to 17% for white-collar workers and 35% business owners. Of those working in the private and non-profit sector, 23% reported having VHI, as compared to 6% of individuals working within the public sector. In line with these results, VHI uptake was also found to be greater among high-income earners. Surprisingly, only small differences in VHI uptake was found between rural and urban areas of residence. Finally, VHI was found more common among individuals politically oriented towards the right, 30% of those stating ‘strongly towards the right’ had an insurance compared to only 9% of those declaring ‘strongly towards the left’.

In order to examine the association between individual characteristics and likelihood of having VHI, logistic regression analyses with odds ratio for having voluntary health insurance was carried out (see Table 2). Model 1, excluding work-related factors, indicated that those with a high family income had higher odds of having VHI compared to those with a low family income. Furthermore, individuals politically oriented towards the right were more likely to have VHI. The odds of having VHI also increased with good self-rated health. When adding the work-related variables (Model 2), political orientation lost its significance. However, when analysing the association between political orientation and VHI uptake in each occupation group separately (results not reported here), the result appeared more nuanced. For blue-collar workers and business owners, there were no statistically significant association between political orientation and VHI uptake. For white-collar workers, on the other hand, the tendency to have a right-leaning political orientation was associated with VHI uptake. These results indicate that VHI uptake in Sweden is associated with employment, income and, for some groups, political orientation.

3.2. What do voluntary health insurance plans contain?

3.2.1. Benefits

The analysis of the content of the insurance plans showed that all studied companies offered benefits at various levels, e.g. basic, standard and comprehensive plans. The *basic* plans typically included outpatient medical care (GP and specialist services), access to a care-coordinator who helps insurance holders to book appointments and find suitable care providers, medical surgery and hospital care. Almost all insurance companies also included some or all of the following benefits in the basic plans: post-acute care and rehabilitation after surgery, compensation for accommodation and travel cost connected to hospitalisation, medical second opinions, ten sessions with a psychologist/psychotherapist, and compensation for patient fees for public healthcare. *Standard plans* typically added 2–4 benefits to their basic plans, such as 20 h of home care service after surgery and access to a nutritionist. In the *comprehensive* plans, some additional benefits were included, such as vaccinations and acupuncture. Overall, the basic plans were rather

Table 1
VHI uptake by population group.

Variable	Insured			Total n	χ^2 test p-value
	%	CI	n		
All	15	(13 – 17)	214	1459	
Sex					.036
Women	13	(11 – 16)	79	588	
Men	18	(15 – 21)	97	540	
Age					<.001
16–29	15	(8 – 24)	14	93	
30–49	23	(19 – 28)	83	356	
50–64	18	(14 – 22)	59	333	
65–85	6	(4 – 9)	20	346	
Residence					.291
Rural area	14	(9 – 21)	21	150	
Smaller town	16	(12 – 22)	38	232	
City or town	14	(11 – 17)	80	560	
Major city (Stockholm, Gothenburg, Malmö)	20	(14 – 26)	37	186	
Education					<.001
<9th grade	4	(1 – 9)	5	127	
<High school	16	(12 – 21)	50	309	
Post high-school	14	(10 – 19)	40	283	
Degree from college	20	(16 – 24)	81	409	
Occupation					<.001
Blue collar worker	8	(5 – 11)	32	406	
White collar worker	17	(14 – 20)	104	607	
Business owner ^a	35	(26 – 44)	40	115	
Employer					<.001
Public	6	(4 – 8)	29	486	
Private (incl. Non-profit)	23	(20 – 26)	147	642	
Household income (€/year)					<.001
<31 100	5	(3 – 8)	12	246	
31 100–73 000	11	(9 – 14)	59	532	
>73 000	30	(25 – 35)	105	350	
Political orientation					<.001
Strongly to left	9	(5 – 15)	11	124	
Moderately to left	10	(7 – 14)	26	257	
Neither left nor right	13	(9 – 18)	43	320	
Moderately to right	19	(15 – 24)	57	297	
Strongly to right	30	(22 – 39)	39	130	
Self-rated health ^b				1128	
PHI (mean)	8.16	(7.9 – 8.4)			
No PHI (mean)	7.40	(7.3–7.5)			

CI refers to 95% confidence interval for % insured.

^a Including self-employed, business owner with 1–9 employees and business owner with more than 10 employees.

^b Self-rated health range: 0–10.

similar across the studied insurance companies, while there was a larger variation of type of benefits included in the standard and comprehensive plans (see Table 3). In general, the content of the plans was the same regardless of how the insurance were paid for; e.g. through employers, other organisations, or individually. All health services offered through the voluntary insurances were to be provided by private healthcare providers, contracted by the insurance companies. This represents a difference from the public healthcare system, where the majority of all care providers are public [40].

The benefits included in the medical care category (GP and specialist services) ranged from influenza treatment to orthopaedic treatments (Interview with care-coordinator). However, some services were not covered in the plans. Services not included can be categorised into five main groups: I) acute conditions, II) examinations and treatments related to fertility and pregnancy, III) ongoing chronic care and dementia, IV) complications related to obesity or substance abuse, V) injuries related to various forms of extreme sports, such as parachuting and mountain climbing. In general, highly specialised medical services usually provided only at the university hospitals, for instance cancer treatments, COPD, ME or other rare diseases are excluded, as these are generally not available on the private healthcare market in Sweden (Interview with care-coordinator). Examples of specialist care services covered by the insurance plans are rehabilitation services, elective surgery such

as knee and hip replacements, CABG and various forms of hernia. Most private health clinics in Sweden do not offer in-patient care for more than a few days, as they specialise on day surgery. Thus, it is basically the supply of medical services, provided by the private healthcare clinics in Sweden, that sets the limits for which services that are included in the VHI plans. However, three of the insurance companies, Länsförsäkringar, If and SEB, reported that they sometimes direct the insurance holder abroad for treatments.

All reviewed insurers also offered a so-called maximum waiting-time guarantee, which involved providing a compensation if the insurer fails to deliver healthcare within a certain time frame. The time frame and the level of the compensation varied between insurance companies, but usually ranged from 14 to 21 days for surgery and 3 to 7 days for a visit to a specialist. The compensation provided if the maximum waiting-time is not met was between €31 to €103 per day, although reimbursement was limited to 30 days and could not exceed the plans annual premium (see Table 4). Compared to the public healthcare system, which offers a recommended maximum waiting-time guarantee of 30 days for a visit to a specialist and an additional 90 days for a surgery with no compensation, the maximum waiting-time guarantee in the VHIs were significantly shorter. Another difference between the benefits offered by the voluntary insurance plans and those provided through the public healthcare system was that VHI plans offered access to a *care-coordinator*, often a registered nurse, who manages bookings

Table 2
Determinants for VHI uptake - Binary Logistic Regression.

Variables	Model 1			Model 2		
	OR	CI	LR	OR	CI	LR
Sex			.088			.948
Female						
Men	1.363	(.955-1.945)		1.013	(.694-1.478)	
Age			.005			.002
16-29						
30-49	1.115	(.575-2.163)		.903	(.450-1.811)	
50-64	.981	(.501-1.918)		.869	(.427-1.770)	
65-85	.430	(.120-.926)		.322	(.141-.736)	
Residence			.639			.765
Rural area						
Smaller town	1.126	(.603-2.101)		1.208	(.629-2.321)	
City or town	.947	(.542-1.653)		.932	(.519-1.674)	
Major city (Stockholm, Gothenburg, Malmö)	1.267	(.674-2.382)		1.040	(.536-2.018)	
Education			.318			.104
<9th grade						
<High school	2.240	(.831-6.037)		2.625	(.950-7.254)	
Post high-school	1.683	(.613-4.617)		1.854	(.654-5.254)	
Degree from college	1.898	(.698-5.165)		2.698	(.944-7.717)	
Household income (€/year)			<.001			<.001
<31 100						
31 100-73 000	1.613	(.831-3.131)		1.565	(.792-3.093)	
>73 000	3.933	(1.991-7.766)		3.320	(1.654-6.666)	
Political orientation			.002			.250
Strongly to left	.589	(.282-1.230)		.561	(.261-1.205)	
Moderately to left	.642	(.373-1.103)		.777	(.442-1.367)	
Neither left nor right						
Moderately to right	1.186	(.749-1.877)		.942	(.581-1.527)	
Strongly to right	1.885	(1.106-3.213)		1.307	(.742-2.302)	
Self-rated health ^b	1.157	(1.038-1.289)	.006	1.141	(1.021-1.276)	.016
Occupation						<.001
Blue collar worker						
White collar worker				1.820	(1.101 -3.009)	
Business owner ^a				4.010	(2.158-7.452)	
Employer						<.001
Public						
Private (incl. Non-profit)				3.700	(2.279-6.006)	

Outcome: VHI (yes = 1, No = 0).

OR refers to Odds Ratio.

CI refers to 95% confidence interval for OR.

LR refers to p-value of a Likelihood-ratio test.

^a Including self-employed, business owner with 1-9 employees and business owner with more than 10 employees.^b Self-rated health range: 0–10.

and contact with physicians and other medical staff. Even though Swedish voluntary health insurance often is categorised as supplementary [1,20], it should be noted that, some benefits offered were complimentary in nature, such as compensation for travel costs and the assistance of care-coordinators.

3.2.2. Subscription and eligibility

The standard practice among the studied insurance companies was to allow individuals between 16 and 63/66 years to subscribe. However, five of the seven companies (Folksam, If, TryggHansa, Skandia, EuroAccident) offered more generous subscription rights in their comprehensive plans, i.e. the option of staying insured until age 70, 75, 80, or for one's entire life. The general principle appeared to be that no pre-existing medical conditions were covered by the insurance, usually defined as conditions or injuries that the insured had symptoms of, received as a diagnosis, or had medical treatment for, prior to the subscription. There was, however, usually a time limit on this restriction: if the insured had been free from symptoms and treatment for two years, the conditions were again covered by the insurance. Other common requirements for subscription is that the insurance holder is 'fully fit for work' or that he/she fills in a health declaration. Fully fit for work was explained to mean that the person can pursue their normal work duties without restrictions, and does not receive any compensation due to illness (Länsförsäkringar, Folksam, EuroAccident, SEB,

Skandia, TryggHansa). Five of the insurance companies (Folksam, If, TryggHansa, Skandia, EuroAccident) also offered, in their group- or employer-paid plans, the opportunity to co-insure family members.

3.2.3. Prices

As for the cost of purchasing VHI, prices varied based on the insured person's age, the comprehensiveness of the insurance plan, whether a deductible was included or not, and whether a referral from a GP was required to get access to specialist care. As is shown in Table 4, the price of a basic VHI varied between 11-53€ per month for individuals aged 40-45. For people over 60, prices were significantly higher. In all plans, age was the most important determinant for the insurance premium. The quite significant differences in price between some of the plans were explained, at least in part, by different requirements. For instance, if the insured also held savings in the insurers bank (SEB) or if a referral from a GP was required to get access to insurance-funded healthcare. For employer-paid VHI, most insurers differentiate between larger employers, where premiums are calculated on the average age of the employees, and smaller ones (less than 10) where premiums are set individually. This implies that both premiums and levels of protection can vary between different employees at a workplace. Several insurance companies declined to share price information for employer-based plans.

Table 4
Scope and content by Insurance company and type of VHI plan.

Type of plan	Folksam	If	Länsförsäkringar			TryggHansa		Skandia		SEB		EuroAccident	
	Group	Indiv.	Empl.	Indiv.	Empl. 1-9	Empl. 10+	Indiv.	Empl.	Indiv.	Empl.	Indiv.	Empl.	Empl.
Level of comprehensiveness*	B, S, C	B	B, S, C	B, S	B	B,S	B, S	B, S	B, S, C, C+	B, S, C, C+	B ^k , S, C	B ^k , S, C, CL	B, S, C
Price (premium, € / month)													
Youngest (16-19)	B: 7 S: 15 ^b /14 ^c C: 36	N/A ^{**}	N/A	B: 33 S: 44	B:40	N/A	N/A	N/A	B: 11 S: 31 C: 32 C+: 39	N/A	B: 10 S: 32/25 ^c C: 48	B: 10 S:32/25 ^c C: 48 CL: 42/32 ^c	N/A
Middle age (40-45)	B: 11 S: 24. ^b /23 ^c C: 59	N/A	N/A	B:53 S:82	B:54	N/A	N/A	N/A	B: 48 S: 60 C: 63 C+: 96	N/A	B: 11 S: 41/33 ^c C: 63	B: 11 S: 41/33 ^c C: 64 CL: 42/32 ^c	N/A
Oldest ^a	B: 22 S: 72 ^b /70 ^c C: 227	N/A	N/A	B:200 S: 278	B:119	N/A	N/A	N/A	B: 277 S: 344 C: 360 C+: 364	N/A	B: 33 S:149/118 ^c C: 180	B: 33 S: 149/118 ^c C: 19 CL: 42/32 ^c	N/A
Co-payment	No	No	No	No	No	No	No	No	No	No	No	No	No
Deductible	B, C: No S: 72€/or referral	52€	No	77€	77€	77€	B: Yes S: No	B: 52€ S: No/opt.	No/opt. (62€)	No	B: yes S, C: No	No B: yes, 104€ S,C: No CL: 52€	B: opt 52€ S, C: No
Access													
Wait-limit (days)	3 to visits 21 to surgery	14	14	20 from diagnostic to surgery	20 from diagnostic to surgery	20 from diagnostic to surgery	6 to visit 14 to surgery	6 to visit 14 to surgery	Yes	Yes	6 to visit 21 to surgery	6 to visit 21 to surgery	6 to visit 14 to surgery

Table 4 (Continued)

Type of plan	Folksam	If		Länsförsäkringar			TryggHansa		Skandia		SEB		EuroAccident
	Group	Indiv.	Empl.	Indiv.	Empl. 1-9	Empl. 10+	Indiv.	Empl.	Indiv.	Empl.	Indiv.	Empl.	Empl.
Allowance (until treatment, €)	31/day	309 ^d	309	103/day	103/day	103/day	155/day	155/day	N/A	N/A	52 / day	52 / day	103/ day
Referral required	B: Yes S,C: Yes, or deductible	No	No	No	No	No	No	No	B, S: Opt. C, C+: No	B, S: Opt. C, C+: No	B: Yes S: Opt. ^j C: N/A	B: Yes S: Opt. ^j C: N/A CL: Opt. / Yes for age >70	No
Eligibility criteria													
Age (valid to)	B: <65 S: < 70 C: <75	70	N/A	<end of life	<67	<67	< 70	N/A	< 67	< 67	B: 80 S: 80 C: 70	B: 80 S: 80 C: 70 CL: 80	< 67
Pre-existing conditions	< 2 years	No	No	No	< 2 years	< 2 years	No	No	No	< 2 years ^h	No	< 2 years	< 1 year C: Yes ⁱ
'Fully fit for work' (FFW) / Health declaration (HD)	FFW and/or HD	N/A	FFW	HD	FFW HD ^e	FFW HD	and/or	and/or ^f FFW ^g	HD	FFW	B: FFW S,C: HD	B: FFW S,C: and / or CL: only FFW	B-C: FFW
co-insure family members?	Yes	N/A	Yes	N/A	Yes	Yes	N/A	Yes	N/A	Yes	N/A	CL: Yes	B, S: Yes C: No

Not. Currency rate from the Swedish Riksbank, SEK – EUR (2017-05-04).

^a B = Basic, S = Standard, C = Comprehensive, C+ = Comprehensive plus, CL = Collective. (SEB CL: Employer-based PHI for companies with at least 5 employees).

^{**} If declare that they do not provide general information about price for individual plans without a social security number from the potential customer (Support-chat 2017-11-24).

^a For oldest group, see eligibility criteria: 'age', for each policy.

^b With deductible.

^c With referral.

^d 2068 € after 30 days.

^e Health declaration is required for companies with 1-9 employed.

^f Group- / employer-based optional affiliation.

^g Group- / employer-based mandatory affiliation.

^h No time of restraint when choosing the policy; "Fully fit for work – without time of restraint".

ⁱ No restriction of pre-existing conditions when choosing the comprehensive policy with health declaration.

^j Referral mandatory for visit to dietician and for aftercare/rehabilitation.

^k SEB basic plan is only available for bank customers at SEB or members in an association that has a group-based insurance from SEB.

Taken together, the analysis of the Swedish VHI plans showed that the benefits differed from the services offered through the public healthcare system mainly in three respects: all services were provided by private rather than public care providers, the plans had stricter maximum waiting-time guarantees, and that care-coordination was offered. The analysis also showed that there were important pre-conditions determining who could purchase insurance which seemed to select for healthy individuals of working age.

4. Discussion

The empirical investigation in this paper has provided a first overview of the characteristics of VHI in Sweden; who holds such insurance and what benefits are obtained through them. The results indicate that VHI is more common among high income-earners, individuals employed in the private sector and white-collar workers. The benefits included in the VHI plans range from GP visits to elective surgery and, to some extent, inpatient care. Beside individuals' pre-existing conditions, emergency medicine, highly specialised care, and treatment for chronic conditions are not included in the insurance plans. Individuals with pre-existing medical conditions and those who are not fit for work can generally not subscribe to a voluntary health insurance plan. Even though the Swedish VHI has been categorised as supplementary [1,20], the analysis of the insurance plans show that they also have complementary elements.

Comparing the pattern of VHI uptake in Sweden with those found in other countries with NHS-type healthcare systems, both similarities and differences was found. The finding that white-collar and high income-earners in the private sector were over-represented among VHI holders, is in line with results from studies from the UK, Denmark and countries in the Mediterranean area [23,24,41–43]. In the Swedish case, political orientation was shown to play a role only for the white-collar group, where white-collar workers with political orientations to the right were more likely to have VHI. It seems likely, given the fact that the vast majority of VHI holders in Sweden obtain their insurance from their employment, that conditions such as occupation or public/private sector employment plays a stronger role than individual characteristics or preferences for VHI uptake. Reflecting on potential motives behind VHI purchase in Sweden, some findings are particularly interesting. First, the fact that the Swedish VHI plans allow access to a care-coordinator, since many patients in Sweden testify about a lack of integration and difficulties to navigate in the public healthcare system. Second, the substantially stricter waiting time guarantee in the VHI plans could be an important factor for VHI purchase. Specially in the light of the long-lasting problems of long waiting-times, especially for certain forms of elective surgery, in the public healthcare [44]. As noted in previous studies on VHI in the Nordic countries [20,29], waiting-times in the healthcare system can also be seen as a problem for employers if their employees have to be on extended sick leave while waiting for treatment. Waiting-time guarantee has also been found to be a common VHI benefit in the other Nordic countries; which have all experienced long-lasting problems with queues in their public healthcare systems [20,29].

The fact that VHI uptake in Sweden, like in most other countries, is limited foremost to high-income groups suggests that the growing market for VHI risks undermining the egalitarian principles of the public healthcare system. First, it threatens the principle of solidaristic financing through general income taxation in that VHI is paid for and consumed like a private good, with limited risk-sharing between the healthy and the sickly. Second, it violates the long-standing principle in Swedish healthcare that access to care is to be based on medical need, rather than ability to pay, by allowing the

VHI holders to 'jump the queues' within the system [45,46]. Last but not least, an increased VHI uptake might, in Sweden as elsewhere, threaten the legitimacy of the public healthcare system. With reference to the British case, Propper with colleagues [32] emphasise the importance of winning the middle-class support to legitimise and finance a universal public healthcare system. With a growing body of middle-class individuals getting speedier access to healthcare services through their voluntary insurance, there is a risk that their willingness to contribute via taxes to the public system may decrease over time. If so, public systems would lose both revenue and popular support, which could lead to a 'vicious circle' of deteriorating quality leading to even more individuals choosing to buy voluntary health insurance. In the Swedish case, however, such effects can be moderated by the fact the voluntary insurance plans do not appear to provide coverage for most serious illnesses, which means that most people will continue to depend on public healthcare for their health protection.

4.1. Limitations

Several limitations can be noted in the study. First, since voluntary health insurance is still quite uncommon, the limited number of surveyed individuals with VHI entails low precision in the estimates, resulting in rather large confidence intervals. A consequence of the small group of people with VHI is that data on type of VHI can not be used, i.e. whether the individual received an employer-paid VHI, purchased a group-based VHI through a trade union, or bought an individual VHI privately. Second, that the survey has been known to under-represent individuals of young age, living in economically deprived areas and those with poor language skills, indicates that the share of respondents holding a VHI might be slightly overrepresented in the sample. A third limitation is that the data does not provide any direct information regarding the motives behind the decision to purchase VHI, either on part of individuals, employers or other organisations.

5. Conclusions

Voluntary health insurance has become more common in Sweden during the last decades. The analysis in this paper has shown that it is foremost better-off groups like white-collar workers with high income who obtain such insurance. This, together with the fact that most VHI is obtained through employment, suggests that work-related factors strongly determine who has VHI in Sweden. The benefits obtained through such voluntary insurance plans provide access to private care providers, shorter waiting times, and assistance with care-coordination. Generally, VHI does not cover pre-existing medical conditions, highly specialised care or treatment for chronic diseases. Taken together, the results indicate that voluntary health insurance provide benefits foremost for the healthy high-income earners employed in the private sector and that it is used foremost to obtain faster access to care services already covered in the public healthcare system.

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Declaration of Competing Interest

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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Appendix A. Supplementary data

Supplementary material related to this article can be found, in the online version, at doi:<https://doi.org/10.1016/j.healthpol.2019.06.004>.

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