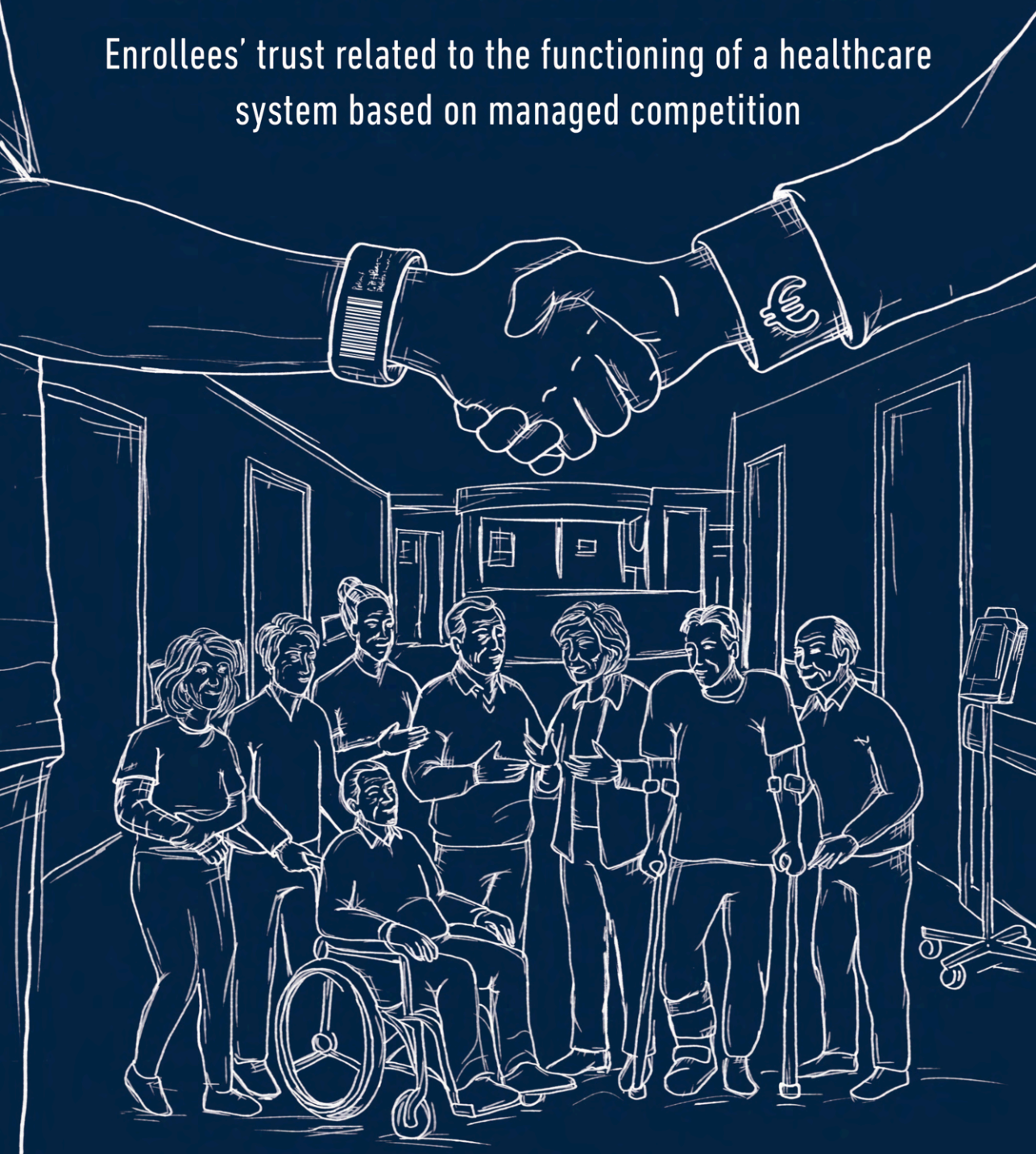
TRUST IN HEALTH INSURERS

Enrollees' trust related to the functioning of a healthcare system based on managed competition



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www.nivel.nl
Postbus 1568
3500 BN Utrecht
Phone: 030-27 29 700
Email: receptie@nivel.nl

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Promotor
Prof. dr. Judith de Jong, Maastricht University / Nivel
Copromotor
Dr. Anne Brabers, Nivel

Beoordelingscommissie

Voorzitter:
Prof. dr. Dirk Ruwaard, Maastricht University

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Prof. dr. Erik Schut, Erasmus University Rotterdam

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Chapter 1

General introduction

1.1 Background

It is November. Mr. Jansen (65) and his partner, Mrs. Jansen (63), are sitting side by side on the couch with the television on. Between the evening news and a game show, the annually recurring commercials appear: "Choose your health insurance wisely!", "Switch now and save up to 300 euros a year!", "Your health insurance, fully tailored to you." Online, they are also targeted with advertisements from health insurance companies and comparison websites. Like other Dutch citizens, they are urged each year to reassess their health insurance. Mr. Jansen is considering switching: his premium has increased, and he found a cheaper policy online. However, that policy does not include contracts with all hospitals. "What does that mean exactly? Will I be turned away somewhere?" he wonders. In the end, he decides to stay with his current insurer. "At least I know what I'm getting," he says with a shrug, "even though I don't trust them one bit."

Meanwhile, Mrs. Jansen is frustrated by the long waiting time for treatment of her hernia. She has been suffering from pain in her lower back and leg for months, and her GP has referred her to the hospital. A neighbour mentioned that her insurer helped her find a provider with a shorter waiting time. But Mrs. Jansen declines such help. "They will just send you to the cheapest option, not the one you actually need," she says. Both are convinced that health insurers profit from the ever-increasing premiums they collect, which contributes to their limited trust in health insurers. Mr. Jansen says, "They're supposed to be there for our care, but it feels like they're mainly focused on making money and increasingly taking control instead of facilitating." Mrs. Jansen nods in agreement: "That makes it hard to trust them, especially when they also decide where I should receive my care." At the same time, they find it difficult to clearly articulate what a health insurer should actually do.

This case of Mr. and Mrs. Jansen is fictional, yet it reflects a familiar reality that many Dutch citizens face each year during the official switching period that starts in November. During this time, all enrollees have the opportunity to change their health insurance policy, and are actively encouraged to do so. The deadline to enroll in a new health insurance for the coming year is January 31. The situations described in the Jansen case, such as uncertainty about policy conditions, reluctance to follow the health insurer's advice, and a general lack of trust, are not merely hypothetical. Studies have shown that trust in health insurers in the Netherlands is relatively low (1–3). Several factors may contribute to this low level of trust, such as limited health insurance literacy, the perception of insurers as profit-driven entities, concerns about third-party interference in the doctor-patient relationship, and the influence of media on public opinion (4). Additionally, there is a so-called 'credible commitment' problem, meaning that health insurers struggle to convince consumers that they are committed

to contracting high-quality care rather than simply the cheapest options (5). Moreover, studies show that a significant portion of Dutch enrollees are not receptive to healthcare advice from their insurer (1, 6). One Dutch study found that about one-third of enrollees would consider approaching their health insurer for advice on choosing a healthcare provider (6). Trust in the insurer may play a key role in this reluctance (1, 5, 6). Lastly, the study by Hoefman et al. (2015) found that there are misconceptions among enrollees about the current tasks of Dutch health insurers and that the tasks health insurers have are not always in line with the expectations of enrollees, which may be related to trust (7).

While previous studies have examined aspects of trust in healthcare, few have explicitly linked enrollees' trust in health insurers to the functioning of the healthcare system. The studies in this dissertation aim to fill that gap by examining trust not only as an outcome, but also as a possible factor influencing system performance. Therefore, the central question of this dissertation is: 'What role does enrollees' trust in health insurers play in the effective functioning of a healthcare system based on managed competition?'. This dissertation focuses its analysis on the Dutch healthcare system, where managed competition has been the guiding principle since its reform in 2006.

Before we further explore the central question, it is essential to establish a clear understanding of the conceptual and systemic foundations underlying the Dutch healthcare system and the role of trust within it. Therefore, this introduction section first outlines the concept of managed competition, followed by an explanation of the Dutch healthcare system, the insurer's role, and the importance of trust. It then introduces the research questions guiding this dissertation, discusses its scientific and policy relevance, and presents the main methodological approach. The chapter concludes with a concise overview of the structure and content of the subsequent chapters.

Managed competition

Managed competition is a government-regulated system designed to foster competition both among third-party purchasers, typically health insurers, and among healthcare providers (8–11). In recent decades, several countries, including the Netherlands, Germany, and Switzerland, have adopted healthcare systems with elements based on Enthoven's theory of managed competition (8, 9, 12). As the prudent buyers of care on behalf of their enrollees, health insurers play an important role in managed competition (8, 10, 11). The possibility for enrollees to switch to a competitor is supposed to be a key element in creating competition between health insurers. Since enrollees can switch health insurers annually, this would give health insurers the incentive to keep enrollees satisfied and to offer the most attractive health insurance packages in terms of conditions and prices to attract new enrollees and maintain loyalty among

current enrollees (8, 10, 11, 13). During the purchasing negotiations with healthcare providers, according to the theory, health insurers therefore aim to steer towards quality improvement of care and price reductions (11, 13, 14). In this way, they would improve their competitive position in relation to other health insurers.

The healthcare system in the Netherlands

In the Netherlands the model of managed competition has been expressed since the introduction of the Health Insurance Act (HIA) in 2006. Since then, citizens aged 18 years and older are obliged to take out health insurance (the so called basic package) (15). Everyone aged 18 years and older contributes to the cost of healthcare through premiums, contributions and taxes (16).

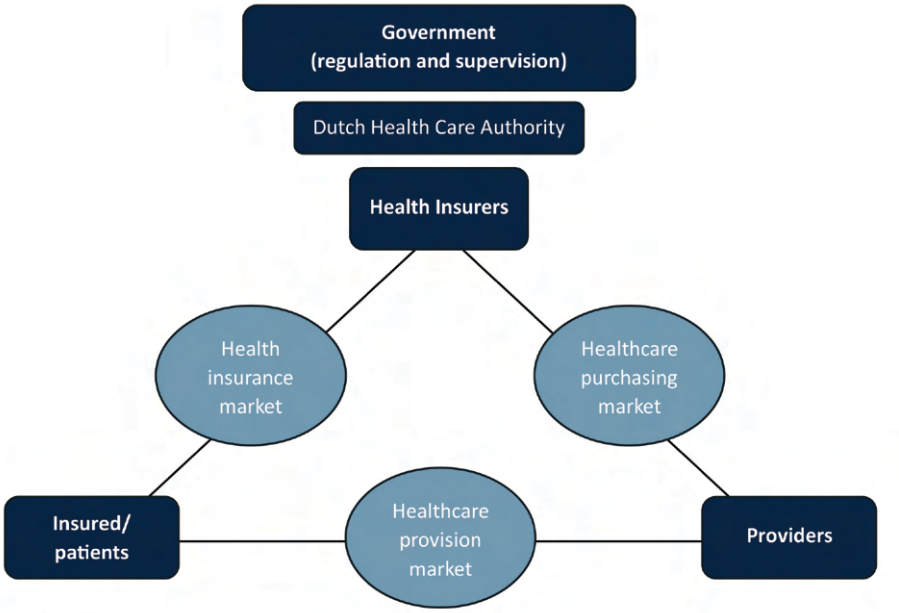

Figure 1.1. Netherlands healthcare market interaction (Derived from Kroneman et al, 2016 (17)).

In the model of regulated competition, a distinction can be made between three healthcare markets: the healthcare purchasing market, the health insurance market and the healthcare provision market. Figure 1.1 shows the interactions between these three markets. Each year, citizens are free to choose between the different health insurance policies offered by private health insurers on the health insurance market (16). The content of the basic health insurance package is determined by the government, and includes necessary medical care, medicines and aids (15). Health insurers are obliged to accept everyone for the basic health insurance, no matter

their health status or other characteristics (15). Furthermore, the enrollee's personal situation, health, age or income does not affect the health insurance premium (15).

Nevertheless, the price and quality of care can differ between health insurance policies. This is because health insurers negotiate with providers about quality, volume and costs of care on the healthcare purchasing market. Health insurers have a duty of care, meaning they must ensure their enrollees have access to all care from the basic health insurance package within a reasonable time and travel distance (15). Health insurers will have a strong position during the negotiations with healthcare providers on the healthcare purchasing market, if they can guide enrollees to preferred providers. This is because providers must then seriously consider the possibility that an insurer and their enrollees switch to a competitor on the healthcare provision market (13, 18). According to the theory of managed competition, this gives care providers an incentive to improve the quality of care and reduce the price of care (9, 13, 18). In this system, the Dutch Healthcare Authority (NZa) is responsible for the supervision of the three healthcare markets in the Netherlands and ensures the proper implementation of the Health Insurance Act (19).

Selective contracting and healthcare advice to channel enrollees

Enrollees in need of care can choose a provider from the healthcare provision market. In this choice, which may be based on factors such as quality of care, waiting times and price, health insurers have two instruments to guide enrollees to preferred providers. Firstly, Dutch health insurers can apply selective contracting (10, 13). This means that health insurers do not contract all healthcare providers on the healthcare purchasing market. Enrollees who opt for a health insurance policy with restrictive conditions, usually at a lower premium, must choose from contracted providers; otherwise, care may not be fully reimbursed and may require a co-payment. This makes it financially less attractive for these enrollees to visit healthcare providers that are not contracted by the health insurer.

Another way to guide enrollees to preferred providers is to provide healthcare advice (6). Healthcare advice can consist of different services, such as waiting list mediation, advice on the most suitable provider, advice and guidance in arranging care or obtaining medical aids, as well as in arranging a second opinion, advice aimed at prevention and health promotion, and assistance in preparing a meeting with a doctor (20). Especially with services on guidance to the most appropriate healthcare provider, insurers can guide their enrollees to visit the providers with whom they have made agreements. Healthcare advice currently consists mainly of answering questions from the insured. Nevertheless, a number of health insurers indicate that, if legislation allows, they would like to do more in terms of actively approaching insured with advice (20). Actively approaching enrollees can be done in various ways, such as by phone calls or sending letters and e-mails (20).

The role and importance of trust

For health insurers to perform their role as healthcare purchasers, it is important that enrollees have trust in them. Trust in the health insurer is important, because enrollees may doubt the intentions of health insurers in healthcare contracting when trust is low. Earlier studies show that if trust in the insurer is lacking, enrollees are likely not to choose selective health plans with restrictive conditions, and do not want to be channeled to preferred providers (5, 21). Furthermore, low trust in health insurers could be a bottleneck for enrollees to be open to advice from the health insurer, which could prevent them from guiding enrollees to preferred providers. When enrollees have trust in the health insurer, it is expected that they are more willing to follow the health insurers' advice. This enforces the negotiation position of health insurers when contracting healthcare providers, and results in health insurers being better able to manage quality and costs of care, which is the ultimate goal of managed competition (8, 10, 11, 13).

The definition of insurer trust

Various definitions of trust can be found in the literature. A distinction can be made between definitions in general (22–28) and definitions based specifically on the healthcare context (29–31). Most definitions stress 'the optimistic acceptance of a vulnerable situation in which the truster believes the trustee will care for the truster's interests' (32, p.615). Trust refers to expectations about the future actions of others, making it a future-oriented concept (33). This is in contrast to satisfaction, which is an evaluation based on previous experiences (34).

Different types of trust exist according to literature. With regard to trust within healthcare, a distinction can be made between interpersonal trust and public trust (32). At the micro level, interpersonal trust in healthcare is about trust in individual persons, such as the general practitioner or medical specialist. Public trust, on the other hand, is about trust in groups or institutions at the meso-level or macro-level (32).

According to the definition of Hall et al. (32), trust is closely related to the acceptance of vulnerability. This definition was initially used to describe trust in an interpersonal setting, but is also applicable in public trust in the healthcare setting (35). When we put this definition in the context of the relation between enrollees and health insurers, enrollees with trust in health insurers accept their vulnerable position of leaving the purchasing of care to their health insurer. This acceptance comes from the belief that the insurer acts in the enrollees' interest, which is most likely contracting high-quality care provided at a good price. When focusing on trust in the health insurer, the interest is mainly in public trust, institution-based, at a macro level.

1.2 Goal and research questions

As previously discussed, literature shows that trust in health insurers in the Netherlands is low (1–3). Limited previous studies have examined whether low trust in the health insurer poses a problem in making healthcare systems based on managed competition work as intended. Therefore, the main question of this dissertation is: 'What role does enrollees' trust in health insurers play in the effective functioning of a healthcare system based on managed competition?'.

This dissertation examines the relationship between trust and the choice of health insurance policy, as well as the willingness to receive healthcare advice. In addition, the dissertation aims to provide deeper insight into how trust in health insurers is formed, and the importance of enrollees' awareness of policy conditions. Furthermore, it explores which tasks enrollees associate with health insurers and what underlies the lack of trust in the execution of these tasks. These insights contribute to understanding how trust in health insurers can be strengthened.

Specific research questions

Enrollees' trust in health insurers and their choice of a health insurance policy

The first study of this dissertation focuses on the relationship between trust and enrollees' choice of a health insurance policy. Theory regarding consumer behaviour states that trust is required when there is uncertainty: the higher the initial perception of risk, the higher the level of trust required to facilitate transactions (21, 36). Trust is closely related to the trustor's risk arising from the uncertainty about the trustee's motives, intentions, and future behaviour (21, 37). Furthermore, trust has been shown to reduce perceived risk (21, 36, 38). In countries with a healthcare system based on managed competition, citizens are expected to be critical consumers when choosing a health insurance policy. Trust in the health insurer may be a key factor in the choice of a health insurance policy, yet this relationship remains underexplored in earlier research.

In the first study we therefore aim to investigate what role enrollees' trust in health insurers plays in their choice of a health insurance policy in the Netherlands, focusing on enrollees' switching behaviour and the choice of a policy with restrictive conditions. The research question we aim to answer is:

RQ1: What is the role of trust in enrollees' choice of a health insurance policy?

Enrollees' awareness of the restrictive conditions of their health insurance policies

In the second study, we take a foray into health insurers' role in clear information provision. Enrollees may be surprised by healthcare costs they were not clearly informed about. This can impair enrollees' trust in the health insurer, and may be particularly an issue in the context of restrictive health insurance policies. If enrollees have such a health insurance policy, enrollees have to make a co-payment if the visited healthcare provider is not contracted (10). This makes it financially less attractive for enrollees to visit healthcare providers that are not contracted by the health insurer. In recent years, work has been undertaken in the Netherlands to ensure enrollees are more informed about policies with restrictive conditions, and therefore better supported in their choice of health insurance. For example, the Dutch Healthcare Authority (NZa) has published guidelines to improve the contracting process and enhance transparency regarding contracted care (39). In addition, legislation has been introduced requiring both healthcare providers and insurers to offer clear, accessible, and comparable information, aimed at helping consumers make well-informed decisions about their health insurance coverage (40, 41). And yet, it remains uncertain whether people consciously choose a health insurance policy with restrictive conditions.

The objective of the second study of this dissertation is to gain insight into enrollees' awareness of the restrictive conditions of their health insurance policies. We aim to provide insight into whether enrollees may need to be better informed and supported in their choice of health insurance by answering the following research question:

RQ2: To what extent do enrollees with restrictive conditions in their health insurance policy know about these conditions?

Trust and the willingness to receive healthcare advice

The third study in this dissertation is about trust and its relation to healthcare advice. By providing advice, insurers can guide their enrollees to visit the providers with whom they have made agreements on price, quality and/or volume of care, especially with services with regard to advice on the most suitable healthcare provider. This could give providers incentives for quality improvement and reduction of prices (9, 13, 17). Besides that, healthcare advice could also lead to a better match between the needs of enrollees and the care offered. We know from a previous Dutch study that trust of enrollees, specifically in the advisory role, is not high (7). As a result, low trust could threaten the functioning of the healthcare system based on the theory of managed competition, because, as described earlier, the health insurer would be less able to use healthcare advice as an instrument to eventually influence the price and/or quality of

care. Furthermore, when enrollees do not trust the healthcare advice from the health insurer and do not follow it, it is difficult for health insurers to align care to the needs of enrollees.

The third study, therefore, focuses on the association between trust in the health insurer and the willingness to receive healthcare advice from the health insurer in the Netherlands. The research question underlying this study is:

RQ3: What is the relationship between trust in the health insurer and the willingness of enrollees to receive healthcare advice from their health insurer?

Trust and enrollees' perceptions of the role and tasks of health insurers

The fourth and fifth study focus on enrollees' perception of the role and tasks of health insurers and their relationship with trust. Low levels of trust in health insurers could be explained by different theories as described in the article of Maarse and Jeurissen (2019) (4). The first theory is based on the principle that many citizens have little knowledge of the role of insurers in the healthcare system (4). The second theory is based on the principle that there is a critical attitude to competition in healthcare among citizens, arising from the idea that health insurers are profit-driven organisations that do not act in the interests of the patient (4). Thirdly, limited trust may come from the idea that insurers should not interfere in the relationship between doctor and patient (4). Finally, low levels of trust may come from the bad publicity insurers usually get in the media (4). Nevertheless, literature in this area is scarce, and theory is not always substantiated with research. In particular, little qualitative research has been conducted on why there is low trust in the health insurer among enrollees.

The fourth study, therefore, focuses on why trust in health insurers is low to offer a better understanding of what health insurers can do to increase trust in health insurers. The study will examine how citizens view health insurers, exploring what has created their perception. In addition, this study will examine what enrollees expect from the role health insurers have in the healthcare system, as the introduction of the Dutch Health Insurance Act (HIA) in 2016 meant a new role and a change of tasks for health insurers. The research question we aim to answer is:

RQ4: How do enrollees perceive health insurers and the role they have in the healthcare system, how are these perceptions formed, and how are these related to trust?

Furthermore, the study of Hoefman et al. (2015) has indicated that there are misconceptions among enrollees about the current tasks of Dutch health insurers (7). This study found that the tasks of insurers, as stated in the HIA, are not always in line with the expectations of their tasks according to enrollees (7). In addition, enrollees may feel that the tasks of the insurer are not always carried out (7). These mismatches between the role and performance of tasks by health insurers, and the expectations and experiences of enrollees, may be related to trust in health insurers; however, research on this topic is still scarce.

The fifth study, therefore, focuses on the extent to which enrollees' perceptions of the role and tasks of health insurers are related to their trust in them. The aim of this study is to examine whether a mismatch between expectations about the insurer's role and what they actually do may be a reason why trust in health insurers in the Netherlands is low. We aim to answer the following research question:

RQ5: What is the relationship between enrollees' perceptions of the tasks of health insurers and enrollees' trust in them?

Chapters 2 to 6 of this dissertation each address one of the research questions and the corresponding study. An overview of the research questions per chapter is presented in Table 1.1.

Table 1.1. Overview of research questions.

Research question		Chapter
RQ1:	What is the role of trust in enrollees' choice of a health insurance policy?	2
RQ2:	To what extent do enrollees with restrictive conditions in their health insurance policy know about these conditions?	3
RQ3:	What is the relationship between trust in the health insurer and the willingness of enrollees to receive healthcare advice from their health insurer?	4
RQ4:	How do enrollees perceive health insurers and the role they have in the healthcare system, how are these perceptions formed, and how are these related to trust?	5
RQ5:	What is the relationship between enrollees' perceptions of the tasks of health insurers and enrollees' trust in them?	6

1.3 Relevance

Scientific relevance

Although several studies have been conducted on trust in health insurers (1, 2, 7, 42), its association with fundamental elements for the proper functioning of the Dutch healthcare system with regulated competition, such as switching behaviour, enrollees' choices regarding health insurance policies with restrictive conditions, or willingness to receive healthcare advice from the insurer, has not been extensively investigated before. In addition, there is little literature on how Dutch enrollees perceive health insurers and the role they have in the healthcare system, and how this is related to trust. This dissertation will contribute to expanding the limited literature on trust in the health insurer in healthcare systems based on managed competition. Although this study is situated within the Dutch healthcare system, its findings may have broader applicability to other systems based on managed competition, thereby contributing to the advancement of comparative research on trust and system performance in healthcare.

Policy relevance

In a healthcare system based on managed competition, fundamental elements, like switching behaviour, enrollees' choices regarding health insurance policies with restrictive conditions, or willingness to receive healthcare advice, should occur as intended to stimulate competition. In this dissertation, we focus on trust in the health insurer and its association with these elements. Although trust in the health insurer is considered important, in practice, enrollees' trust in health insurers in the Netherlands is relatively low (1–3). Our results could help health insurers and the government to provide insight into which areas there are gains to be made to increase trust in the health insurer. Moreover, it could give the Dutch government insight into whether the healthcare system is functioning as intended. While the focus is on the Dutch context, the findings may offer valuable lessons for other countries operating under principles of managed competition, as they may draw lessons from these findings as well.

1.4 Methods

For four studies in this dissertation, data were collected using the Dutch Health Care Consumer Panel, an access panel managed by Nivel (the Netherlands Institute for Health Services Research) (43). The panel collects citizens' opinions, knowledge, expectations and experiences regarding healthcare. Currently, the panel has approximately 10,500 members from the general Dutch population aged 18 and over. Their background characteristics, such as age, gender, education level, and self-reported health status, were recorded at the start of their membership. People can join the panel by invitation

only. Data have been assessed and processed, pseudonymized, in accordance with the panel's privacy policy, which corresponds to the General Data Protection Regulation (GDPR). According to Dutch legislation, approval by a medical ethics committee is not obligatory for conducting research through the panel (43). The Medical Ethics Review Committee (METC) of the Amsterdam UMC has confirmed that research conducted through the Dutch Health Care Consumer Panel is not subject to approval by a medical ethics committee (METC ref. number: 2024.1150). Informed consent is obtained from the participants to the panel as follows: an intended participant receives an invitation to participate in the panel, including information about the purpose, scope, method and use of the panel. Based on that information, a participant can give permission to participate in the panel. This is a written consent that, since 2020, can also be given digitally. Participants are asked to complete a questionnaire a few times a year. Prior to each survey, the participants receive information on the subject and the length of the survey. Participation is voluntary, and members are not obliged to participate in the survey or answer any questions in the survey. They can stop their membership at any time without giving a reason.

For three studies (Chapters 2, 4, and 6), we sent out questionnaires to panel members. These studies employed a cross-sectional design and conducted regression analyses to test hypotheses concerning enrollees' trust in health insurers and its relationship to their attitudes and behaviours. For one study (Chapter 5), we conducted qualitative interviews with 17 participants, selected based on their level of trust in health insurers as indicated in a prior questionnaire.

For one study in this dissertation (Chapter 3), data were collected with the help of two insurers. Online questionnaires were sent to enrollees from two insurers offering together three health insurance policies with a limited hospital choice. For this study, it is mainly descriptive statistics that have been performed.

The analyses in this dissertation were conducted using STATA 16.1 and the interviews were coded using MAXQDA software (Release 22.1.1).

1.5 Structure and content

Chapter 2 describes the association between enrollees' trust in health insurers and their choice of a health insurance policy. With regard to enrollees' choice of a health insurer, we focus on switching behaviour and the choice of a policy with restrictive conditions. In **Chapter 3,** we look at enrollees' awareness of the restrictive conditions of their health insurance policies. We look at whether people consciously choose a health insurance policy with restrictive conditions, and if not, the extent of the problem when enrollees face unexpected costs. In **Chapter 4,** we focus on the relationship between trust and the willingness to receive healthcare advice. In addition, we look at whether this relationship is different for certain groups of enrollees. Chapters 5 and 6 are focused on enrollees' perceptions of the role and tasks of health insurers. In **Chapter 5,** we focus on how citizens view health insurers, what has created this perception, and what they expect from the role health insurers have in the healthcare system. In **Chapter 6,** we look at whether a mismatch between expectations about the insurer's role and what they actually do may be a reason why trust in health insurers in the Netherlands is low. These chapters are followed by a general discussion in **Chapter 7**.

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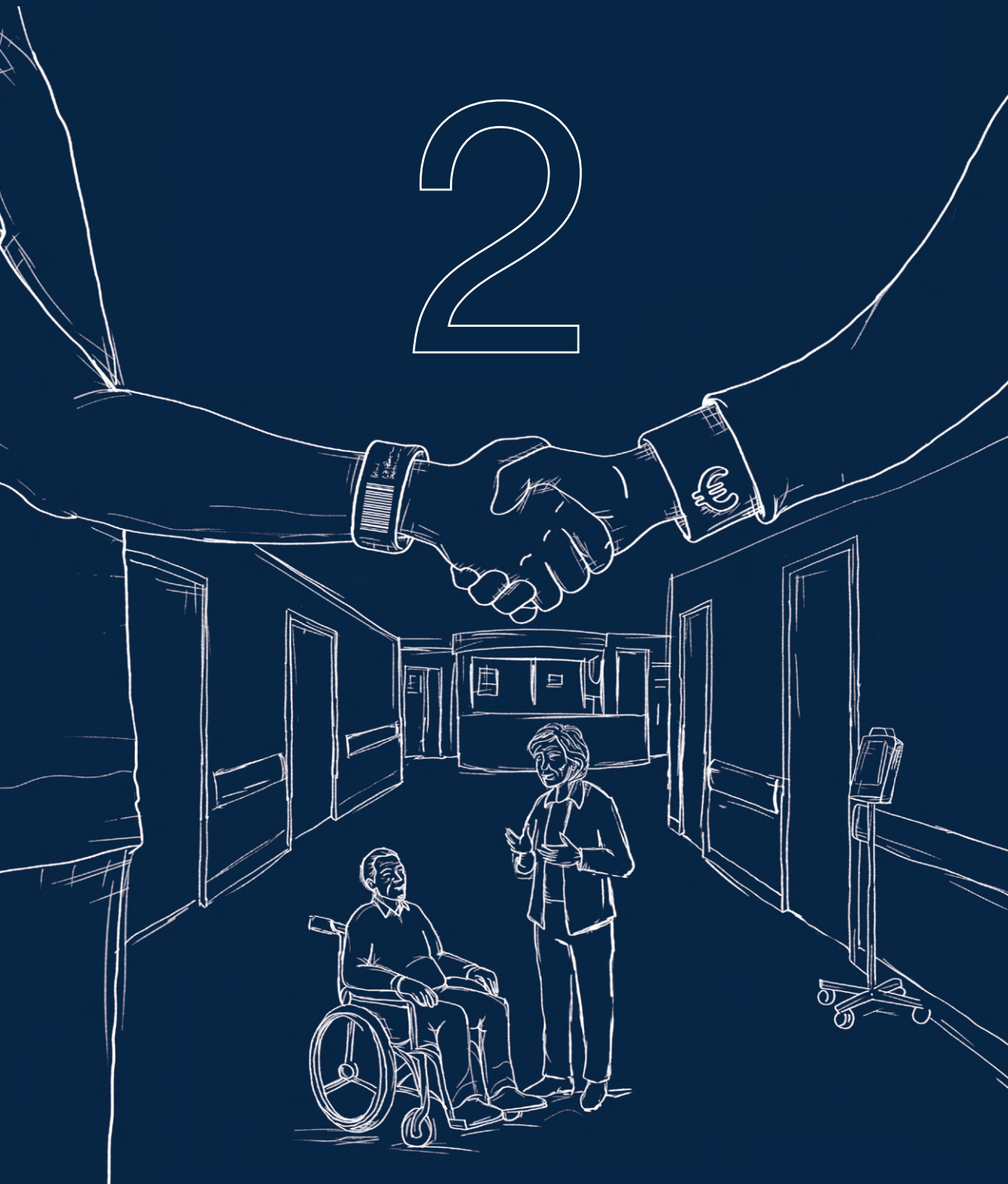

Chapter 2

How is enrollees' trust in health insurers associated with choosing health insurance?

van der Hulst F.J.P., Brabers A.E.M., de Jong J.D.

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2.1 Abstract

In a healthcare system based on managed competition, health insurers are intended to be the prudent buyers of care on behalf of their enrollees. Equally, citizens are expected to be critical consumers when choosing a health insurance policy. The choice of a health insurance policy may be related to trust in the health insurer, as enrollees must believe that the health insurer will make the right choices for them when it comes to purchasing care. This study aims to investigate how enrollees' trust in health insurers is associated with their choice of a health insurance policy in the Netherlands. We will focus on the switching behaviour of enrollees and the choice of a policy with restrictive conditions. In February 2022, a questionnaire was sent to a representative sample regarding gender and age of the adult Dutch population. In total 1,125 enrollees responded, a response rate of 56%. Respondents were asked about the choices they made in choosing health insurance. Trust in health insurers was measured using the Health Insurer Trust Scale (HITS), a validated multiple item scale. Descriptive statistics, a paired t-test and logistic regression models were conducted to analyse the results. Of all respondents, 35% indicated that they agree, or completely agree, with the statement that they trust health insurers completely. In addition, trust in enrollees' own insurer is slightly higher than trust in other insurers (36.29 vs. 33.59, $p<0.001$). Furthermore, we found no significant associations between trust in health insurers, and whether enrollees have either switched health insurers or have chosen a policy with restrictive conditions. This study showed that enrollees' trust in health insurance in the Netherlands is relatively low and that trust in their own insurer is slightly higher than trust in other insurers. Furthermore, this study does not show a relationship between trust in health insurers and, either switching health insurers, or choosing a policy with restrictive conditions. Nevertheless, attention for increasing the trust in health insurers might still be important, as low trust may have negative consequences for other elements of the functioning of the healthcare system.

2.2 Introduction

In recent decades several countries such as the Netherlands, Germany, and Switzerland, have switched to a healthcare system based on managed competition (1–3). This is a system regulated by the government that stimulates competition between third party purchasers, which in most cases are health insurers, and healthcare providers (1, 2, 4, 5). Health insurers play an important role in such a healthcare system. They are intended to behave as the prudent buyers of care on behalf of their enrollees (1, 4, 5). The possibility that enrollees may switch to a competitor is supposed to be a key element in creating competition between health insurers. Since enrollees are able to switch health insurers every year, this should give health insurers the incentive to keep enrollees satisfied by offering the most attractive health insurance package. This may include favourable conditions and prices to attract new enrollees and retain affiliated ones (1, 4–6). During the purchasing negotiations with healthcare providers, according to the theory, health insurers, therefore, aim to improve the quality of care and reduce prices (5–7). By doing this they should improve their competitive position in relation to other health insurers. In addition to competition between health insurers, the system of managed competition should stimulate competition between healthcare providers. In some countries, health insurers are able to apply selective contracting of care providers (4, 6, 8). This means that health insurers only conclude contracts with providers with whom they have been able to reach reasonable agreements regarding costs, volume, and quality of care. As a result, healthcare providers might be concerned that they will lose market share if they are not contracted by health insurers. In order to make selective contracting effective, health insurers must be able to steer enrollees towards their contracted providers. Restrictive health insurance policies play an important role in this. If enrollees have such a health insurance policy, then they have to make a co-payment if the healthcare provider treating them does not have a contract with their insurer (6). This makes it financially less attractive for enrollees to visit these providers.

Trust in the health insurer

In countries with a healthcare system based on managed competition, citizens are expected to be critical consumers when choosing a health insurance policy. The choice of a health insurance policy may be related to trust in the health insurer. Trust can be defined as "the optimistic acceptance of a vulnerable situation in which the truster believes the trustee will care for the truster's interests" (9). Theory regarding consumer behaviour states that trust is required when there is uncertainty, and that the higher the initial perception of risk, the higher the trust required to facilitate transactions (8, 10). Trust is closely related to the truster's risk arising from the uncertainty about the trustee's motives, intentions, and future behaviour (8, 11). Furthermore, trust has been shown to reduce perceived risk (8, 10, 12).

This uncertainty exists with regard to the choice of a health insurance policy. For example, enrollees do not have experience with all care providers, so they cannot be certain about the quality of care provided by different providers. In addition, enrollees have no certainty about what care they will need in the future. The risk derived from this uncertainty may lead to the situation that enrollees need to trust their health insurer is acting in their best interests. Enrollees who trust their health insurer believe that they will make the right choices for them when it comes to purchasing care (13).

In this study, we investigate how enrollees' trust in health insurers is associated with their choice of a health insurance policy in the Netherlands. There are ten health insurance groups, nineteen health insurers, sixteen labels, and one authorised representative in the Netherlands in 2022 (14). Every year, from November 12, enrollees have the option of switching to another health insurer or health insurance policy for the coming year. The last day to decide to discontinue a health insurance policy is December 31. The last day to enroll in a new health insurance is January 31. The new health insurance then starts January 1, retroactively if enrollees enroll in a new health insurance policy in January. Different health insurers and labels offer around 60 different types of health insurance policies for the basic health insurance in 2022 (14). Although all insurers offer the same extensive basic insurance, of which the content is determined by the government, these policies usually differ in their terms of conditions. For instance, policies may differ in the degree of freedom of choice of healthcare providers as care from non-contracted providers is not always fully reimbursed.

Dutch enrollees have the least choice of fully reimbursed healthcare providers if they opt for health insurance policies with restrictive conditions (15). These, according to the definition of the Dutch Healthcare Authority (NZa), are a group of policies for which the reimbursement rate is below 75% for the use of non-contracted care. These health insurance policies are, in general, available at a lower premium compared to those without restrictive conditions (15). If enrollees have such a health insurance policy, their choice of healthcare providers is limited due to selective contracting if they do not want to face extra, out-of-pocket, payments. Trust in the health insurer is expected to play a role in the willingness of enrollees to allow their health insurer to limit their choice of providers. This has also been shown in previous research. A study by Bes et al. shows that when enrollees' trust in the health insurer is lower, they are less likely to accept selective contracting (8). However, the association between trust in the health insurer and enrollees' choices with regard to a health insurance policy has not been studied before.

This article, therefore, focuses on how enrollees' trust in health insurers is associated with the choices they make with regard to health insurance policies. We examine three research questions. What is the level of enrollees' trust in health insurers, and does it differ between their own and other health insurers? Secondly, what is the relationship between trust in health insurers and enrollees' switching behaviour? And, thirdly, what is the relationship between trust in health insurers and enrollees' choice of a restrictive health insurance policy? This research contributes to the literature on the role of trust in the health insurer in the functioning of the healthcare system.

Hypotheses

H1: Enrollees have more trust in their own health insurer than in others.

Enrollees who trust their health insurer believe that the health insurer will take care of their interests (13). When enrollees believe that another health insurer will take better care of their interests, it provides an incentive to switch to that other health insurer. When this line of reasoning is followed, enrollees are insured with the health insurer who they believe looks after their interests the most, that is to say, in which they have the most trust. We, therefore, expect that enrollees have more trust in their own health insurer than in others.

H2: Enrollees who have more trust in health insurers in general are more likely to switch health insurers.

Trust is closely related to risk, which is derived from uncertainty about the trustee's motives, intentions, and future behaviour (8, 11). Switching to another health insurer carries a certain risk. The lack of experience with another health insurer means there is uncertainty about whether that insurer will act, if necessary, according to their enrollees' best interests. This entails a certain risk that enrollees may be worse off with another health insurer than with their current one. Trust is shown to reduce the perceived risk (8, 10, 12). For this reason, we expect that enrollees who have more trust in health insurers experience less of a sense of risk in switching to another health insurer. At the same time, we expect that enrollees with low trust in health insurers in general have a higher perceived risk of switching health insurers. This is because the sense of risk of poorer conditions elsewhere after switching is not eliminated by trust.

H3: Enrollees with more trust in health insurers are more likely to opt for a policy with restrictive conditions.

Trust is expected to play a role in the willingness of enrollees to allow their health insurer to limit their choice of providers through selective contracting (8, 16–19). Most enrollees do not know what care they will need in the future and they do not have experience with all the care providers with whom their health insurer has concluded

a contract. The risk derived from this uncertainty leads to the situation that enrollees need to have trust that the health insurer will put the enrollees' interests first when purchasing care. As trust is shown to reduce the perceived risk (8, 10, 12), we expect that trust in the health insurer plays an important role in the acceptance of selective contracting. We expect that enrollees with more trust in health insurers are more likely to opt for a policy with restrictive conditions.

2.3 Materials and methods

Setting

Data were collected using the Dutch Health Care Consumer Panel, an access panel managed by Nivel (the Netherlands Institute for Health Services Research) (20). The panel collects opinions, knowledge, and experience of Dutch healthcare from citizens. The Consumer Panel is a so-called access panel. An access panel consists of a large number of people who have agreed to answer questions on a regular basis. In general, each individual panel member receives a questionnaire three to four times a year. At the time of the study in February 2022, the panel had approximately 11,500 members from the general Dutch population aged 18 and over. Their background characteristics, such as age, gender, level of education, and self-reported health status, were recorded at the start of their membership. Members can only join by invitation. Signing up on own initiative is not possible.

Questionnaire

The questionnaire was developed by the authors who have expertise in this research topic and in conducting research based on surveys. In addition to questions about other health insurance related topics, the questionnaire asked about respondents choices in health insurance, and questions about trust in health insurers. The draft version of the questionnaire was submitted to the programme committee of the Nivel Dutch Health Care Consumer Panel who had the opportunity to give feedback. This committee consists of representatives from various interest groups in the healthcare sector, including the Ministry of Health, Welfare and Sport (VWS), the Dutch Consumers Association, and 'Zorgverzekeraars Nederland', the umbrella organisation of health insurers. As a result of their feedback, some slight changes were made to the questionnaire in order to make questions more easily understood by respondents.

Data collection

In February 2022, the questionnaire was sent to a sample of 2,000 panel members, representative of the adult population in the Netherlands with regard to age and sex. The questionnaire could be filled in online or by post depending on the personal preference of the panel members. The panel members could fill in the questionnaire from the 10th of February until the 9th of March, 2022. Completing the questionnaire took respondents approximately 15 to 20 minutes. Two reminders were sent to respondents who had not yet completed the online questionnaire and one reminder to those who had not yet completed the paper questionnaire. In the end the questionnaire was completed by 1,125 panel members, a response rate of 56%.

Ethical considerations

Data were assessed and processed, pseudonymised, in accordance with the panel's privacy policy, which corresponds to the General Data Protection Regulation (GDPR). Under Dutch law, approval of a medical ethics committee is not required to conduct research with the panel (20). Informed consent is obtained from the participants to the panel as follows: an intended participant receives an invitation to participate in the panel, including information about the purpose, scope, method and use of the panel. Based on that information, a participant can give permission to participate in the panel. This is a written consent, that since 2020 can also be given digitally. Participants are asked to complete a questionnaire a few times a year. Prior to each survey the participants receive information on the subject and the length of the survey. Participation is always voluntary and completing the questionnaire is considered consent to participate. Members of the Dutch Health Care Consumer Panel can stop their membership at any time without giving reasons.

Measures

Trust in the health insurer

Trust in health insurers was measured by the Health Insurer Trust Scale (HITS), a validated scale to measure enrollees' trust developed by Zheng et al. (21). According to Zheng et al. this scale is based on a conceptual model that assumes that insurer trust has four components that reflect overlapping aspects of insurance organisations. These are, firstly, fidelity, caring for the subject's interests or welfare. Second is competence, that is making correct decisions and avoiding mistakes. Thirdly is honesty, telling the truth and avoiding intentional falsehoods. And, finally, confidentiality, that is the proper use of sensitive information (21). The scale consists of 11 items, in total. We used the validated Dutch translation of this scale of Hendriks et al. for this study (13).

Trust in health insurers in general

Firstly, we measured to what extent respondents agree with a statement about health insurers in general. This concerned only item 11 of the HITS, which, according to previous research, had the highest factor loadings and highest correlation with the scale and, therefore, can be asked individually (13). The item is: "All in all, you trust health insurers completely". The response categories for this item were: completely agree (score 5), agree (score 4), neutral (score 3), disagree (score 2), and completely disagree (score 1). A higher score indicates more trust.

Trust in one's own health insurer and in other health insurers

Then all the 11 items of the HITS were asked with respect to enrollees' own insurer (see Table 2.1). Subsequently, this set of 11 items was repeated measuring enrollees' trust in other health insurers. For every item of the scale the words 'your health insurer' have been replaced with 'other health insurers'. The response categories for every item are completely agree (score 5), agree (score 4), neutral (score 3), disagree (score 2), and completely disagree (score 1). The scoring is reversed in the case of a negative item (items 2, 4–7, and 9). Trust is measured by the sum of the 11 item scores ranging from 11 to 55. A higher score indicates more trust. A score has only been calculated once the respondents have given an answer to all the items on the scale. The scores of respondents who did not complete the whole scale (n = 27 for own insurer and n = 28 for other insurer) or not at all (n = 86 for own insurer and n = 115 for other insurers) were converted to missing scores after checking that they were not of a specific group of respondents. This meant that their responses were not included in the analyses. To measure the internal consistency of the three items in these measures, Cronbach's alpha was used. Cronbach's alpha of the items related to the policyholders' own health insurer was 0.86. Those related to other health insurers was 0.87. Both measures, therefore, had very good reliability (22).

Three questions specifically about enrollees' trust in the purchasing strategy of health insurers were asked in addition to the validated scale developed by Zheng et al (see Table 2.2.). These questions were derived from a study of Bes et al. (8). Firstly, the three questions were asked with respect to the enrollees' own insurer. Then they were repeated for the enrollees' trust in other health insurers. In the second case, the words "your health insurer" were replaced by "other health insurer" for all three items. The response categories for each item are the same as with the Health Insurance Trust Scale, being: completely agree (score 5), agree (score 4), neutral (score 3), disagree (score 2), and completely disagree (score 1). Trust in the purchasing strategy of health insurers is measured by the sum of the three item scores, ranging from 3 to 15. A higher score indicates more trust. A score is only calculated if respondents answered all three

questions. The scores of respondents who did not complete the whole the scale (n = 16 for own insurer and n = 14 for other insurer) or not at all (n = 91 for own insurer and n = 120 for other insurers) were converted to missing scores after checking that they were not of a specific group of respondents. This meant that their responses were not included in the analyses. Cronbach's alpha was used to measure the internal consistency of the three items in these measures. The figure for Cronbach's alpha of both the items related to the policyholders' own health insurer, and the items related to other health insurers, was 0.89. Both measures, therefore, had very good reliability (22).

Table 2.1. Health Insurer Trust Scale (HITS) (Zheng et al., 2002).

	Items	Response categories
1.	You think the people at your health insurer are completely honest.	completely agree (score 5); agree (score 4); neutral (score 3); disagree (score 2); completely disagree (score 1)
2.	Your health insurer cares more about saving money than about getting you the treatment you need.	completely agree (score 1); agree (score 2); neutral (score 3); disagree (score 4); completely disagree (score 5)
3.	As far as you know, the people at your health insurer are very good at what they do.	completely agree (score 5); agree (score 4); neutral (score 3); disagree (score 2); completely disagree (score 1)
4.	If someone at your health insurer made a serious mistake, you think they would try to hide it.	completely agree (score 1); agree (score 2); neutral (score 3); disagree (score 4); completely disagree (score 5)
5.	You feel like you have to double check everything your health insurer does.	completely agree (score 1); agree (score 2); neutral (score 3); disagree (score 4); completely disagree (score 5)
6.	You worry that private information your health insurer has about you could be used against you.	completely agree (score 1); agree (score 2); neutral (score 3); disagree (score 4); completely disagree (score 5)
7.	You worry there are a lot of loopholes in what your health insurer covers that you don't know about.	completely agree (score 1); agree (score 2); neutral (score 3); disagree (score 4); completely disagree (score 5)
8.	You believe your health insurer will pay for everything it is supposed to, even really expensive treatments.	completely agree (score 5); agree (score 4); neutral (score 3); disagree (score 2); completely disagree (score 1)
9.	If you got really sick, you are afraid your health insurer might try to stop covering you altogether.	completely agree (score 1); agree (score 2); neutral (score 3); disagree (score 4); completely disagree (score 5)
10.	If you have a question, you think your health insurer will give a straight answer.	completely agree (score 5); agree (score 4); neutral (score 3); disagree (score 2); completely disagree (score 1)
11.	All in all, you have complete trust in your health insurer.	completely agree (score 5); agree (score 4); neutral (score 3); disagree (score 2); completely disagree (score 1)

Table 2.2. Measure of enrollees' trust in health insurers' purchasing strategy.

	Items	Response categories
1.	I trust my health insurer/other health insurers to choose the best care providers.	completely agree (score 5); agree (score 4); neutral (score 3); disagree (score 2); completely disagree (score 1)
2.	I trust my health insurer/other health insurers not to compromise on quality in order to keep the price down.	completely agree (score 5); agree (score 4); neutral (score 3); disagree (score 2); completely disagree (score 1)
3.	I trust my health insurer/other health insurers to choose the best care for me at the best price.	completely agree (score 5); agree (score 4); neutral (score 3); disagree (score 2); completely disagree (score 1)

Enrollees' switching behaviour

We looked at whether enrollees switched health insurers as of 2022. The question that has been asked to measure enrollees' switching behaviour in that year was: 'Have you switched health insurers as of 2022?' The response categories on this question were: (1) 'No, but I have considered switching health insurers'; (2) 'No, nor have I considered switching health insurers'; (3) 'Yes, but only for basic insurance'; (4) 'Yes, but only for supplemental insurance'; and (5) 'Yes, both for basic and supplemental insurance'. Since the interest was whether they actually switched or not, regardless of basic or supplemental insurance, a dummy variable was created (1 = Yes, 0 = No).

Choosing a restrictive health insurance policy

With regard to the choice of a restrictive health insurance policy, we specifically focused on four health insurance policies in the Netherlands with restrictive conditions in 2022 which offer a choice of fewer hospitals. These four policies are: Pro Life Principe Polis Budget, Gewoon ZEKUR Polis, ZieZo Selectief and Zilveren Kruis Basis Budget. To measure this enrolment, we asked respondents: Do you have one of the following health insurance policies: Pro Life Principe Polis Budget, Gewoon ZEKUR Polis, ZieZo Selectief or Zilveren Kruis Basis Budget? The response categories on this question were: (1) 'No', (2) 'Yes', (3) 'I do not know'. Since the interest was not so much about which policy people have, but whether they have a policy with restrictive conditions, a dummy variable was created (1 = Yes, 0 = No). The answer option, 'I do not know', has been converted into a missing value (n = 116).

Background variables

The background variables that are known from the panel members and are included concern: age (continuous): gender (0 = male, 1 = female); educational level (1 = low: none, primary school or pre- vocational education, 2 = middle: secondary or vocational education, 3 = high: professional higher education or university); and self-reported

health status, which was measured using an item derived from the 36-Item Short Form Survey (SF-36) (1 = bad/fair, 2 = good, 3 = very good/excellent).

Data analysis

Descriptive statistics were computed to describe the characteristics of the study population and to analyse the level of enrollees' trust in health insurers in general. Because the survey respondents were not fully representative of all Dutch citizens aged 18 years and older in terms of the combination of age and gender, we applied weighting factors by age and gender to the descriptive statistics related to enrollees' trust in health insurers to correct for this. These weighting factors were calculated by dividing the amount of males and females per age group (18–49, 50–64, and 65+) in the study sample with the corresponding age groups of the Dutch general population as provided by Statistics Netherlands (CBS) (23). The weighting factors ranged from 0.80 to 1.67 in males, and 0.82 to 1.75 in females.

In order to test hypothesis 1, paired t-tests were conducted to examine the difference between trust in one's own insurer and trust in other insurers. We examined this for trust in the health insurer in general, as well as specifically in their purchasing strategy.

In order to test hypothesis 2, a multivariate logistic regression model was applied. Here the dependent variable was the answer to the question about whether enrollees have switched health insurers as of 2022 (yes/no). General trust in health insurers (Item 11 HITS) was applied as the independent variable of interest (model 1). Other background variables included in the model were gender, age, the level of education, and self-reported health status.

For testing hypothesis 3, three multivariate logistic regression models were applied. Here the dependent variable was the answer to the question whether enrollees have a health insurance policy with restrictive conditions (yes/no). The independent variables of interest were: trust in health insurers in general (Item 11 HITS) (model 2); trust in enrollees' own health insurer (HITS) (model 3), and; trust in the purchasing strategy of enrollees' own health insurer (model 4). Once again, the background variables included in all three models were gender, age, the level of education, and self-reported health status. A significance level of 5% ($p \leq 0.05$) was maintained for the analyses. All analyses were performed using STATA version 16.1.

Table 2.3. Descriptive statistics of the respondents.

	Number of respondents (n)	Percentage (%) or mean (SD)
Gender	**1125**	
Male	566	50%
Female	559	50%
Age	**1125**	57 (15.97)
18-39 years	227	20%
40-64 years	555	49%
65 years and older	343	30%
Education	**1098**	
Low (none, primary school or pre-vocational education)	109	10%
Middle (secondary or vocational education)	475	43%
High (professional higher education or university)	514	47%
Health (self-reported)	**989**	
Bad/fair	187	19%
Good	473	48%
Very good/excellent	329	33%
Trust in own health insurer (HITS)	1012	36.73 (6.05) (range 11 – 55)
Trust in other health insurers (HITS)	982	33.93 (5.17) (range 11 – 54)
Trust in one's own health insurer's purchasing strategy	1018	9.75 (2.46) (range 3 – 15)
Trust in other health insurers' purchasing strategy	991	9.04 (1.97) (range 3 – 15)
Have you switched health insurers as of 2022?	**1086**	
Yes	105	10%
No	981	90%
Do you have one of the following health insurance policies: Pro Life Principe Polis Budget, Gewoon ZEKUR Polis, ZieZo Selectief, or Zilveren Kruis Basis Budget?	**960**	
Yes	106	11%
No	854	89%

2.4 Results

Descriptive statistics

Half (50%) of the respondents were women. Respondents were, on average, 57 years old (Table 2.3.). Furthermore, 47% of the respondents were highly educated, and 19% rated their health as bad or fair. The average score for trust in their own health insurer, measured by the HITS, was 36.73, and the average trust score in other health insurers, 33.93. Corrected with weighting factors by age and gender, these scores are 36.62 and 33.99, respectively (not in table). The average total score on the 3-items measure, with regard to the health insurers' purchasing strategy, was 9.75 for one's own insurer, and 9.04 for other health insurers. When weighting factors by age and gender are applied, these scores are 9.64 and 9.02, respectively (not in table). Ten percent of the respondents indicated that they have switched health insurers as of 2022. Furthermore, 11% indicated that they have one of the four health insurance policies with restrictive conditions in the Netherlands which offer a choice of fewer hospitals.

What is the level of enrollees' trust in health insurers, and does it differ between their own and other health insurers?

The results show that 35% of the respondents indicated that they agree, or completely agree, with the statement that they trust health insurers completely (Table 2.4). Furthermore, 22% of the respondents disagree, or completely disagree, with the statement, while 44% of the respondents indicated they are neutral. Corrected with weighting factors by age and gender, these percentages are almost identical (Table 2.4).

Table 2.4. Descriptive statistics to examine enrollees' trust in health insurers in general.

	unweighted		weighted[a]	
	Obs	**%**	**Obs**	**%**
Trust in health insurers in general: All in all, you trust health insurers completely (Item 11 HITS)	**1040**		**1036.42**	
completely agree	51	5%	51.28	5%
agree	317	30%	309.13	30%
neutral	453	44%	442.20	43%
disagree	151	15%	159.65	15%
completely disagree	68	7%	74.16	7%

a. Results corrected with weighting factors by age and gender.

The mean score of the respondents in the paired t-test on the HITS with regard to trust in their own health insurer is 36.67 out of 55 (Table 2.5). This score is on average 2.75 higher than mean score on the HITS with regard to trust in other health insurers, which is 33.91 out of 55. This difference is statistically significant (p<0.001).

Table 2.5. Paired t-test to examine the difference between trust in one's own insurer and trust in other insurers.

	Obs	Mean	SE	95% Conf. Interval		Ha: mean(diff) !=0
HITS: Trust in one's own health insurer	962	36.67	0.19	36.29	37.05	
HITS: Trust in other health insurers	962	33.91	0.17	33.59	34.24	
Difference	962	2.75	0.13	2.50	3.01	p<0.001*

* Significant p-value

The mean score of the respondents in the paired t-test on the HITS with regard to trust in their own health insurer's purchasing strategy is 9.76 out of 15 (Table 2.6). This score is on average 0.71 higher than mean score on the HITS with regard to trust in other insurers' purchasing strategy, which is 9.05 out of 15. This difference is statistically significant (p<0.001). The results of both paired t-tests are in line with hypothesis 1.

Table 2.6. Paired t-test to examine the difference between trust in one's own insurer's purchasing strategy and trust in other insurers' purchasing strategy.

	Obs	Mean	SE	95% Conf. Interval		Ha: mean(diff) !=0
Trust in one's own health insurer's purchasing strategy	975	9.76	0.08	9.60	9.91	
Trust in other health insurers' purchasing strategy	975	9.05	0.06	8.93	9.17	
Difference	975	0.71	0.06	0.60	0.82	p<0.001*

* Significant p-value

What is the relationship between trust in health insurers and enrollees' switching behaviour?

Model 1 in Table 2.7 shows no significant relationship between general trust in health insurers and whether enrollees have switched health insurers as of 2022 (OR = 0.83, p = 0.12). This result is not in line with hypothesis 2. Hypothesis 2 is, therefore, not accepted. If we look at the background characteristics, older enrollees have switched health insurers as of 2022 slightly less often than younger enrollees (OR = 0.94, p<0.001).

Table 2.7. Multivariate logistic regression to examine the associations between switching behaviour and general trust in health insurers.

		Model 1 (*n=944)*	
		Y: Have you switched health insurers as of 2022? (1=Yes, 0=No)	
		Odds Ratio	**P-value**
General trust in health insurers (Item 11 HITS)[b]		0.83	0.12
Gender	Male	Reference	
	Female	1.25	0.33
Age[b]		0.94	<0.001*
Education[c]	Low	Reference	
	Middle	1.57	0.47
	High	2.04	0.25
Health (self-reported)	Bad/fair	Reference	
	Good	1.11	0.77
	Very good/excellent	0.89	0.74
Constant		0.04	<0.001*

* Significant p-value
b. Centred around the mean
c. Low = none, primary school or pre-vocational education. Middle = secondary or vocational education. High = professional higher education or university.

What is the relationship between trust in health insurers and enrollees' choice of a restrictive health insurance policy?

In models 2–4, presented in Table 2.8, no significant associations were found between trust in health insurers and enrollees' choice of a restrictive health insurance policy. The results show that enrollees' trust, both in general, and specifically in their health insurer and its purchasing strategy, is not associated with their choice for a policy with restrictive conditions. These results are not in line with hypothesis 3. Hypothesis 3 is therefore not accepted. If we look at the background characteristics, then especially men and people with a low level of education are more likely to have a health insurance policy with restrictive conditions.

Table 2.8. Multivariate logistic regression to examine the associations between having a health insurance policy with restrictive conditions and different types of trust in the health insurer.

Y: Do you have one of the following health insurance policies: Pro Life Principe Polis Budget, Gewoon ZEKUR Polis, ZieZo Selectief or Zilveren Kruis Basis Budget? (1=Yes, 0=No)											
Model 2 (*n=847*) Examining the association with general trust in health insurers				**Model 3 (*n=835*) Examining the association with trust in one's own health insurer**				**Model 4 (*n=837*) Examining the association with trust in one's own health insurer's purchasing strategy**			
		Odds Ratio	**P-value**			**Odds Ratio**	**P-value**			**Odds Ratio**	**P-value**
General trust in health insurers (item 11 HITS, range 1-5)[b]		1.06	0.66	**Trust in enrollees' health insurer (HITS, range 11-55)**[b]		0.99	0.69	**Trust in purchasing strategy of enrollees' health insurer (range 3-15)**[b]		0.98	0.73
Gender	Male	Ref.		**Gender**	Male	Ref.		**Gender**	Male	Ref.	
	Female	0.63	0.05*		Female	0.63	0.05*		Female	0.64	0.06
Age[b]		1.02	0.02*	**Age**[b]		1.02	<0.01*	**Age**[b]		1.02	<0.01*
Education[c]	Low	Ref.		**Education**[c]	Low	Ref.		**Education**[c]	Low	Ref.	
	Middle	0.45	0.02*		Middle	0.42	<0.01*		Middle	0.42	0.01*
	High	0.32	<0.01*		High	0.29	<0.001*		High	0.29	<0.001*
Health (self-reported)	Bad/fair	Ref.		**Health (self-reported)**	Bad/fair	Ref.		**Health (self-reported)**	Bad/fair	Ref.	
	Good	1.14	0.68		Good	1.07	0.84		Good	1.08	0.80
	Very good/ excellent	1.53	0.23		Very good/ excellent	1.43	0.31		Very good/ excellent	1.47	0.27
Constant		0.27	<0.01*	**Constant**		0.31	<0.01*	**Constant**			<0.01*

* Significant p-value
b. Centred around the mean
c. Low = none, primary school or pre-vocational education. Middle = secondary or vocational education. High = professional higher education or university.

2.5 Discussion

In this study, we investigated how enrollees' trust in health insurers is associated with their choice of a health insurance policy in the Netherlands. The results showed, first of all, that 35% of the respondents indicated that they agree, or completely agree, with the statement that they trust health insurers completely. In addition, we found that the level of enrollees' trust is slightly, but significantly, different between their own and other health insurers. Enrollees have more trust in their own health insurer than in other health insurers. Lastly, against our expectation, we found no significant associations between trust in health insurers and whether enrollees have switched health insurers or have chosen a policy with restrictive conditions.

The level of enrollees' trust found in health insurers (35%) is much lower than the known level of trust found in 2020 in general practitioners (89%), medical specialists (91%) or hospitals (83%) in the Netherlands (24). In addition, it also appears to be lower than that which literature suggests is trust in health insurers in Switzerland and Germany, which have similar healthcare systems to the Netherlands (25–28). Of the respondents, 22% indicated that they distrusted health insurers. Maarse et al. (2019) suggest several reasons why people may distrust health insurers. For example it might be due to a lack of health insurance literacy, the fact that health insurers are seen as for-profit organisations, the belief that third parties should not interfere in the doctor-patient relationship, and the media influencing public opinion about health insurers (25). However, literature on reasons why trust in health insurers is low is scarce. Further research on this topic may provide more insight into this.

Furthermore, we found that the level of enrollees' trust is slightly different between their own and other health insurers. This applies both to trust in general and specifically to trust in the purchasing strategy. In line with our hypothesis, enrollees are thus insured with the health insurer that they believe looks after their interests the most–that is in which they have the most trust. This may be because positive experiences, or the absence of negative experiences, resulted in enrollees feeling satisfied, as earlier research has shown that satisfaction with the health insurer was a strong predictor of trust in them (29). In addition, we know from literature that disputes with the insurer in the past are related to a lower trust in the health insurer (30).

In addition, this study showed that general trust in health insurers is not related to whether enrollees have switched health insurers as of 2022. This was not as expected. A possible explanation could be the fact that our data shows that young enrollees have switched slightly more often as of 2022. Also, literature shows that people who switch are relatively younger and healthier (31, 32). For these groups, trust might not play such an important role because they might not use much care anyway and therefore do

not expect to have to rely on their health insurer. Instead, the level of premium might be the most important reason to switch, as is confirmed in other literature (33–35).

The absence of a relationship between trust in health insurers and enrollees' switching behaviour could also be due to the type of trust we used to analyse this relationship. We could only examine the association between *general trust* in health insurers and whether respondents switched health insurers. We might have found different results if it was possible to examine the association between the level of trust in one's own health insurer and the choice to switch or not. Even though we have measured trust in one's own health insurer, it was not possible to use this measurement to examine its relationship with switching as of 2022. Our study was conducted in February, after the period in which switching health insurers can take place instead of before. Trust in one's own health insurer was, therefore, related to their new health insurer for respondents who had switched as of 2022. Future research could focus on whether the level of trust in enrollees' own health insurer, preferably compared with the level of trust in other health insurers, affects enrollees' switching behaviour.

Finally, this study showed that trust, both in general, and specifically in their health insurer and its purchasing strategy, is not related to the choice of a policy with restrictive conditions. This finding seems inconsistent with previous research by Bes et al. (2013), which found that trust in the health insurer was found to be an important condition for the acceptance of selective contracting among their enrollees (8). This possible contradiction could be caused by a lack of knowledge amongst enrollees about policies with restrictive conditions. Indeed, previous research has shown that the awareness of the restrictive conditions of this type of health insurance policies is low (36). According to our hypothesis, more trust in the health insurer is essential in order to choose such a policy, as trust is important for the acceptance of selective contracting. However, if enrollees do not know that selective contracting is part of such health insurance policies, the role of trust in choosing a health insurance policy may be negated. Further research could focus on the relationship between knowledge about policy conditions and the extent to which trust plays a role in choosing a health insurance policy.

For the functioning of the current healthcare system based on managed competition as intended, it is important that enough enrollees change health insurers each year, or consciously consider doing so, in order that insurers feel that there is a genuine threat of enrollees leaving them. Furthermore, it is important that health insurers are able to guide enrollees to preferred providers via selective contracting. This is because the more enrollees choose restrictive health insurance policies, the more selective contracting may become an effective key element in creating competition between healthcare providers. The results of this study show that low general trust in insurers does not necessarily

pose a threat to the functioning of the healthcare system in regard to switching insurers. General trust seems not to be related to switching behaviour and the choice of a policy with restrictive conditions. However, this does not mean that it is not important to maintain, or increase, the level of trust in health insurers because trust might also be important for other elements related to the functioning of the healthcare system based on managed competition. For example, according to Maarse and Jeurissen, low institutional trust in health insurers may cause inefficiency in the health insurance market, undermine the legitimacy of health insurance, and eventually weaken solidarity in health insurance (25, 37). In addition, literature suggests that with lack of trust in the health insurer, people do not choose policies with selective contracting and do not want to be channeled to preferred providers (16, 38). Furthermore, low trust is negatively related with enrollees 'willingness to receive healthcare advice from the health insurer (39). Both, policies with restrictive conditions and healthcare advice, are instruments that may give health insurers the ability to channel enrollees to preferred providers. The ability to channel enrollees to preferred providers is essential for health insurers to act as prudent purchasers of care (16, 40–42). An inability to use these instruments to channel enrollees could lead to a weakening of the bargaining position of health insurers towards healthcare providers. This may result in health insurers being restrained to steer on cost and/or quality of care. Further research may identify which other elements in the functioning of the healthcare system based on managed competition are affected by enrollees' trust in their health insurer. This could offer more insight into the degree of importance of increasing trust in the health insurer. Accordingly, future research should focus the possibilities for increasing trust in health insurers, as there is a lack of literature on this topic.

Strengths and limitations

A strength of the methodology applied in this study is that trust in health insurers was measured using a validated scale (HITS). The use of this scale contributes to the validity of this study. Another strength is the high number of respondents (n = 1,125), which increases the reliability of the study. Furthermore, by sending questionnaires both by mail and online meant that even people with low digital skills could participate in the survey. However, the respondents were not fully representative of the Dutch population aged 18 years and older. Our respondents are relatively older and more educated thus underrepresenting the younger and less educated (23). This could affect the level of trust we measured, as several studies have found a relationship between age or level of education with trust (9, 43–45). However, the constraint that respondents are relatively older is addressed by the fact that we corrected the descriptive statistics regarding enrollees' trust in health insurers with weighting factors by age and gender. Furthermore, our regression results are not expected to have been affected, as all subgroups are sufficiently large to perform association analyses.

Another limitation of this study is related to the relationship between trust in the health insurer and whether or not enrollees choose a restrictive health insurance policy. Whether respondents have a policy with restrictive conditions is self-indicated. We have to assume that respondents are aware of the name of their health insurance policy, and therefore filled in the question correctly. Furthermore, one health insurance policy provided by a really small insurance concern with less than 1% of the market share was not included in our question, but this should hardly have affected our measurement given its market share. A comparison of our data with the literature shows that 11% of our respondents reported having a policy with restrictive conditions, which is lower than the national rate of 21.8% reported in the literature (46). Nevertheless, the proportion of young people between aged 18 and 40 years old is underrepresented among our respondents (20% compared to 34% of the national Dutch adult population), while literature shows that most enrollees opting for such a policy are of this age group (47). Thus, a deviation between these percentages does not, by definition, mean that there is an insufficient measurement. Furthermore, by presenting information in advance of the question about the existence of different types of policies, and by adding the answer option 'I do not know', we expect that incorrect completion of this question was minimised.

2.6 Conclusions

This study showed that enrollees' trust in health insurance in the Netherlands is relatively low and that trust in their own insurer is slightly higher than trust in other insurers. Furthermore, this study did not find a relationship between trust in the health insurer and whether enrollees have switched health insurers. Lastly, no relationship was found between enrollees' trust in the health insurer and choosing a policy with restrictive conditions. This study contributes to the limited research on the field of trust in health insurers. The results of this study do not indicate that low trust in health insurers poses a threat to the functioning of the healthcare system with regard to switching behaviour and the choice of a policy with restrictive conditions. Nevertheless, it may still be important to give attention to increasing trust in health insurers, because trust can be necessary for other elements of the functioning of the healthcare system. For example, according to literature the level of trust seems to be related to the ability to channel enrollees to preferred providers, which is essential for the execution of the health insurers' role as prudent purchasers of care. Further research may identify which other elements in the functioning of the healthcare system based on managed competition are affected by enrollees' trust in their health insurer. In addition, as this study found that the level of enrollees' trust in health insurers is relatively low, future research could focus on possibilities for increasing trust in health insurers.

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3

Chapter 3

To what degree are health insurance enrollees in the Netherlands aware of the restrictive conditions attached to their policies?

van der Hulst F.J.P., Holst L., Brabers A.E.M., de Jong J.D.

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3.1 Abstract

Background

Within the Dutch healthcare system of managed competition, health insurers can contract healthcare providers selectively. Enrollees who choose a health insurance policy with restrictive conditions, will have to make a co-payment if they consult a non-contracted provider. This study aims to gain insight into enrollees' awareness of the conditions of such health insurance policies.

Methods

In August 2020, an online questionnaire was sent out via health insurers to their enrollees with restrictive health plans. In total 13,588 enrollees responded.

Results

One fifth of the respondents appeared to be totally unfamiliar with the policy conditions. Men, younger people, people with a low level of education, a lower income, a poorer health status and non-care users were found to be less familiar with the conditions. Of those who have been in the situation that they wanted to visit a healthcare provider whose care was not fully reimbursed, 62% went to that provider. Of those who had to pay extra because hospital care was not fully reimbursed, 62% did not know this in advance and 30% indicated that paying extra was a serious problem.

Conclusions

Not all enrollees who choose a policy with restrictive conditions are aware of the consequences of receiving care from non-contracted providers. Increased awareness among enrollees will benefit the functioning of the healthcare system based on managed competition.

3.2 Introduction

Over recent decades, many Western countries have added market incentives to their health systems in order to make resource allocation in healthcare more efficient, more innovative, and more responsive to consumers' preferences (1-3). Alain Enthoven's theory of managed competition was often used as the basis of these reforms for example in the Netherlands, Germany, and Switzerland (4, 5). In a health system based on managed competition, health insurers function as the prudent purchaser of care on behalf of their enrollees (4, 6, 7). Health insurers compete with each other for enrollees in the health insurance market. According to the theory, it is expected that this provides an incentive for the health insurer to negotiate each year with healthcare providers in order to offer an attractive price and quality for their health insurance policy (6, 7). Nevertheless, in practice, managed competition offers insurers ambiguous incentives to promote quality in contracting (8).

Health insurers have the option of contracting with healthcare providers selectively in a system based on managed competition. This means that they can choose with which care providers they conclude a contract, and with which they do not (6, 9). In the case of health insurance policies with selective contracting, the health insurer does not have to reimburse the costs of care in full if the healthcare provider is not contracted with it. In those cases, enrollees have to make a co-payment. This financial incentive allows health insurers to steer enrollees towards their preferred healthcare providers. As a result, health insurers may have a stronger bargaining position in negotiations with healthcare providers about their desired contractual conditions (6, 7). However, if enrollees are to avoid being faced with unexpected financial and other consequences, it is important they have a good understanding of the consequences for them if they opt for such a policy.

Enrollees' understanding of polices with selective contracting is linked to the concept of health insurance literacy (HIL). HIL can be defined as "the capacity to find and evaluate information about health plans, select the best plan given financial and health circumstances, and use the plan once enrolled" (10). While the body of literature about HIL is growing, most studies focus on the situation in the US. According to several survey-based studies, HIL is low in the general US population (11-14). Furthermore, studies show that lower HIL is more prevalent amongst persons with a lower socioeconomic status, older adults, and ethnic minorities (14-17). How the level of health insurance literacy in the US compares to that in other countries is unknown, because studies conducted in other countries are lacking. Also for the Dutch situation only a few studies have been published about health insurance literacy among enrollees. One study shows that more than half of the Dutch enrollees indicate

that it is difficult to compare health insurance policies and to find out which healthcare providers are reimbursed (18). Another study shows that the majority of enrollees in the Netherlands are confident in their own skills when it comes to choosing and using health insurance (19). A third study concludes that a section of the Dutch citizens do not have the appropriate skills to decide which insurance policy best fits their needs and preferences (20). However, specifically with regard to health insurance policies with selective contracting, we currently do not know whether Dutch enrollees have a good understanding of these policies. A study from the US showed that fewer than a third of the enrollees were fully aware of the restrictive conditions of their health plan (21). Nevertheless, other US studies showed that enrollees are actually aware of the consequences of having a restrictive health insurance policy (22-24).

Selective contracting in the Netherlands

In 2006 the Health Insurance Act (HIA) was introduced in the Netherlands. In the Dutch system all health insurers in the Netherlands are private, and there is a legal obligation for all citizens aged 18 and above to take out a basic health insurance (4, 25, 26). In turn, all health insurers have to offer a standard care package for basic health insurance. As a means of supplementing their basic insurance, enrollees are also free to choose an additional health plan, which may differ in its coverage between the health insurers. While there is a legal requirement to offer the same basic cover in every basic health insurance policy, the premium and conditions may differ, because health insurers are free to contract selectively with care providers (4, 25).

There are three types of basic health insurance policies offered by Dutch insurers. These are ‘restitution’, ‘in kind’, and a combination of these two (6, 25). When people choose a restitution policy, this means care from all providers, contracted or not, will be reimbursed unless the prices are excessively higher than the statutory or market rate (27). The statutory rate is the rate set by the government (27). If no statutory rate has been set for a treatment, the health insurer will reimburse up to a maximum of the market rate (27). This is the rate that is according to the health insurer appropriate in the Dutch market for a particular treatment. For the other two policy types, only contracted healthcare providers are fully reimbursed. With an ‘in kind’ policy, costs of non-contracted care are compensated up to a maximum limit. With a combination of ‘restitution’ and ‘in kind’, costs of non-contracted care are reimbursed up to a ‘standard rate’ as determined by the health insurer on the basis of rate lists available to them (28, 29).

Health insurance policies with restrictive conditions

This article focuses on 'in kind' health insurance policies with restrictive conditions, also referred to with the Dutch term 'budgetpolis'. According to the definition of the Dutch Healthcare Authority (NZa) - an autonomous administrative body under the supervision of the Ministry of Health, Welfare and Sport (VWS) - this is a group of policies for which the reimbursement rate is below 75% for the use of non-contracted care, or which offer less choice of hospitals (30). These health insurance policies are offered at a lower premium compared to health insurance policies without restrictive conditions (30).

At the time of this study, 2.3 million Dutch citizens (14.1 percent of the population) were enrolled in one of the ten health insurance policies with restrictive conditions (30, 31). Four policies had a limited hospital choice, which means that when an enrollee visits a non-contracted hospital, the health insurer reimburses a maximum percentage of the average rate they agreed with other hospitals (30, 31). In one case this was 80%, in the other cases 75%. This article will focus, in particular, on these health insurance policies.

The first policy with restrictive conditions was introduced in the Netherlands in 2008 (32). Since then, policies with restrictive conditions have been offered by a growing number of health insurers. After 2014, when the popularity of these types of policies among enrollees had grown, there were reports of patients facing problems with such a 'budgetpolis'. For example, patients were being faced with having to pay part of a large hospital bill themselves, without being aware of this in advance (33-35). Various interest groups recognised these situations, such as the Dutch Hospital Association (NVZ), the umbrella organisation of Dutch health insurers 'Zorgverzekeraars Nederland', and the Netherlands Patients Federation (34, 35). As a result, questions were raised in the Dutch parliament about whether people were aware of choosing a health insurance policy with restrictive conditions (36-39).

It appears that enrollees in the Netherlands are not always aware of what health insurance policy they have and what selective contracting entails. This could lead to unexpected, and sometimes problematic, medical co-payments (40, 41). However, scientific literature about enrollees' awareness in the Netherlands of the restrictive conditions of some health insurance policies is lacking.

In recent years, work has been undertaken in the Netherlands to ensure enrollees are more informed about policies with restrictive conditions, and therefore better supported in their choice of health insurance. And yet, it remains uncertain whether people consciously choose a health insurance policy with restrictive conditions. The objective of this study is, therefore, to gain insight into enrollees' awareness of the

restrictive conditions of their health insurance policies. We aim to provide insight into whether enrollees may need to be better informed and supported in their choice of health insurance. The results will be relevant for countries where selective contracting is practised and so enable health insurers to adjust reimbursements accordingly (42-44).

We aim to gain insight into the following three research questions: To what extent do enrollees with restrictive conditions in their health insurance policy know about these conditions; to what extent do the restrictive conditions of a policy affect enrollees' choice of a healthcare provider; and, to what extent do enrollees who have a policy with restrictive conditions experience unexpected costs from additional payments?

3.3 Materials and methods

Participants

In 2020, there were two insurers in the Netherlands who together offered four policies with limited hospital choice (31). Both insurers agreed to participate in this study after having been approached by the Ministry of Health, Welfare and Sport. For one of the insurers, it was not possible within the time frame of the study to approach the enrollees of one specific policy with limited hospital choice. Therefore, online questionnaires were sent to enrollees from three of the four policies offering a limited hospital choice. The two health insurers themselves contacted their enrollees by e-mail to participate in the questionnaire, thus complying with the General Data Protection Regulation (GDPR). For one insurer, this concerned all enrollees of two policies with limited hospital choice (approximately 380,000 enrollees), for the other insurer this was a sample of 16,000 enrollees of one policy with limited hospital choice.

Online questionnaire

The online questionnaire consisted of 53 questions, including several focusing on the socio-demographic variables of the respondents, such as gender, age, and level of education. Completing the questionnaire took approximately 15 to 20 minutes. The questionnaire could be completed on a computer, laptop, tablet, or smartphone.

The questionnaire has been developed by the authors. The Ministry of Health, Welfare and Sport provided feedback on a draft version of the questionnaire. The two insurers who participated in the study also commented upon the draft questionnaire. The questionnaire was then submitted to the programme committee of the Nivel Dutch Health Care Consumer Panel. This committee consists of representatives of different parties in the healthcare sector, including the Dutch Consumers Association, and

'Zorgverzekeraars Nederland', the umbrella organisation of health insurers. Comments, mostly related to use of terminology, were used to improve the questionnaire.

Data collection and response

The enrollees could fill in the questionnaire from the 3rd until the 18th of August 2020. A reminder was sent by the insurers on the 10th August. The questionnaire was completed by 13,588 enrollees (response rate 3.4%).

Measures

Table 3.1 provides an overview of the fifteen questions that were used to investigate the three main research questions.

To what extent do enrollees with restrictive conditions in their health insurance policy know about these conditions?

To answer the first research question about the extent of enrollees' knowledge about their policy with restrictive conditions, five questions on two different themes have been asked.

Knowledge when choosing a policy

Two questions were asked to measure whether enrollees consciously choose a health insurance policy with restrictive conditions. Firstly, respondents were asked to indicate whether they did consider which healthcare providers are fully reimbursed by the health insurance policy they chose. If this was the case then what they specifically have considered (see Table 3.1, Q1). Secondly, we asked whether respondents have checked whether healthcare providers of a particular type of care are fully reimbursed (Table 3.1, Q2).

Knowledge of the policy taken out

Three questions were asked to measure to what extent enrollees are familiar with the restrictive conditions of their policy, once they have taken out a health insurance policy. First of all, it was asked whether the respondents are familiar with the conditions of their basic insurance (Table 3.1, Q3). In addition, respondents were asked if they have any idea how many healthcare providers there are whose care is fully reimbursed in their basic insurance (Table 3.1, Q4). Finally, the respondents were asked for the maximum rate of reimbursement for non-contracted care (Table 3.1, Q5).

To what extent do the restrictive conditions of a policy affect enrollees' choice of a healthcare provider?

To get insight in the second research question, respondents were asked if they had ever been in a situation in the past 12 months where they wanted to go to a care provider who was not fully reimbursed (Table 3.1, Q6). The respondents who had were then asked about what type of care this was for (Table 3.1, Q7). These respondents were then asked whether or not they still went to this care provider even though their care was not fully reimbursed (Table 3.1, Q8). If not, they were asked whether they went to another care provider who was fully reimbursed or, indeed, did not go to a healthcare provider at all (Table 3.1, Q9).

To what extent do enrollees who have a policy with restrictive conditions experience unexpected costs from additional payments?

The extent to which enrollees experience unexpected costs from additional payments was measured by asking respondents a series of six consecutive questions. This series began with asking the respondents if they had been in hospital for care in the past 12 months (Table 3.1, Q10). If so, they were asked whether they had to pay extra (Table 3.1, Q11). If that was the case, respondents were asked whether this was because hospital care was not fully reimbursed by their health insurer (Table 3.1, Q12). The respondents were then asked whether they knew in advance that they had to pay extra for this hospital care and if so, whether the amount of the additional payment was made clear in advance (Table 3.1, Q13 and Q14). Finally, respondents were asked whether the additional payment was a problem (Table 3.1, Q15).

Socio-demographics

The questionnaire also included questions to measure respondents' socio-demographic characteristics, such as age, the level of education, income, self-perceived health status, and use of care. These details can be found in Table 3.2.

Analyses

It is mainly descriptive statistics which have been performed. Each figure or table in the results section lists the number of respondents (n) who completed the question. The number of respondents may differ between the figures and tables, because not all respondents were always required to complete a question, and completing every question in the questionnaire was not mandatory. When considered relevant, we analysed results between groups, based on socio-demographics, by performing logistic regression analyses. The independent variables included in the logistic regression analyses are gender, age, the level of education, net monthly income, self-perceived health status, and use of care. These are all categorical variables that

have been recoded to dummy variables in the analyses. Besides socio-demographic variables, we also, occasionally, used a question from the questionnaire (Table 3.1, Q3) in order to distinguish groups and analyse differences in the results between the groups. A significance level of 5% ($p \leq 0.05$) was maintained for these analyses. All analyses were performed using STATA version 15.0.

Table 3.1. Questions used to examine the three main research questions.

Main research question	Questions in the questionnaire	Answer categories
To what extent do enrollees with restrictive conditions in their health insurance policy know about these conditions?	Q1: When choosing your health insurance policy, did you consider which healthcare providers are fully reimbursed under your current basic insurance?	No (score 1); Yes, I have taken into account the number of healthcare providers whose care is fully reimbursed (score 2); Yes, I have considered why certain healthcare providers are / are not fully reimbursed (score 3); Yes, I have taken into account the distance from my home to the healthcare providers who are fully reimbursed (score 4); Yes, I have checked whether the healthcare providers I am already visiting are fully reimbursed (score 5); Yes, I have checked whether the healthcare providers I would like to go to if I need certain care are fully reimbursed (score 6); Yes, I have taken into account how much I have to pay if I go to healthcare providers who are not fully reimbursed (score 7); Yes, I have taken into account something else (score 8).
	Q2: Have you checked whether the providers of a certain type of care are fully reimbursed?	No (score 1); Yes, especially whether healthcare providers are fully reimbursed for hospital care (score 2); Yes, especially ... for district nursing (score 3); Yes, especially … for mental healthcare (score 4); Yes, especially … for medical aids (score 5), Yes, especially … for pharmaceutical care (score 6); Yes, for another type of care (score 7).
	Q3: Are you familiar with the conditions of your basic insurance?	No, I am not familiar with them (score 1); Yes, but I do not know what it says (score 2); Yes, and I know roughly what it says (score 3); Yes, and I know exactly what it says (score 4).
	Q4: For 1) hospital care, 2) district nursing, 3) mental healthcare, 4) medical aids, 5) pharmaceutical care, do you have any idea how many care providers are fully reimbursed in the basic insurance that you have taken out this year (2020)?	Yes, I know exactly (score 1); Yes, I know approximately (score 2); No, I do not know, but I can investigate that (score 3); No, I do not know and I can't easily investigate it.
	Q5: What is the maximum reimbursement percentage in your current basic insurance for care that is not fully reimbursed?	Less than 70% (score 1); More than 70% (score 2); I do not know (score 3).

Main research question	Questions in the questionnaire	Answer categories
To what extent do the restrictive conditions of a policy affect enrollees' choice of a healthcare provider?	Q6: In the past 12 months, have you ever been in the situation that you wanted to go to a particular healthcare provider whose care was not fully reimbursed?	No (score 1); Yes, one time (score 2), Yes, several times (score 3).
	[If Q6 = score 2 or 3] Q7: What type of care was this for?	Hospital care (score 1); district nursing (score 2); mental healthcare (score 3); medical aids (score 4); pharmaceutical care (score 5); a different kind of care (score 6).
	[If Q6 = score 2 or 3] Q8: Did you still go to this healthcare provider who was not fully reimbursed at that time?	Yes, I went to this healthcare provider after all (score 1); No, I did not go to this care provider at the time (score 2).
	[If Q8 = score 2] Q9: Did you go to another healthcare provider who was fully reimbursed?	Yes, I went to a healthcare provider who was fully reimbursed (score 1); No, in the end I did not go to a healthcare provider (score 2).
To what extent do enrollees who have a policy with restrictive conditions experience unexpected costs from additional payments?	Q10: Have you visited the hospital for care in the past 12 months?	No (score 1); Yes (score 2).
	[If Q10 = score 2] Q11: In the past 12 months, have you had to pay, or pay extra, for care that you received in the hospital?	No (score 1); Yes (score 2); I do not know (score 3).
	[If Q11 = score 2] Q12: Did you have to pay extra because this hospital care was not fully reimbursed by your health insurer?	No (score 1); Yes (score 2); I do not know (score 3).
	[If Q12 = score 2] Q13: Did you know in advance that you had to pay – or pay extra – for this hospital care?	No (score 1); Yes (score 2).
	[If Q13 = score 2] Q14: Was it clear in advance how much you would have to pay – or pay extra – for this hospital care?	No (score 1); Yes (score 2).
	[If Q12 = score 2] Q15: Has paying extra for this hospital care been a problem for you?	A serious problem (score 1); A minor problem (score 2); No problem (score 3).

3.4 Results

Descriptive analyses

A total of 13,588 respondents completed the questionnaire. The male/female ratio in the total group of respondents was 52/48 (see Table 3.2). The average age of the respondents was 47 years. 45% of the respondents were highly educated, and one in five had a net monthly household income of €3,500 or more. Two out of five respondents rate their health as very good or excellent and 13% indicated that they did not use any care.

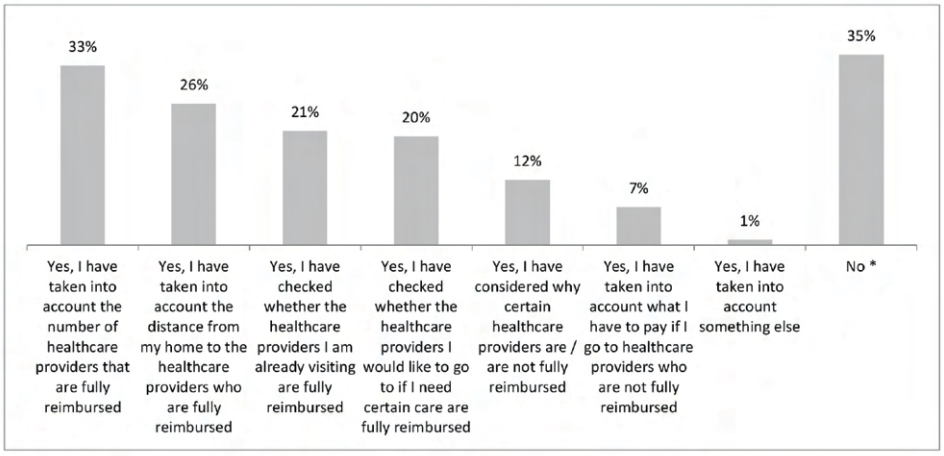
Table 3.2. Descriptive statistics of the respondents.

	Number of respondents (n)	Percentage (%) or mean (SD)
Sex	**13,588**	
Male	7,058	52%
Female	6,490	48%
Non-binary	40	0%
Age	**13,588**	47 (0.15)
18-39 years	5,411	40%
40-64 years	5,864	43%
65 years and older	2,313	17%
Education	**13,588**	
Low (none, primary school or pre-vocational education)	994	7%
Middle (secondary or vocational education)	3,157	23%
High (professional higher education or university)	6,101	45%
Other	160	1%
Unknown	3,176	23%
Net monthly income of the household	**13,588**	
< €1500	2,307	17%
€1500 - €2500	2,915	21%
€2500 - €3500	2,142	16%
> €3500	2,578	19%
Unknown	3,646	27%
Health (self-reported)	**13,588**	
Bad/fair	1,064	8%
Good	4,249	31%
Very good/excellent	5,371	40%
Unknown	2,904	21%
Care use (self-reported)	**13,588**	
No	1,796	13%
Very little/little	7,523	55%
Much/very much	1,337	10%
Unknown	2,932	22%

To what extent do enrollees with restrictive conditions in their health insurance policy know about these conditions?

Knowledge when choosing a policy

About one in three respondents (35%) indicated that they had not considered which care providers were fully reimbursed when choosing their health insurance policy (see Figure 3.1). Logistic regression analysis showed that men, people aged 40 to 64 years, people with a lower level of education, people with lower income, people with a bad/fair health status and people who use less care, more often had not considered this than women, people aged 18 to 39 years or 65 years and older, people with a higher level of education, people with a higher income, people with a (very) good or excellent health status, and people who use more care (Table 3.A3 in the Appendix). If respondents did pay attention to this, they considered mainly the number of healthcare providers that are fully reimbursed (33%) and the distance from their home to these healthcare providers (26%). Furthermore, about half of the respondents (48%) did not check whether the care providers of a certain type of care are fully reimbursed (not in figure). When they did, in most cases they checked, in particular, whether healthcare providers are fully reimbursed for hospital care (42%). Furthermore, 14% of the respondents checked whether providers of pharmaceutical care (pharmacies) are fully reimbursed; 6% checked providers of medical aids; 5% checked providers of mental healthcare; and 2% checked providers of district nursing.



* The answer option 'No' could not be combined with other answer options.

Figure 3.1. When choosing your health insurance policy, did you consider which healthcare providers are fully reimbursed under your current basic insurance? (multiple answers possible) (n=12,568).

Knowledge of the policy taken out

Of all respondents, 5% indicated that they know exactly what the conditions of their basic insurance are, and more than half (52%) indicated that they know roughly. A quarter (25%) of the respondents indicated that they were familiar with the conditions while not knowing the content, and one fifth (19%) of the respondents appeared to be totally unfamiliar with the conditions of their basic insurance. Logistic regression analysis showed that women, older people, people with a high level of education, people with a higher income, people with a better health status, and people who use more care, are more familiar with the conditions of their basic insurance than men, younger people, people with a low level of education, people with a lower income, people with a poorer health status, and people who use less care (Table 3.A4 in the Appendix).

A large section of the respondents did not know how many healthcare providers there are whose care is fully reimbursed in their basic insurance. This differs between types of care. The respondents are best informed about the amount of healthcare providers contracted in the field of hospital care and pharmaceutical care: 44% respectively 43% indicated to know this exactly or approximately (not in figure). The respondents indicated to a lesser extent to know this for providers of medical aids (20%), mental healthcare (16%) and district nursing (10%).

Although the majority of the respondents indicated that they do not know which care providers were fully reimbursed, the largest group of them indicated that they could investigate this. The other group, about a sixth of all respondents (12% for hospital care to 19% for district nursing), indicated that they do not know which care providers are reimbursed and that it is not easy for them to investigate this.

More than half of the respondents (59%) indicated that they were not aware of the maximum reimbursement percentage, within their current basic insurance, for care that is not fully reimbursed (not in figure). Table 3.A5 in the Appendix shows that people with a higher income, people who use more care, and people who indicated that they know exactly what the conditions for reimbursement of their basic insurance are, indicated this to a lesser extent than people with a lower income, people who use less care, and people who did not indicate that they know exactly what the conditions for reimbursement of their basic insurance are.

To what extent do the conditions of a policy with restrictive conditions affect enrollees' choice of a healthcare provider?

Approximately a quarter (23%) of the respondents wanted to go to a healthcare provider who was not contracted by their health insurer in the 12 months before the questionnaire. Of this group of respondents (n=2,537), 38% indicated that this was for hospital care, 24% for pharmaceutical care, 14% for mental healthcare, 13% for medical aids, and 2% for district nursing (not in figure).

Of the group who have been in the situation that the healthcare provider they wanted to visit was not fully reimbursed, 62% still went to that non-contracted healthcare provider. Logistic regression analysis showed that people with a high level of education, people with a better health status, and people who use care, more often indicated this than people with a low level of education, people with a poorer health status, and people who do not use care (Table 3.A6 in the Appendix). However, 12% went to another care provider who was fully reimbursed and 26% refrained from healthcare altogether (not in figure). Calculated on the total number of respondents (the 10,852 respondents who filled out Q6, see Table 3.1), the percentage who refrained from healthcare is 6%. People with a low level of education and people who use less care more often indicated that they refrained from care than people with a high level of education and people who use more care (Table 3.A7 in the Appendix).

To what extent do enrollees with a policy including restrictive conditions experience the unexpected costs of additional payments?

A total of 4,404 respondents (41%) indicated that they had been to a hospital for care in the 12 months before the questionnaire (see Figure 3.2). Of this group, 48% indicated that they had to pay extra for the care they received in the hospital. According to these 2,090 respondents, this was because the hospital care was not fully reimbursed by the insurer in two out of five cases (39%). In the other cases (61%), the costs were, according to the respondents, related to something other than non-contracted care, or the respondents did not know the reason for the costs. The majority (62%) of the respondents who said they had to pay extra because hospital care was not fully reimbursed, did not know this in advance. Calculated on the total number of respondents (10,805 respondents who filled out Q10, see Table 3.1), this means that 5% found themselves in this situation. For the group of respondents who did know that they had to pay extra for their hospital care (n=298), the level of the additional payment was unclear in three out of five cases (62%). Table 3.A8 in the Appendix shows that income and health status are significantly associated with the knowledge of having to pay extra for hospital care. People with a higher income and people with a better health

status more often reported that they knew that they had to pay extra for hospital care than people with a lower income and people with a poorer health status.

For 30% of the respondents who had to pay extra because hospital care was not fully reimbursed (240 out of 803 respondents), paying extra was a serious problem. This concerns 2% of the total number of respondents (10,805 respondents who filled out Q10, see Table 3.1). Logistic regression analysis showed that people with a lower income and people with a poorer health status more often indicated that paying extra was a serious problem than people with a higher income and people with a better health status (Table 3.A9 in the Appendix). The group for whom paying extra was a serious problem, consists largely of enrollees with a low net monthly household income (net monthly income €<2500). In most cases these also indicated that they did not know that they had to pay extra.

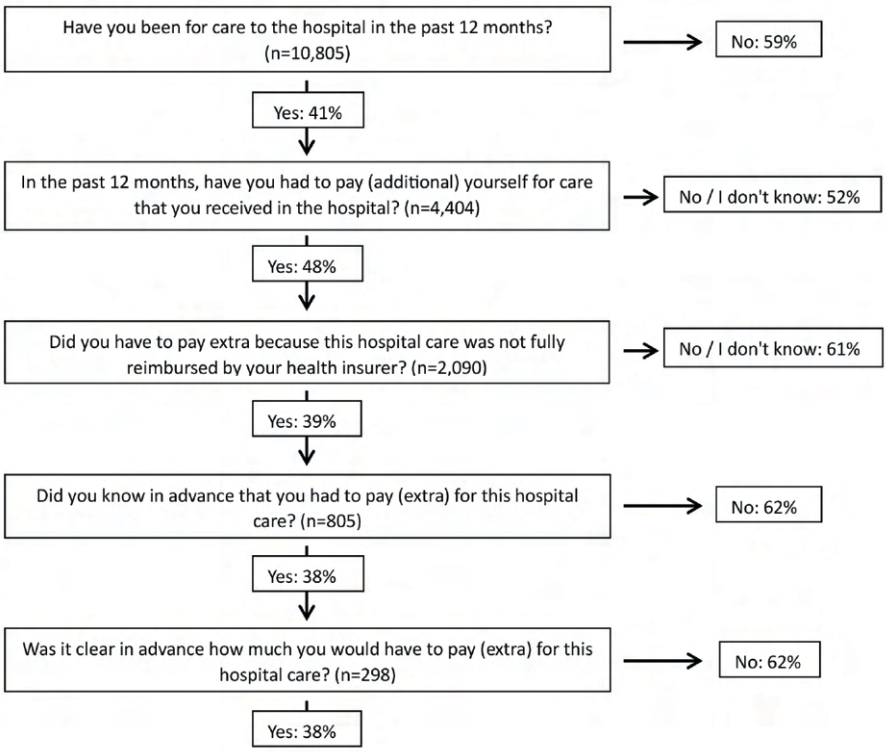


Figure 3.2. An overview of response to successive questions about the respondents' experiences with hospital care.

3.5 Discussion

The aim of this study was to gain insight into enrollees' awareness of the restrictive conditions of their health insurance policies. Our results indicate, firstly, that not all enrollees who have a policy with restrictive conditions are well aware of the consequences of receiving care from a non-contracted healthcare provider. More than a third of the respondents did not consider which providers are fully reimbursed when choosing their health insurance policy. Once enrolled, one fifth of them appear to be totally unfamiliar with the restrictive conditions of their policy. Secondly, our results show that being enrolled in a policy with restrictive conditions does not always seem to affect enrollees' choice of a provider. In the 12 months before the questionnaire, three out of five respondents who wanted to go to a particular provider who was not fully reimbursed, still went to that non-contracted provider. Thirdly, our results show that there are a considerable number of enrollees with a policy which includes restrictive conditions who have faced unexpected costs in the 12 months before the questionnaire. The majority (62%) of the respondents who said they had to pay extra in the 12 months before the questionnaire, because hospital care was not fully reimbursed, did not know this in advance. For 30% of these respondents this was a serious problem. This is 2% of the total number of respondents.

How these Dutch results compare to the situation in other countries with similar health systems is unknown. Apart from a growing body of literature from the US, studies about health insurance literacy in other countries are lacking. In addition, this is the first study in which the study population specifically consists of enrollees with a restrictive health plan. However, a comparison with a survey based study from the US among a more varied population of enrollees indicates that the proportion of respondents (35%) that do not consider which providers are fully reimbursed when choosing their health insurance policy is relatively high (13). The study from the US found that only 21% of their respondents was only somewhat or not at all likely to check which hospitals and physician are covered in each plan when comparing plans (13). In addition, the percentage that did not know in advance that they had to pay extra (62%) seems to be high, as in the US study only 42% of the respondents indicated that they were not at all or only somewhat likely to check what their plan will and will not cover before getting health services (13). Although study populations differ, this gives an indication that HIL among Dutch enrollees with a restrictive policy is relatively low.

Desirability of health insurance policies with restrictive conditions for the healthcare system

Taking into account managed competition in the Dutch healthcare system, offering health insurance policies with restrictive conditions is desirable for two reasons. Firstly, it contributes to a wider range of health insurance policies. This results in more freedom of choice for enrollees, who can opt for a policy with a lower premium that suits their preferences. Ensuring enrollees freedom of choice is one of the conditions to enable the health insurance market to function properly (45, 46). Secondly, health insurance policies with restrictive conditions offer health insurers the option of selective contracting, which in theory makes channelling enrollees to contracted care providers possible. This is a very important instrument for health insurers in a healthcare system based on managed competition. It can lead to efficient healthcare procurement, as it provides them with a stronger position during the negotiations with providers on the price and quality of care (9, 47, 48).

Nevertheless, the findings of this study raise questions about the actual desirability in practice of health insurance policies which include restrictive conditions. Insurance policies are meant to ensure that people have access to the healthcare they need, without being exposed to financial hardship. However, our results suggest that this goal of health insurance is not achieved for all enrollees. There appears to be a group of enrollees who face serious problems as the result of having to pay extra for hospital care. Many of them did not know that they had to pay extra or did not know how much they would have to pay.

Furthermore, our study shows that, despite what the theory suggests, selective contracting seems to fall short in practice as an instrument for channelling enrollees to contracted care providers. Of the respondents who wanted to go to a provider who was not contracted by their health insurer, only 12 percent changed their mind and opted for a contracted provider. Previous research into choices in pharmaceutical care showed that financial incentives in restrictive health plans are effective in channelling patients to contracted pharmacies in the Netherlands (9, 49, 50). Then again, other literature shows that patients prefer not to be guided when choosing a general practitioner, dentist, or physiotherapist (51). Further research could provide more clarity about the effectiveness of co-payments in channelling enrollees to contracted providers.

Improving knowledge and the ability to channel enrollees

The results of our study show that there is room to improve the knowledge about the consequences of visiting a non-contracted provider, in particular for people for whom paying extra is a greater problem. Mainly people with a low level of education, people with a lower income and people with a poorer health status seem to have less

knowledge about the restrictive conditions of their policy. These groups also appear in several other studies as groups with lower levels of health insurance literacy (13, 16). In addition, people with a lower income and people with a poorer health condition are also the groups who indicated that paying extra was a greater problem.

When it comes to gaining knowledge about the restrictive conditions, our study found that knowledge is partly acquired naturally by an 'experience effect': (frequent) care users are better informed than non-users about the restrictive conditions of their health insurance policy. At the same time, as mentioned before, it appears that people in poor health are generally less well informed about the restrictive conditions. It therefore seems that the 'experience effect' may counteract the 'health effect'. Thus, people in poor health on average make less informed decisions, but may become aware of the restrictive conditions of their health insurance policy when using care. Results of additional analyses (not shown in table) are in line with this assumption by showing that people in poor health who use care, are in general more aware of the restrictive conditions than people in poor health who do not use care.

Although knowledge can be gained through experience, it is important enrollees are informed about the restrictive conditions *before they actually need care*, so that they are not taken by surprise. Appropriate information provision could play an important role in improving both the ability to channel enrollees and in preventing enrollees from facing unexpected costs. If enrollees have a good understanding about the conditions of their policy, they may make different choices of providers in order to avoid having to pay extra. For the functioning of a healthcare system with managed competition, being able to influence the choice of enrollees for a provider is indispensable (9). However, it might be that information itself is not the problem, but the way the information is framed by the insurer or processed by certain enrollees. We generally know that people find it difficult to find information on the website of a health insurer (52). Further research could focus on how enrollees are actually informed by their health insurers, and whether or how they use this information.

Since it is questionable whether better information provision proves to be the solution to strengthen selective contracting as an instrument for channeling enrollees to contracted care providers, is it also relevant to conduct research into alternative instruments. Besides selective contracting, providing healthcare advise can be an instrument to channel enrollees (53-55). In the Netherlands we see that providing healthcare advice to enrollees also plays an increasingly important role in channeling them. However, from previous research we know that insurers may lack (institutional) trust, which may be a limitation of this instrument (56-59). Future research could focus on this topic.

Strenghts and limitations

A strength of this study is the way in which the respondents were recruited. This took place with help from the health insurers, who sent the invitation to participate to their enrollees. This means that a large part of the Dutch population of enrollees with a policy with restrictive conditions has been invited to participate. However, a limititation is that the response to the online questionnaire was very low (3.4%). Other studies, in which recruitment takes place in a similar manner via health insurers, show a response of around 30% (60-62). It is uncertain why the response was so low. The month in which enrollees were invited to participate (August) may have affected the response, as usually many people are on holiday at this time of the year.

The consequences of the low response rate with regard to the external validity of the results of this study are unknown. In addition, checking for representativeness of the sample is limited by the lack of descriptive data on the characteristics of the Dutch population opting for restrictive policies. The information that is available about this population shows that age and income within our group of respondents seems higher (63). However, the group of respondents shows similarities concerning the educational level and health of the entire Dutch population of enrollees with a policy with restrictive conditions (63).

Another limitation is that it is uncertain how people have interpreted the concept of 'co-payments' in the questionnaire. It may be the case that some respondents have mixed co-payments as a result of non-contracted care with other payments such as the obligatory deductible. However, the question clearly states that it does not concern payments on the obligatory deductible, so we assume that possible confusion has been kept to a minimum.

3.6 Conclusions

This study concludes that not all enrollees with a policy that includes restrictive conditions are aware of its conditions. Having better informed enrollees can ensure that health insurers are better able to channel enrollees, since it will be more likely that they will opt for a contracted provider to avoid having to pay extra. This will benefit the functioning of the healthcare system based on managed competition. The ability to channel enrollees can, in the end, lead to more efficient healthcare procurement due to the improved negotiating position of health insurers (9, 47, 48). There seems room to improve the information provision, in particular for people with a low income and people with a poorer health status, as these groups more often reported not to know they had to pay extra for this hospital care and more often faced financial problems. However, it is uncertain whether this is because the information about the conditions

of their policies is insufficient. It could be that these groups are less likely to read the information about the conditions of their policies or understanding the information is more difficult for them. Further research could focus on how enrollees are informed by their health insurer and whether and how they use this information.

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3.8 Appendix

Table 3.A3. Multivariate logistic regression to examine the associations between the results of Q1 and the socio-demographic characteristics of the respondents.

		Model 1: Dependent variable: When choosing your health insurance policy, did you consider which healthcare providers are fully reimbursed under your current basic insurance? (1=no, 0=yes)	
		n=9,621	
		Odds Ratio	**P-value**
Sex	Male	reference	
	Female	0.67	0.00*
	Non-binary	1.05	0.90
Age	18-39	reference	
	40-64	1.20	0.00*
	65 and older	0.84	0.01*
Education**	Low	reference	
	Middle	0.79	0.00*
	High	0.63	0.00*
Net monthly income of the household	< €1500	reference	
	€1500 - €2500	0.70	0.00*
	€2500 - €3500	0.61	0.00*
	> €3500	0.58	0.00*
Health (self-reported)	Bad/fair	reference	
	Good	0.82	0.02*
	Very good/excellent	0.82	0.02*
Care use (self-reported)	No	reference	
	Very little/little	0.61	0.00*
	Much/very much	0.48	0.00*
Constant		2.09	0.00

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

Table 3.A4. Multivariate logistic regression to examine the associations between the results of Q3 and the socio-demographic characteristics of the respondents.

		Model 2: Dependent variable: Are you familiar with the conditions of your basic insurance? (1=yes, and I know roughly what it says/yes, and I know exactly what it says, 0=no, I am not familiar with them/yes, but I don't know what it says)	
		n=9,650	
		Odds Ratio	**P-value**
Sex	Male	reference	
	Female	1.15	0.00*
	Non-binary	0.83	0.67
Age	18-39	reference	
	40-64	1.89	0.00*
	65 and older	4.01	0.00*
Education**	Low	reference	
	Middle	1.10	0.25
	High	1.34	0.00*
Net monthly income of the household	< €1500	reference	
	€1500 - €2500	1.15	0.02*
	€2500 - €3500	1.29	0.00*
	> €3500	1.54	0.00*
Health (self-reported)	Bad/fair	reference	
	Good	1.32	0.00*
	Very good/excellent	1.39	0.00*
Care use (self-reported)	No	reference	
	Very little/little	1.38	0.00*
	Much/very much	1.69	0.00*
Constant		0.27	0.00*

* Significant p-value

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

Table 3.A5. Multivariate logistic regression to examine the associations between the results of Q5 and the socio-demographic characteristics of the respondents.

		Model 3: What is the maximum reimbursement percentage in your current basic insurance for care that is not fully reimbursed? (1=I do not know, 0=I do know*)**	
		n=9,621	
		Odds Ratio	**P-value**
Sex	Male	reference	
	Female	1.03	0.47
	Non-binary	0.78	0.55
Age	18-39	reference	
	40-64	0.97	0.51
	65 and older	0.99	0.84
Education**	Low	reference	
	Middle	0.99	0.87
	High	1.06	0.45
Net monthly income of the household	< €1500	reference	
	€1500 - €2500	0.77	0.00*
	€2500 - €3500	0.74	0.00*
	> €3500	0.72	0.00*
Health (self-reported)	Bad/fair	reference	
	Good	0.86	0.07
	Very good/excellent	0.88	0.13
Care use (self-reported)	No	reference	
	Very little/little	0.67	0.00*
	Much/very much	0.60	0.00*
Totally familiar with the conditions of their basic insurance (self-reported)****	No	reference	
	Yes	0.24	0.00*
Constant		2.96	0.00

* Significant p-value
** Low = none, primary school or pre-vocational education. Middle = secondary or vocational education. High = professional higher education or university.
*** If respondents gave the answer 'Less than 70%' or 'More than 70%'.
**** Based on answer on Q3: Are you familiar with the conditions of your basic insurance? (1=Yes, and I know exactly what it says, 0=No, I am not familiar with them/Yes, but I don't know what it says/Yes, and I know roughly what it says).

Table 3.A6. Multivariate logistic regression to examine the associations between the results of Q8 and the socio-demographic characteristics of the respondents.

		Model 4: Dependent variable: Did you still go to this healthcare provider who was not fully reimbursed at that time? (1=no, 0=yes)	
		n=2,286	
		Odds Ratio	**P-value**
Sex	Male	reference	
	Female	0.97	0.72
	Non-binary	0.31	0.30
Age	18-39	reference	
	40-64	0.96	0.64
	65 and older	0.92	0.59
Education**	Low	reference	
	Middle	0.71	0.06
	High	0.65	0.02*
Net monthly income of the household	< €1500	reference	
	€1500 - €2500	1.21	0.10
	€2500 - €3500	0.82	0.15
	> €3500	0.78	0.06
Health (self-reported)	Bad/fair	reference	
	Good	0.73	0.03*
	Very good/excellent	0.54	0.00*
Care use (self-reported)	No	reference	
	Very little/little	0.58	0.00*
	Much/very much	0.59	0.01*
Constant		2.35	0.00

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

Table 3.A7. Multivariate logistic regression to examine the associations between the results of Q9 and the socio-demographic characteristics of the respondents.

		Model 5: Dependent variable: Did you go to another healthcare provider who was fully reimbursed? (1=no, 0=yes)	
		n=854	
		Odds Ratio	**P-value**
Sex	Male	reference	
	Female	0.87	0.38
	Non-binary***	-	-
Age	18-39	reference	
	40-64	0.86	0.39
	65 and older	0.73	0.26
Education**	Low	reference	
	Middle	0.91	0.76
	High	0.52	0.04*
Net monthly income of the household	< €1500	reference	
	€1500 - €2500	1.04	0.85
	€2500 - €3500	0.51	0.01*
	> €3500	0.72	0.17
Health (self-reported)	Bad/fair	reference	
	Good	1.00	0.98
	Very good/excellent	0.67	0.11
Care use (self-reported)	No	reference	
	Very little/little	0.34	0.00*
	Much/very much	0.22	0.00*
Constant		17.07	0.00

* Significant p-value
** Low = none, primary school or pre-vocational education. Middle = secondary or vocational education. High = professional higher education or university.
*** Number of non-binary respondents too low (1 respondent).

Table 3.A8. Multivariate logistic regression to examine the associations between the results of Q13 and the socio-demographic characteristics of the respondents.

		Model 6: Dependent variable: Did you know in advance that you had to pay – or pay extra – for this hospital care? (1=yes, 0=no)	
		n=732	
		Odds Ratio	**P-value**
Sex	Male	reference	
	Female	0.89	0.49
	Non-binary	0.62	0.69
Age	18-39	reference	
	40-64	1.11	0.56
	65 and older	0.89	0.64
Education**	Low	reference	
	Middle	0.78	0.44
	High	0.96	0.91
Net monthly income of the household	< €1500	reference	
	€1500 - €2500	1.49	0.07
	€2500 - €3500	1.76	0.02*
	> €3500	2.51	0.00*
Health (self-reported)	Bad/fair	reference	
	Good	2.74	0.00*
	Very good/excellent	3.22	0.00*
Care use (self-reported)	No	reference	
	Very little/little	0.95	0.90
	Much/very much	1.13	0.76
Constant		0.17	0.00

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

Table 3.A9. Multivariate logistic regression to examine the associations between the results of Q15 and the socio-demographic characteristics of the respondents.

		Model 7: Dependent variable: Has paying extra for this hospital care been a problem for you? (1=a serious problem, 0=no problem/a minor problem)	
		n=732	
		Odds Ratio	**P-value**
Sex	Male	reference	
	Female	0.76	0.14
	Non-binary	12.41***	0.05*
Age	18-39	reference	
	40-64	1.23	0.31
	65 and older	0.66	0.14
Education**	Low	reference	
	Middle	0.74	0.33
	High	0.83	0.56
Net monthly income of the household	< €1500	reference	
	€1500 - €2500	0.45	0.00*
	€2500 - €3500	0.30	0.00*
	> €3500	0.08	0.00*
Health (self-reported)	Bad/fair	reference	
	Good	0.58	0.04*
	Very good/excellent	0.55	0.03*
Care use (self-reported)	No	reference	
	Very little/little	0.47	0.05
	Much/very much	0.66	0.34
Constant		4.14	0.01

* Significant p-value
** Low = none, primary school or pre-vocational education. Middle = secondary or vocational education. High = professional higher education or university.
*** OR is high due to the low number of non-binary respondents on Q15 (n=4).

4

Chapter 4

The relation between trust and the willingness of enrollees to receive healthcare advice from their health insurer

van der Hulst F.J.P., Brabers A.E.M. & de Jong J.D.

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4.1 Abstract

Background

In a healthcare system based on managed competition, it is important that health insurers are able to channel enrollees to preferred providers. This results in incentives for healthcare providers to improve the quality and reduce the price of care. One of the instruments to guide enrollees to preferred providers is by providing healthcare advice. In order to use healthcare advice as an effective instrument, it is important that enrollees accept the health insurer as a healthcare advisor. As trust in health insurers is not high, this may be an obstacle for enrollees to be receptive to the health insurer's advice. This study aims to investigate the association between trust in the health insurer and the willingness to receive healthcare advice from the health insurer in the Netherlands. In terms of receiving healthcare advice, we examine both enrollees' willingness to approach the health insurer themselves and their willingness to be approached by the health insurer.

Methods

In February 2021, a questionnaire was sent to a representative sample of the Dutch population. The questionnaire was completed by 885 respondents (response rate 59%). Respondents were asked about their willingness to receive healthcare advice, and trust in the health insurer was measured using a validated multiple item scale. Logistic regression models were conducted to analyse the results.

Results

Enrollees with more trust in the health insurer were more willing to approach their health insurer for healthcare advice (OR=1.07, p=0.00). In addition, a higher level of trust in the health insurer is significantly associated with the odds that enrollees would like it/really appreciate it if their health insurer actively approached them with healthcare advice (OR=1.07, p=0.00). The role of trust in the willingness to receive healthcare advice is not proven to differ between groups with regard to educational levels, health status or age.

Conclusions

This study confirms that trust plays a role in the willingness to receive healthcare advice from the health insurer. The association between the two emphasizes the importance to increase enrollees' trust in the health insurer. As a result, health insurers may be better able to fulfil their role as healthcare advisor.

4.2 Background

The healthcare systems of several countries, such as the Netherlands, Switzerland, Israel and Germany, are based on the theory of managed competition (1–3). This theory aims to improve the quality of care and contain increasing healthcare costs by stimulating competition between third-party purchasers and care providers (1, 4–6). In such a healthcare system third-party purchasers, mostly health insurers, purchase care on behalf of their enrollees (5). Enrollees have the option to switch health insurers. As a result, health insurers have an interest in offering enrollees a more attractive health plan than competitors (1, 5–7). Therefore insurers negotiate with healthcare providers on price and quality of care. In order for health insurers to have a strong position during these negotiations, it is crucial that they are able to guide their enrollees to preferred providers (7–10). In that case healthcare providers must seriously consider the possibility that an insurer and their enrollees switch to a competitor (7, 10). According to the theory of managed competition this gives care providers an incentive to improve the quality of care and reduce the price of care (4, 7, 10).

The ability to channel enrollees is thus indispensable for the functioning of a healthcare system with managed competition. This study focuses on the healthcare system of the Netherlands, of which the general principles of the health insurance system can be found in Box 4.1. The focus in this article is on basic health insurance. In the Netherlands citizens aged 18 years and older are obliged to take out basic health insurance. In 2022, citizens could choose from 60 health insurance policies offered by 20 health insurers divided into 10 health insurance groups (11). All insurers in the Netherlands are private companies. They offer the same, extensive, basic health insurance package, of which the content is determined by the government. Nevertheless, health insurance policies can differ in terms of conditions and premium enrollees have to pay. For instance, because Dutch health insurers can apply selective contracting (5, 7). This means that health insurers do not contract all healthcare providers. When enrollees choose a health insurance policy with restrictive conditions, which are usually offered at a lower premium, care from non-contracted providers is not always fully reimbursed. This makes it financially less attractive for these enrollees to visit healthcare providers that are not contracted by the health insurer. Health insurers can therefore use selective contracting as an instruments to guide enrollees to preferred providers.

Box 4.1. General principles of the Dutch Health Insurance Act.

- Citizens aged 18 years and older are obliged to take out health insurance for basic health insurance (12)
- Everyone aged 18 years and older contributes to the cost of healthcare through premiums, contributions and taxes (13)
- Each year citizens are free to choose between the different health insurance policies offered by private health insurers (13)
- The content of the basic health insurance package is determined by the government, and includes many necessary medical care, medicines and aids (12)
- There is a deductible: the first €385 of healthcare costs must be paid by the enrollee, except for GP consultations, maternity care, home nursing and care for children under 18 years. In addition, enrollees can choose for a voluntary deductible up to €500 per person per year in exchange for a lower premium (14)
- An enrollee can take out supplementary insurance for care not included in the basic health insurance package. For example, reimbursement for treatment at the dentist or physiotherapist (12)

<u>Roles of health insurers</u>

- Health insurers are obliged to accept everyone for the basic health insurance, no matter health status or other characteristics (12). Furthermore, the enrollee's personal situation does not affect the health insurance premium. This means that the insured's health, age or income make no difference to the amount of the premium (12). Through a risk equalization model, health insurers are financially compensated for predictable variation in individual medical expenses (15)
- Health insurers have a duty of care, meaning that their enrollees must have access to all care from the basic health insurance package within a reasonable time and travel distance. Health insurers must therefore purchase sufficient care or mediate if someone cannot get to a healthcare provider quickly enough (waiting time mediation) (12)
- Health insurers are expected to provide good information to their enrollees on policies, costs, reimbursements and waiting times for care and support (12)

Another way to guide enrollees to preferred providers is to provide healthcare advice (16). Healthcare advice can consist of different services, such as waiting list mediation, advice on the most suitable care provider, advice and guidance in arranging care or obtaining medical aids as well as in arranging a second opinion, advice aimed at prevention and health promotion, and assistance in preparing a meeting with a doctor (17). Although healthcare advice currently consists mainly of answering questions from

the insured, a number of health insurers indicate that, if legislation allows, they would like to do more in terms of actively approaching insured with advice (18). Actively approaching enrollees can be done in various ways, such as by phone calls or sending letters and e-mails (18). By providing advice, especially with services on guidance to the most appropriate healthcare provider, insurers can guide their enrollees to visit the providers with whom they have made agreements on price, quality and/or volume of care. Although literature shows that, in practice, health insurers had limited focus on quality in their contractual negotiations with providers so far (19), increasing their advisory role may ensure that health insurers will be incentivized to pay more attention to quality of care in addition to volume and prices. This, in turn, could give providers incentives for both price reduction and quality improvement of care (4, 7, 10). Besides that, healthcare advice could also lead to a better match between the needs of enrollees and the care offered.

In order to use healthcare advice as an effective instrument within the healthcare system to guide enrollees to preferred providers, it is important that enrollees embrace the health insurer as a healthcare advisor. However, literature shows that a large group of Dutch enrollees is not open to healthcare advice from the health insurer (16, 20). A survey-based study showed that slightly more than half of the respondents indicated that they would not like it if their health insurer took on an advisory role in choosing a healthcare provider (20). Another Dutch study showed that only about a third of the enrollees indicated that they would approach their health insurer for advice on a suitable healthcare provider (16). Enrollees' trust in the health insurer may play a role in this (16, 20, 21). Low trust in health insurers could be a bottleneck for enrollees to be open to advice from the health insurer. Literature shows that trust in health insurers in the Netherlands is low (22, 23). Reasons for low trust might be, for example, the lack of health insurance literacy, the fact that health insurers are seen as for-profit organisations, the belief that third-parties should not interfere in the doctor-patient relationship, and media influencing the public opinion about health insurers (24). Furthermore, there is a so-called 'credible commitment' problem, which means that health insurers have a problem convincing consumers that they are committed to contracting high-quality care rather than merely the least expensive care (21). In addition, we know from a Dutch study that trust of enrollees specifically in the advisory role of the health insurer is not high (25). As a result, low trust could threaten the functioning of the healthcare system based on the theory of managed competition, because the health insurer would be less able to use healthcare advice as an instrument to eventually influence the price and/or quality of care. Furthermore, when enrollees do not trust the healthcare advice from the health insurer and do not follow it, it is difficult for health insurers to align care to the needs of enrollees.

Although a number of studies have already been conducted into trust in health insurers (20, 22, 25), the association between trust in the health insurer and the willingness to receive healthcare advice has not been studied before. This study therefore focuses on the association between trust in the health insurer and the willingness to receive healthcare advice from the health insurer in the Netherlands. In terms of receiving healthcare advice, we examine both enrollees' willingness to approach the health insurer themselves and their willingness to be approached by the health insurer. Finding an association would emphasize the importance of taking actions to build trust in the health insurer so that the Dutch healthcare system, in which health insurers have been assigned the role of healthcare advisors, can function more optimal. We also investigate whether the role of trust in the willingness to receive healthcare advice is stronger for certain groups of people. In this study the concept of healthcare advice is defined by four types of advice: advice on what the most suitable care provider is, waiting list mediation, guidance in arranging care, and assistance in preparing a meeting with a doctor. We answer two research questions in this study: 'What is the relationship between trust in the health insurer and the willingness of enrollees to receive healthcare advice from their health insurer?'. And: 'Is the relationship between trust in the health insurer and the willingness of enrollees to receive healthcare advice from their health insurer different for certain groups of people?

Hypotheses

Enrollees' need for healthcare advice stems from a lack of knowledge or information. For example, enrollees do not have experience with all care providers to assess them for quality. The health insurer is expected to have the data, knowledge and expertise to inform enrollees by giving healthcare advice. However, because the insurer has more information than the enrollee, there is a certain information asymmetry (26, 27). This information asymmetry may make it difficult for the enrollee to assess the quality of the health insurer's advice, in particular if the insurer is not fully transparent about the data or information on which they base their advice. This may create uncertainty which leads to a risk of receiving a less appropriate advice. The enrollee must believe that the insurer is honest in its advice and will have their best interest at heart. We know from literature that trust reduces perceived risk (28–30). Therefore our expectation is that enrollees are more willing to receive advice from the health insurer when they have more trust in the health insurer, because this may reduce the perceived risk of receiving a less appropriate advice. Hence we expect that trust in the health insurer is an important precondition for their enrollees' willingness to receive healthcare advice.

H1: Enrollees who have more trust in their health insurer will be more willing to receive healthcare advice from their health insurer.

The perceived risk of receiving a less appropriate advice may differ between groups. For instance, low-educated enrollees may have a greater perceived risk of receiving bad healthcare advice than high-educated enrollees, as low-educated enrollees are expected to have less knowledge and skills to assess the health insurer's advice (31). As a result, they may have a greater information asymmetry compared to the high-educated enrollees, which leads to more uncertainty about the health insurer's advice. We therefore expect that the relationship between trust and the willingness to receive healthcare advice is different for groups of people with different educational levels. As we know that trust reduces perceived risk (28–30), we expect that the level of trust has a greater impact on the willingness to receive healthcare advice for people with a lower level of education than people with a higher level of education.

H2: The role of trust in the willingness to receive healthcare advice is stronger for lower educated people than for higher educated people.

Furthermore, health status may influence the role of trust in the willingness to receive healthcare advice. This arises from the perception that people with a poor health status are in a vulnerable position as they tend to have more complex care needs. As a result, people with a poor health condition are expected to have a greater perceived risk to receive a less appropriate advice by their health insurer about a suitable treatment or healthcare provider. We therefore expect that the relationship between trust and the willingness to receive healthcare advice is different for people with a different health status. Because trust reduces perceived risk (28–30), we expect that the level of trust has a greater impact on the willingness to receive healthcare advice for people with a poorer health status than for people with a better health status.

H3: The role of trust in the willingness to receive healthcare advice is stronger for people with poorer health than for those with better health.

Following the same reasoning as for health status, age may also influence the role of trust in the willingness to receive healthcare advice. Older people may have a greater perceived risk of receiving a less appropriate healthcare advice, as they are more likely to have (multiple) chronic conditions, which may make their care needs more complex. We expect that the level of trust has a greater impact on the willingness to receive healthcare advice for older than for younger people, as trust reduces perceived risk (28–30).

H4: The role of trust in the willingness to receive healthcare advice is stronger for older than for younger people.

4.3 Methods

Data

Data were collected using the Dutch Health Care Consumer Panel, an access panel managed by Nivel (the Netherlands Institute for Health Services Research) (32). This panel collects opinions on, knowledge about and experiences with healthcare in the Netherlands among citizens. At the time of the study, February 2021, the panel had approximately 11,500 members from the general Dutch population aged 18 years and older. Their background characteristics such as age, sex and educational level are registered. The panel can only be joined through invitation, it is not possible for people to sign up on their own initiative. Members agree to be asked to participate in surveys on a regular basis. The data are analysed pseudonymized, 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 (32). Participation is voluntary and members are not forced to participate in surveys, or to answer questions within the surveys. They can stop their membership at any time without giving a reason.

Questionnaire

In February 2021, a questionnaire was sent to a sample of 1,500 panel members, representative of the adult population in the Netherlands with regard to age and sex. The questionnaire was developed by the authors, who have expertise on this research topic and in conducting survey-based research. Besides questions on other topics related to the choice of health insurance, the questionnaire included questions on enrollees' willingness to receive healthcare advice, a validated question on trust in the health insurer, and a question about their health status. The concept version of the questionnaire was submitted to the programme committee of the Nivel Dutch Health Care Consumer Panel, who had the opportunity to give feedback. This committee consists of representatives of different stakeholders in the healthcare sector, including the Dutch Consumers Association, and 'Zorgverzekeraars Nederland', the umbrella organisation of health insurers. There were no comments from the committee, so the content of the questionnaire did not change. The questionnaire could be filled in online or by post depending on the personal preference of the panel members. The panel members could fill in the questionnaire from the 9th of February until the 11th of March 2021. Completing the questionnaire took respondents approximately 15 to 20 min. Two reminders were sent to respondents who had not yet filled in the online questionnaire at that time and one reminder to respondents who had not yet filled in the paper questionnaire. The questionnaire was completed by 885 panel members (response rate 59%).

Measures

The willingness of enrollees to receive healthcare advice

The willingness of enrollees to receive healthcare advice from their health insurer was measured by two questions. Before the questions were presented, respondents were introduced to the concept of healthcare advice through mentioning four examples: advice on what the most suitable care provider is, waiting list mediation, guidance in arranging care, and assistance in preparing a meeting with a doctor.

The first question was: 'Suppose you need one of the above-mentioned types of advice. Would you approach your health insurer about this?' The response categories on this question were: 1. 'definitely not', 2. 'probably not', 3. 'probably yes', 4. 'definitely yes', and 5. 'I do not know'. To make the measure suitable for analysis, a dummy variable was created (1=probably/definitely yes, 0=probably/definitely not). The answer option 'I do not know' has been converted into a missing value (n=93).

The second question was: 'What would you think if your health insurer actively approached you with advice, for example about the quality of a specific care provider?' The response categories on this question were: 1. 'I would find that very unpleasant', 2. 'I would find that unpleasant', 3. 'I would like that', 4.' I would really appreciate that', and 5. 'I have no opinion about that'. Also this measure was transformed into a dummy variable, in order to make it suitable for the analysis (1=I would like that/I would really appreciate that, 0=I would find that (very) unpleasant). The answer option 'I have no opinion about that' has been converted into a missing value (n=157).

Trust in the health insurer

Trust in health insurers was measured by the Health Insurer Trust Scale (HITS), a validated scale to measure patients' trust in health insurers, developed by Zheng et al. (33). According to Zheng et al. (33), this scale is based on a conceptual model that assumes that insurer trust has four components that reflect overlapping aspects of insurance organizations: 1. fidelity: caring for the subject's interests or welfare, 2. competence: making correct decisions and avoiding mistakes, 3. honesty: telling the truth and avoiding intentional falsehoods, and 4. confidentiality: proper use of sensitive information. The scale consists of 11 items for which the response categories are strongly agree (score 5), agree (score 4), neutral (score 3), disagree (score 2), and strongly disagree (score 1) (see Table 4.1). The scoring is reversed in the case of a negative question (items 2, 4–7, and 9). Trust is measured by the sum of the 11 item scores ranging from 11 to 55. A higher score indicates more trust. A score has only been calculated if respondents have responded to all the statements of the scale. The scores of respondents who completed the scale partially (n=24) or not at all (n=56) were converted to missing scores. For this study we used the validated Dutch translation of this scale by Hendriks et al. (34).

Table 4.1. Health Insurer Trust Scale (HITS) (Zheng et al., 2002)

	Items	Response categories
1.	You think the people at your health insurer are completely honest.	strongly agree (score 5); agree (score 4); neutral (score 3); disagree (score 2); strongly disagree (score 1)
2.	Your health insurer cares more about saving money than about getting you the treatment you need.	strongly agree (score 1); agree (score 2); neutral (score 3); disagree (score 4); strongly disagree (score 5)
3.	As far as you know, the people at your health insurer are very good at what they do.	strongly agree (score 5); agree (score 4); neutral (score 3); disagree (score 2); strongly disagree (score 1)
4.	If someone at your health insurer made a serious mistake, you think they would try to hide it.	strongly agree (score 1); agree (score 2); neutral (score 3); disagree (score 4); strongly disagree (score 5)
5.	You feel like you have to double check everything your health insurer does.	strongly agree (score 1); agree (score 2); neutral (score 3); disagree (score 4); strongly disagree (score 5)
6.	You worry that private information your health insurer has about you could be used against you.	strongly agree (score 1); agree (score 2); neutral (score 3); disagree (score 4); strongly disagree (score 5)
7.	You worry there are a lot of loopholes in what your health insurer covers that you don't know about.	strongly agree (score 1); agree (score 2); neutral (score 3); disagree (score 4); strongly disagree (score 5)
8.	You believe your health insurer will pay for everything it is supposed to, even really expensive treatments.	strongly agree (score 5); agree (score 4); neutral (score 3); disagree (score 2); strongly disagree (score 1)
9.	If you got really sick, you are afraid your health insurer might try to stop covering you altogether.	strongly agree (score 1); agree (score 2); neutral (score 3); disagree (score 4); strongly disagree (score 5)
10.	If you have a question, you think your health insurer will give a straight answer.	strongly agree (score 5); agree (score 4); neutral (score 3); disagree (score 2); strongly disagree (score 1)
11.	All in all, you have complete trust in your health insurer.	strongly agree (score 5); agree (score 4); neutral (score 3); disagree (score 2); strongly disagree (score 1)

Background variables

The background variables that are known from the panel members and are included concern: age (continuous), gender (0=male, 1=female), educational level (1=low (none, primary school or pre-vocational education), 2=middle (secondary or vocational education), 3=high (professional higher education or university)), and selfreported health status (1=bad/fair, 2=good, 3=very good/excellent).

Data analysis

Descriptive statistics were computed to describe the characteristics of the study population. Logistic regression models were applied in order to test the hypotheses.

The two measures for the willingness of enrollees to receive healthcare advice from their health insurer were analysed in separate models. We examined the main and the interaction effects. Through the interaction effects we investigated the hypotheses (H2, H3 and H4) that state that the relationship between trust and the willingness to receive healthcare advice is modified by educational level, age and health status. A significance level of 5% ($p \leq 0.05$) was maintained for these analyses. All analyses were performed using STATA version 16.1.

4.4 Results

Descriptives

Table 4.2 presents the descriptive statistics. The male/female ratio in the total group of 885 respondents was 48/52. Respondents were on average 54 years old. 47% of the respondents were highly educated. 17% rated their health as bad or fair. On average, respondents had a score of 37 (range 13–54) on the Health Insurer Trust Scale. Fifty nine percent of the respondents would probably or definitely approach their health insurer about the mentioned types of advice, and 46% would like it/really appreciate it if their health insurer actively approached them with healthcare advice.

Testing hypothesis 1

Model 1 (see Table 4.3) examines the relationship between enrollees' trust in the health insurer and their willingness to approach their health insurer for healthcare advice. Enrollees with more trust in the health insurer were more willing to approach their health insurer for healthcare advice (OR=1.07). This result is in line with H1. Besides that, Model 1 shows that older enrollees and enrollees with a middle level of education are more willing to approach their health insurer for healthcare advice than younger enrollees and enrollees with a low or high level of education.

Furthermore, Model 5 (see Table 4.4) examines the relationship between trust in the health insurer and the willingness to be actively approached by their health insurer with healthcare advice. In line with H1, a higher level of trust in the health insurer is significantly associated with the odds that enrollees would like it/really appreciate it if their health insurer actively approached them with healthcare advice (OR=1.07). In combination with the result of model 1, H1 is therefore accepted. Beyond that, Model 5 shows that men and those in bad/fair health are more likely to like it/really appreciate it if their health insurer actively approached them with healthcare advice than women and those in very good/excellent health.

Table 4.2. Descriptive statistics of the respondents.

	Number of respondents (n)	Percentage (%) or mean (SD)
Gender	**885**	
Male	429	48%
Female	456	52%
Age	**885**	54 (16.53)
18-39 years	238	27%
40-64 years	418	47%
65 years and older	229	26%
Education	**873**	
Low (none, primary school or pre-vocational education)	93	11%
Middle (secondary or vocational education)	367	42%
High (professional higher education or university)	413	47%
Health (self-reported)	**829**	
Bad/fair	144	17%
Good	384	46%
Very good/excellent	301	36%
Health Insurer Trust Scale (range 11-55)	**805**	37 (5.78) (range: 13-54)
Suppose you need one of the above-mentioned types of advice[1]. Would you approach your health insurer about this?	**745**	
Definitely/probably not	304	41%
Definitely/probably yes	441	59%
What would you think if your health insurer actively approached you with advice[1], for example about the quality of a specific care provider?	**685**	
(Very) unpleasant	368	54%
I would like that/ really appreciate that	317	46%

[1] Advice on what the most suitable care provider, waiting list mediation, guidance in arranging care or assistance in preparing a meeting with a doctor

Testing hypothesis 2

Model 2 (see Table 4.3) examines whether the role of trust in their willingness to approach their health insurer for healthcare advice is stronger for lower educated people than for higher educated people. The role of trust in the willingness to receive healthcare advice does not significantly differ between people with a low level of education and those with a middle or high level of education. Furthermore, Model 6 (see Table 4.4) examines whether the role of trust in the willingness to be actively approached by their health insurer with healthcare advice is stronger for lower educated people than for higher educated people. The role of trust in the willingness to be actively approached by their health insurer with healthcare advice does not differ between people with a low, a middle or high level of education. H2 is therefore rejected.

Testing hypothesis 3

Model 3 (see Table 4.3) examines whether the role of trust in the willingness to approach their health insurer for healthcare advice is stronger for people with a poorer health status than for those with a better health status. In line with H3, the role of trust in the willingness to receive healthcare advice is stronger for people in bad/ fair health than for those in good health (OR=0.90). For the association between trust and the willingness to receive healthcare advice between people in bad/fair health and people in very good/excellent health we find a nearly significant effect (p=0.052). Additionally, Model 7 (see Table 4.4) examines whether the role of trust in the willingness to be actively approached by their health insurer with healthcare advice is stronger for people with a poorer health status than for those with a better health status. The role of trust in the willingness to be actively approached by their health insurer with healthcare advice does not differ between people in bad/fair health and those in good or very good/excellent health. H3 is therefore neither accepted nor rejected, given the different findings from the two models.

Table 4.3. Multivariate logistic regression to examine the associations between Q1 and trust.

Q1: Suppose you need one of the above-mentioned types of advice. Would you approach your health insurer about this? (1=definitely/probably yes, 0= definitely/probably not)									
		Model 1 (*n*=699)		**Model 2 (*n*=699)**		**Model 3 (*n*=699)**		**Model 4 (*n*=699)**	
		Odds Ratio	**P-value**	**Odds Ratio**	**P-value**	**Odds Ratio**	**P-value**	**Odds Ratio**	**P-value**
Trust (HITS)**		1.07	0.00*	1.02	0.77	1.16	0.00*	1.07	0.00*
Gender	Male	Reference		Reference		Reference		Reference	
	Female	0.81	0.20	0.82	0.23	0.80	0.18	0.81	0.20
Age**		1.01	0.04*	1.01	0.04*	1.01	0.03*	1.01	0.03*
Education***	Low	Reference		Reference		Reference		Reference	
	Middle	2.00	0.02*	2.01	0.02*	2.02	0.02*	2.02	0.02*
	High	1.28	0.40	1.29	0.38	1.31	0.36	1.31	0.36
Health (self-reported)	Bad/fair	Reference		Reference		Reference		Reference	
	Good	0.94	0.79	0.94	0.80	0.82	0.44	0.95	0.82
	Very good/excellent	0.74	0.23	0.75	0.24	0.66	0.11	0.74	0.23
Trust*education	Low			Reference					
	Middle			1.05	0.44				
	High			1.07	0.26				
Trust*health	Bad/fair					Reference			
	Good					0.90	0.02*		
	Very good/excellent					0.92	0.05		
Trust*age								1.00	0.31
Constant		1.25	0.48	1.23	0.52	1.41	0.29	1.23	0.51

* Significant p-value
** Centered around the mean
*** Low = none, primary school or pre-vocational education. Middle = secondary or vocational education. High = professional higher education or university.

Table 4.4. Multivariate logistic regression to examine the associations between Q2 and trust.

Q2: What would you think if your health insurer actively approached you with advice, for example about the quality of a specific care provider? (1=I would like that/really appreciate that, 0=I would find that (very) unpleasant)									
		Model 5 (*n=642*)		**Model 6 (*n=642*)**		**Model 7 (*n=642*)**		**Model 8 (*n=642*)**	
		Odds Ratio	**P-value**	**Odds Ratio**	**P-value**	**Odds Ratio**	**P-value**	**Odds Ratio**	**P-value**
Trust (HITS)**		1.07	0.00*	0.97	0.62	1.05	0.09	1.07	0.00*
Gender	Male	Reference		Reference		Reference		Reference	
	Female	0.41	0.00*	0.41	0.00*	0.42	0.00*	0.41	0.00*
Age**		1.00	0.43	1.00	0.43	1.00	0.39	1.01	0.30
Education***	Low	Reference		Reference		Reference		Reference	
	Middle	1.29	0.41	1.26	0.46	1.31	0.39	1.32	0.38
	High	0.60	0.11	0.58	0.09	0.61	0.11	0.62	0.13
Health (self-reported)	Bad/fair	Reference		Reference		Reference		Reference	
	Good	0.83	0.42	0.83	0.45	0.85	0.49	0.84	0.47
	Very good/excellent	0.57	0.03*	0.58	0.04*	0.57	0.03*	0.57	0.03*
Trust*education	Low			Reference					
	Middle			1.12	0.07				
	High			1.10	0.11				
Trust*health	Bad/fair					Reference			
	Good					1.01	0.79		
	Very good/excellent					1.04	0.30		
Trust*age								1.00	0.09
Constant		1.97	0.04*	2.01	0.04*	1.90	0.05	1.93	0.05*

* Significant p-value
** Centered around the mean
*** Low = none, primary school or pre-vocational education. Middle = secondary or vocational education. High = professional higher education or university.

Testing hypothesis 4

Model 4 (see Table 4.3) examines whether the role of trust in the willingness to approach their health insurer for healthcare advice is stronger for older than for younger people. The role of trust in the willingness to receive healthcare advice is not significantly different for older than for younger people. In addition, Model 8 (see Table 4.4) examines whether the role of trust in the willingness to be actively approached by their health insurer with healthcare advice is stronger for older than for younger people. The role of trust does not differ between younger and older people. Therefore, H4 is rejected.

4.5 Discussion

In accordance with our first hypothesis, our study shows there is an association between trust in the health insurer and the willingness to receive healthcare advice from the health insurer. We found that when enrollees have more trust in the health insurer, they are more willing to approach them for healthcare advice, and are also more positive about being actively approached by their health insurer. This finding makes it plausible that trust can remove the perceived risk of receiving less appropriate advice. In the presence of a higher level of trust, the uncertainty about the advice, caused by the information asymmetry between the health insurer and the enrollee seeking care, seems to be reduced. Our study shows an average score of 37 on the Health Insurer Trust Scale (HITS), which we consider as moderate trust. This score is about the same as that measured in an older study from 2007 that used the HITS to measure trust in health insurers in general in the Netherlands and found an average score of 36.6 (34). Since we also know from other literature that the current level of trust in health insurers in the Netherlands is not high (23, 24), the results of our study emphasize the importance of investigating ways to increase trust in health insurers. By increasing enrollees' trust in their health insurer, the proportion of enrollees who are receptive to healthcare advice may increase. As a result health insurers will have the opportunity to take on their role of healthcare advisor. This might lead to a better functioning of the healthcare system based on the theory of managed competition, as healthcare advice can align care with the needs of enrollees and as it creates a greater ability to guide enrollees to preferred providers.

The current distrust towards health insurers could be explained by different theories. The first theory is based on the principle that many citizens have little knowledge of the role of insurers in the healthcare system, also referred to as the 'lack-of information model' by Maarse et Jeurissen (24). The distrust resulting from this theory may be eliminated by better disclosure of the role of insurers, however the literature on this is still limited (24, 25). Further research could focus on enrollees' knowledge of insurers'

roles and the relationship of this to trust. The second theory is based on the principle that there is a critical attitude to competition in healthcare among citizens, arising from the idea that health insurers are profit-driven organisations who do not act in the interests of the patient (24). Maarse et. al. (24) call this theory 'the anti-competition model'. More transparency about the quality of the selected providers may increase trust in health insurers (22). Additional research could provide insight as to whether transparency is a good instrument for increasing trust in health insurers. Thirdly, distrust may come from the idea that insurers should not interfere in the relationship between doctor and patient (24). According to Maarse et al. (24), who refer to this theory as the 'pro-profession model', this idea may change by building a trust relationship between insurers and the providers of medical care. They assume that doctors' trust in health insurance will positively affect the patients' understanding of the insurers' role in healthcare (24). Finally, distrust may come from the bad publicity insurers usually get in the media (24, 35). Maarse et al. (24) call this the 'political communication model'. It is difficult for the health insurer to influence the information brought by third parties, such as the media (36). However, showing good behaviour as an insurer can improve the personal experiences of both insured and healthcare providers and thus avoid negative media coverage (36). In addition, trust in the health insurer may be increased by not ignoring negative reporting and criticism, but by responding to it openly and honestly. It could also help to bring out positive reports about the achievements of the health insurer in advancing the interests of the enrollees.

Our results show that there is an association between trust in the health insurer and the willingness to receive healthcare advice from the health insurer. The degree of this association is not proven to be different between groups. It has not been found that for certain groups, with regard to educational levels, health status or age, an increase in trust in the health insurer is in particular important. The finding that no difference in association was found based on educational level could possibly be explained by the fact that a lack of publicly available quality information that is useful for the enrollee (19, 37). This makes it also difficult for those with a high level of education to examine and assess the healthcare advice they receive. As a result, all enrollees might have about the same information asymmetry. The result that no difference in association has been proven based on health status is still arguable, as one of the models showed a significant result, while the other model did not. In future research a comparable analysis could be performed again to clarify this.

Apart from the association with trust, the results of our study show that men were more open than woman to being approached by the health insurer with advice. Since literature shows that men generally show a delay in help-seeking when they become

ill (38–40), our result that men are relatively more open to healthcare advice from the health insurer might imply a solution to promote earlier healthcare utilization among men through this advice. Furthermore, our results show that younger people were less likely to approach their health insurer for healthcare advice than older people. In addition, respondents in very good or excellent health were in particular less open to being approached with advice from their health insurer. An explanation might be that healthcare plays a less important role in life for most young people and for those in good health. Therefore this result is not surprising and not a concern, as it is especially important that those who use care regularly are open to healthcare advice.

Strenghts and limitations

A strength of this study is that it contributes to the limited research on the field of healthcare advice from the health insurer. A strength of the method of the study is that trust in health insurers was measured by a validated scale (HITS). The use of this scale contributes to the validity of this study. Furthermore, the questionnaires were sent both by post and online. As a result, people who are less digitally literate could also participate in the survey.

A limitation of this study is that the respondents were not entirely representative of the Dutch population of enrollees. The respondents are relatively older and higher educated compared to the general Dutch population (41, 42), as younger and less educated people were underrepresented. However, we expect that this did not affect our regression results, since all subgroups are of sufficient size to perform association analyses.

Another limitation of this study is that there might be other factors besides trust and the enrollees' characteristics which are not included in this study, but may influence enrollees' willingness to receive healthcare advice. An important factor might be earlier experience with healthcare advice. Enrollees who have previously received healthcare advice and had a negative experience with it, will be less open to it than enrollees who have had a positive experience. Unfortunately, since the assessment of previous experiences of healthcare advice was not measured in the questionnaire, we were not able to include this factor in the analyses. Future studies could focus on other factors that may influence enrollees' willingness to receive healthcare advice.

A third limitation is that a part of the enrollees may be not familiar with what healthcare advice from the health insurer entails. In addition, healthcare advice is a broad concept. It could be that enrollees are positive about certain forms of healthcare advice, but for other forms they are not. This may affect the results, as it may also make it more difficult for respondents to assess whether they would be open to it. However, we

introduced the topic in the questionnaire by mentioning examples of healthcare advice, and therefore assume that the participants were able to make a good assessment of whether or not they would be willing to receive healthcare advice. The same applies to the concept of being 'actively approached'. This can be carried out in several manners, such as by phone calls or sending letters and e-mails. The distinction between enrollees' openness to the different manners cannot be made from this research. For this study we looked at healthcare advice in a broad sense, because we were interested in enrollees' attitude towards the advisory role of the health insurer in general. Further research might focus separately on specific forms of healthcare advice in a variety of manners.

4.6 Conclusions

This study confirms that trust plays a role in the willingness to receive healthcare advice from the health insurer. The association between the two emphasizes the importance of high trust in the health insurer. The role of trust is not proven to be different between specific groups. We find a general relationship between trust and openness to healthcare advice, independent of the presumed degree of information asymmetry or the interest people may have in receiving appropriate advice. This study can be seen as a first exploration of this association, to contribute to the knowledge about the importance of trust in the health insurer for the functioning of healthcare systems based on the theory of managed competition. The results are relevant for countries in which the health insurers have also been attributed a role as a healthcare advisor. Further research could focus on possibilities to increase trust in health insurers, as this may increase enrollees' receptiveness to healthcare advice from the health insurer. As a result, health insurers may be better able to fulfil their assigned role as healthcare advisor.

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5

Chapter 5

Exploring trust in health insurers: insights from enrollees' perceptions and experiences

van der Hulst F.J.P., Huijgen S., Brabers, A.E.M., de Jong, J.D.

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5.1 Abstract

Managed competition is a key driver in healthcare systems in countries like Germany, Switzerland, and The Netherlands. Trust in health insurers is vital but currently low in The Netherlands. This may be due to perceptions regarding profit motives, negative experiences, media coverage, and a lack of understanding of insurers' roles. This study explores how enrollees perceive health insurers and how the aforementioned factors contribute to these perceptions. Semi-structured interviews were conducted with 17 participants from the Nivel Dutch Health Care Consumer Panel in March and April 2023. Data were analysed using Braun and Clarke's six-step method for inductive thematic analysis. Participants generally view health insurers positively in terms of managing finances and ensuring care accessibility. However, some perceive insurers as profit-driven and prioritising cost reduction over individual needs, leading to dissatisfaction. Negative experiences and media coverage also shape these perceptions. Participants believe that insurers should ensure care accessibility and quality, distribute costs fairly, provide guidance, and prioritise preventive measures. To foster trust, insurers should communicate their non-profit status and use of benefits, increase transparency in purchasing decisions, and maintain clear communication about payment obligations. Enhancing communication about their contributions to healthcare and raising awareness of their broader roles may also help build trust.

5.2 Introduction

Managed competition has become a key driver in the healthcare systems of countries like Germany, Switzerland, and The Netherlands. This approach aims to improve care quality and contain costs by fostering competition between third-party purchasers and care providers (1, 2, 3). In such systems, health insurers act as purchasers that are responsible for achieving public goals like quality, access to care, and affordability of healthcare services (4, 5). They may accomplish this by negotiating annually with healthcare providers on the basis of volume, quality, and prices. The idea is that when healthcare providers compete with one another to gain the preference of health insurers and health insurers compete to attract enrollees, both parties are motivated to reduce costs and maintain high-quality care. In The Netherlands, managed competition was introduced in 2006 by the Dutch Health Insurance Act (HIA), which assigned insurers the roles of efficient, customer-oriented directors of care. They must control costs, ensure access to care within reasonable time and distance, provide policy information, and mediate to ensure high-quality care (6, 7, 8, 9).

In The Netherlands, health insurers are essentially not-for-profit organisations and do not distribute profits to shareholders or private owners in practice. The Dutch healthcare system is based on solidarity and accessibility, with accessibility encompassing aspects such as availability and affordability of care. The system ensures everyone has access to insurance, regardless of their health status or income (10). Insurers collect premiums from policyholders and are required to use these funds to cover healthcare costs and offer insurance in line with legal guidelines. While health insurers are not focused on maximising profit, they can generate financial surpluses through efficiency or by building reserves for future healthcare needs. However, these surpluses are not distributed to shareholders in practice but may be reserved for financing future healthcare costs or improving service delivery.

Each year, health insurers negotiate with healthcare providers to purchase healthcare for their enrollees. Health insurers can negotiate better terms with healthcare providers if they can direct enrollees to preferred providers (1, 11, 12). In the Dutch healthcare system, which is based on managed competition, health insurers can use selective contracting. This means that they do not contract all providers, and care from non-contracted providers may not be fully reimbursed. Furthermore, health insurers can also offer healthcare advice to direct enrollees to preferred providers, such as recommending suitable providers, managing waiting lists, and promoting health. Trust in health insurers is crucial for public acceptance and the effectiveness of selective contracting and health advice (13, 14). If these instruments cannot be used to steer enrollees toward preferred providers, this reduces the competition that healthcare providers experience, while

competition is what drives the health system to work as intended. When the feeling of competition is absent, health insurers will lose their bargaining position and will be constrained in their ability to steer costs and/or quality of care.

Trust in health insurers in The Netherlands appears to be low. According to earlier research, in 2022, only 26% of respondents indicated that they agree, or completely agree, with the statement that they trust health insurers completely (15). This is lower than, for example, the level of trust found in 2022 in general practitioners (92%) or hospitals (77%) in The Netherlands (15). Furthermore, it seems to be lower than the level of trust in health insurers reported in the literature in Switzerland and Germany, which have healthcare systems similar to that of The Netherlands (16, 17, 18, 19). According to the literature, different factors may contribute to this low level of trust. First, trust in health insurers may be influenced by health insurers being perceived by enrollees as for-profit organisations (18). This perception can lead enrollees to believe that insurers prioritise profits over patient care. A second factor mentioned in the literature that has a negative impact on trust is prior disputes with health insurers (20). When enrollees face conflicts or challenges with their insurers, such as reimbursement issues or lack of customer support, their trust in the insurer's reliability diminishes. A third factor that may affect trust in the health insurer is bad publicity of health insurers in the media (18). Negative media coverage can shape public opinion and reinforce doubts about the insurer's integrity and performance. Fourth, little knowledge among enrollees about the role of health insurers in the healthcare system may be a factor that negatively affects trust in the health insurer (18). A lack of understanding about how insurers operate and their responsibilities can lead to misconceptions and mistrust.

In this study, we aim to understand the origins of this low trust in health insurers, as trust in health insurers can be linked to their ability to steer enrollees toward healthcare providers (13, 14). As described earlier, this ability is essential for creating competition between health insurers and healthcare providers, which determines whether the system of regulated competition functions as intended. Although the four reasonings for low trust derived from literature seem plausible, there has been little qualitative research on how enrollees perceive health insurers regarding these aforementioned subjects. By examining the enrollees' perceptions regarding these issues, key elements can be identified that encourage trust among enrollees.

This study therefore attempts to gain a more in-depth understanding of how enrollees perceive health insurers, how these perceptions are formed, and how these perceptions may be related to trust. We obtain this understanding based on four research questions

that have origins in the four mentioned factors in the literature that are said to play a role in enrollees' trust in health insurers:

- How do enrollees perceive health insurers in general?
- What are the experiences of enrollees and their relatives with health insurers?
- What is the role of the media in enrollees' perceptions of health insurers?
- What do enrollees perceive as the tasks and roles of health insurers in the healthcare system?

This study is particularly relevant for The Netherlands and other countries with healthcare systems based on managed competition, as trust plays a crucial role in ensuring that the system functions as intended. Additionally, for countries with other healthcare systems where health insurers play a role, such as in the private health insurance model in the US (21), this study may offer relevant insights. However, the role of the health insurer in systems other than managed competition may be structured differently or may not exist at all. For instance, in systems that are typically based on the Beveridge model, such as the NHS, where healthcare is funded by the government, consumers do not need to choose between different insurers (21). In such systems, questions related to trust in the government or the healthcare system in general might be more relevant than those related to trust in health insurers.

5.3 Materials and methods

Study design and participants

To obtain data for this study, semi-structured interviews were conducted. The Nivel Dutch Health Care Consumer Panel (DHCCP) was used to recruit interview participants for this study. The DHCCP's main goal is to gauge Dutch people's expectations and experiences with healthcare, as well as their opinions and knowledge about the Dutch healthcare system (22). The DHCCP is an access panel consisting of about 11,000 people at the moment of the study. They regularly and voluntarily fill out questionnaires on healthcare. Information about several background characteristics of the panel members is available.

Membership to the panel is by invitation only. Individuals cannot join on their own initiative. Upon joining, panel members are informed about the panel's purpose, scope, methods, and usage. Based on this information, participants can consent to participate. Written informed consent, which has been allowed to be given digitally since 2020, is obtained when a new member registers to the panel. Pseudonymised data are analysed and processed in accordance with the privacy policy of the Dutch Healthcare

Consumer Panel. The panel adheres to the General Data Protection Regulation (GDPR) (22). According to Dutch legislation, approval from a medical ethics committee is not required for research conducted using the panel (23). Participation is voluntary, and members are not obligated to participate in surveys or answer specific questions. They can terminate their membership at any time without providing a reason. Returning the completed questionnaire is considered consent to participate. Panel members are informed about the questionnaire's subject and length in the invitation letter.

In February 2023, a sample of 1500 panel members received the annual questionnaire regarding health insurance. The sample was chosen according to criteria that reflect the demographic composition of the Dutch population aged 18 and older in terms of sex and age. Of the respondents in this questionnaire who indicated that they were willing to be contacted for an interview (n = 183), seventeen participants were selected and invited for interviews. The sample was selected based on respondents' level of trust in health insurers, with eleven participants chosen who reported (very) low trust and six participants selected who reported (very) high trust. Seventeen participants were invited for interviews. In the last interviews, it appeared that no new information or themes emerged, indicating that data saturation was reached. All participants were informed in writing and verbally prior to the interview about the goal and scope of the interview and gave consent to participate. After the interview, the data were pseudonymised, analysed, and processed in accordance with the DHCCP's privacy policy and the GDPR.

Data collection

The first author (F.J.P.v.d.H.) conducted all seventeen interviews during March and April 2023. The interviewer had no personal or professional connection with any of the participants. A topic list that included open-ended questions relevant to the four research questions of the study was used to guide the interview process (see Appendix, Table 5.A1). The questions in this topic list were based on the four previously mentioned concepts from the literature that are said to play a role in enrollees' trust in health insurers. Together, three of the authors (F.J.P.v.d.H., A.E.M.B., and J.D.d.J.) collaborated to develop the topic list. All the researchers involved are employed at Nivel. The interviews took thirty to forty-five minutes on average. The interviews were conducted via video call using Microsoft Teams or over the phone, based on each participant's preference. With the participants' consent, audio recordings of every interview were made for the purpose of verbatim transcription.

Data analysis

Braun and Clarke's six-step method for inductive thematic data analysis was used to derive themes from the data (24, 25). The first step consisted of familiarisation with the data. After the completion of all the interviews, the audio recordings underwent verbatim transcription and pseudonymisation. To become comfortable with the data, the researchers reviewed all the interview transcripts. Then, in the second step, the researchers created codes to capture interesting data (open coding). One researcher (F.J.P.v.d.H.) coded the first four interviews, while another researcher (S.H.) coded the remaining thirteen interviews. The first two interviews coded by S.H. were discussed between F.J.P.v.d.H. and S.H. In addition, to increase the reliability of the study, a third researcher (A.E.M.B.) coded four interviews independently (26). The differences in assigned codes were debated by F.J.P.v.d.H., S.H., and A.E.M.B. Subsequently, in the third step, the researchers searched for themes. A coding tree (axial coding) was constructed according to the predetermined themes based on the research questions (see Appendix, Figure 5.A1, Figure 5.A2, Figure 5.A3 and Figure 5.A4). During the fourth step, the researchers refined and reviewed the themes. By methodically perusing the coded transcripts, it was possible to validate the predetermined themes. Eventually, the constructed coding tree was evaluated by different members of the research team to increase the reliability of the themes that were investigated in connection to the data (selective coding) (26). In the fifth step, the themes were defined and named. Thereafter, distinct summaries of the results of the interviews were written to give a thorough rundown of the research. The sixth and last step, writing the report, included gathering the themes and summaries into a comprehensive overview of all the findings. In addition, a "peer debriefing" technique was implemented to strengthen the study's credibility (26). In this step, a panel of peer researchers who were not involved in the study met to discuss the draft article. A few changes were made to the draft version based on this peer feedback. The interviews were coded using the MAXQDA software (Release 22.1.1).

5.4 Results

Participants

The interviews were completed by all seventeen participants. The gender distribution, with eight male and nine female participants, was nearly equal. According to the background information about the Nivel Dutch Health Care Consumer Panel, the youngest participant was 31 years old, the oldest was 81 years old, and the average age of the participants was 51 years old. Seven participants were highly educated (professional higher education or university), eight had a medium level of education

(secondary or vocational education), and one had a low level of education (none, primary school or pre-vocational education). For one participant, no data were available. Eleven participants reported having one or more long-term or chronic conditions, while six participants reported having no long-term or chronic conditions. There was one participant with a low income (less than EUR 1750 net per month), eleven with a medium income (between EUR 1750 and 2700 net per month), and five with a high income (more than EUR 2700 net per month).

Interview results

In this section, we answer the four research questions one by one based on the results of the interviews. A schematic overview of the results of the interviews (a coding tree) can be found in Figure 5.A1, Figure 5.A2, Figure 5.A3 and Figure 5.A4 in the Appendix.

How do citizens view health insurers in general?

In general, the participants' perceptions of health insurers are favourable. Most participants are satisfied with the service and contact provided by the health insurer, such as support with healthcare claims or telephone assistance and answering questions. The interviews revealed that a number of participants perceive the health insurer purely as a financial handler and are satisfied with how this role is performed. Other participants recognise that the responsibilities of the health insurer are broad, including roles such as guaranteeing good accessibility and quality of care or ensuring the equitable distribution of healthcare costs.

However, participants' perceptions about health insurers are not only positive. For instance, several participants feel that health insurers do not represent the interests of the individual. They perceive health insurers as being overly concerned with financial matters. They feel that the focus of health insurers is primarily on reducing costs and believe that more attention should be given to the individual circumstances of their enrollees. Regarding these individual circumstances, one of the participants made the following statement:

> *"I also find the human aspect important. You know, that individual circumstances are taken into account. Because people are biological and biology is not an exact science, sometimes there are situations that fall outside the norm. And it's nice to put everything into the system, but sometimes there's no box that person fits into, you know, and then you have to tweak things a bit, and I find that willingness to do so important as well." (Participant #3)*

One participant believes that the focus on money is especially noticeable regarding the issue of medication shortages, as indicated by the following statement:

> *"I think they have far too much power and that it's all about money. I also believe that their privatisation, which happened years ago, was a bad decision (…) It's really all about money. And people who need medication always have to... Well, at the moment, it's a hot issue with medications being unavailable. People suffer too much from this. I think it's not focused on care, which is what it should be about."*
> *(Participant #12)*

A few participants indicated that health insurers' focus on reducing costs sometimes also comes at the expense of the efficient use of resources in care. One participant, for example, mentioned having difficulty obtaining sufficient incontinence supplies for her father because the health insurer only allowed two diapers per day, which was insufficient. The participant said that after much effort, this was increased to eight diapers per day, which was too many. This led to frustration for the participant over the rigid rules of the health insurer and the impression that resources in healthcare could be used more efficiently.

Several participants have an inaccurate perception that health insurers in The Netherlands operate as for-profit organisations that distribute profits to shareholders. One of the insured commented on this belief as follows:

> *"Operationally, they do good work and facilitate the flow of money. I don't have much trust in their interventions. Look, they are ultimately all companies that need to make a profit and have shareholders, and I think that shareholders are prioritised over patients."*
> *(Participant #15)*

Others indicated that they do not know whether health insurers are allowed to make a profit, as follows:

> *"I've never wondered about it. It seemed so illogical to me that they would make a profit, that I've never questioned it. But do they?"*
> *(Participant #11)*

With regard to differences in view of their own health insurer versus other health insurers, most participants do not view them very differently. Some of these participants indicated only perceiving differences in premiums and policy conditions between health insurers. However, the fact that basic insurance is the same for all citizens in The Netherlands makes the differences small, according to some of them.

What are the experiences of citizens and their relatives with health insurers?

Participants have varying experiences with health insurers, including personal experiences and experiences heard from relatives or friends. Some participants indicated that they like their health insurer and that they are satisfied with their health insurance company because they have not experienced any problems with them. Other participants shared examples of negative experiences. An example of a negative experience is that payments due to the mandatory deductible in The Netherlands are an issue. A participant mentioned, for example, that a relative's unexpectedly high medical expenses resulted in problems, as follows:

> *"My brother-in-law was once picked up by ambulance somewhere and taken to a hospital not here in our area, but to another hospital because there was no room here. (…) Later he got a bill and that was because he did have a higher deductible I think. And that bill from the ambulance then had to be paid in stages because they didn't have more money in their bank account. And then I think that just shouldn't be allowed."*
> *(Participant #14)*

Additionally, some participants indicated that in their experience, the health insurer prioritises money over quality and efficiency of care. One of the participants gave an example involving the price of prescribed drugs. She indicated that she has observed that medications are currently being phased out and replaced with cheaper options that do not always work or are not appropriate for people at all because of side effects, as follows:

> *"My mother had medication for blood pressure, which worked perfectly without side effects, and all of a sudden it wasn't allowed to be given anymore. And then I asked the pharmacist, 'Why not?'. And so it was because 0.01 per cent of a cent per pill was more expensive than the alternative that she would get side effects from. But they get them because those 0.01 percentage points are important. And then you have more side effects, but you have a cheap drug, so yes, that creates aversion."*
> *(Participant #3)*

During the interviews, it emerged that not all participants found that it was simple to contact their health insurer. One participant mentioned that they faced waiting times on the phone before reaching their health insurer, depending on the time they called. Furthermore, another participant expressed dissatisfaction with her experience with health insurers using chatbots for customer service, presumably to save costs. In addition, some participants indicated that an increasing number of digital skills are needed to get in touch with health insurers, such as the need to use a digital identification system used in The Netherlands that allows residents to securely access government services online (called DigiD), as follows:

> *"Well, I have to say, my health insurance company does everything via e-mail. (…) That's going to be a problem. At one point you could only log in with your DigID and I didn't have a DigID. And then you had to log in with a smartphone. I don't have a smartphone, I don't have a cell phone, I'm one of those people who doesn't have a cell phone."*
> *(Participant #3)*

What is the role of the media in citizens' perceptions of health insurers?

Participants indicated that they had seen different types of reporting about health insurers in the media. Participants mentioned that they had seen health insurers' advertisements, especially at the end of the year during the period between mid-November and December 31, when enrollees can switch health insurers. A number of participants reported seeing newspaper reports and critical consumer programmes on TV. According to one participant, the media frequently brings up the fact that health insurers generate profits. Another participant reported seeing items in the media that address the role health insurers play in achieving efficiency in healthcare by controlling costs, as shown in the following statement:

> *"Then I see particularly the items about to what extent the health insurance companies are interfering with the efficiency of care, the cost of certain drugs and whether or not to use certain drugs and the trade-offs they have to make between care that is used very infrequently versus very widely used care and how those costs should be settled."*
> *(Participant #1)*

Several participants indicated that they are aware that the media is often not objective and that media coverage is often emotionally driven. This emotional reaction towards the health insurer can be both positive and negative. According to one participant, large health insurers receive the majority of the media attention, with smaller health

insurers receiving less attention overall. Some participants expressed their opinions regarding health insurers portrayed in television shows. One of the participants made the following statement:

> *"Or things that have unfortunately gone less well or positive, yes. Often the negatives are expressed anyway. That's good for the audience ratings, though."*
> *(Participant #10)*

Another participant made the following statement:

> *"It's often negative. But I also think because that's kind of what's out there. But there's also a fallacy in that because everything that stands out comes out in the news. So if a hundred things go right, you don't hear about it. Does one thing go wrong? That makes the news."*
> *(Participant #2)*

Some participants indicated that their perception of health insurance companies is negatively influenced by the media, as follows:

> *"Yes, my perception does get negatively affected by that, and that's mainly because then they kind of take it easy off. And what I say is that I think yes, they really only look at those costs and how they can keep the price as low as possible. And that sometimes comes at the expense of patient care, so to speak."*
> *(Participant #7)*

What do citizens see as the tasks and roles of health insurers in the healthcare system?

Participants were asked what they see as tasks of the health insurer in the healthcare system. This led to different answers. Some participants indicated that it is the health insurers' duty to ensure the accessibility of care. According to these participants, health insurers have a responsibility to purchase care and to guarantee that care is distributed fairly. One of the participants made the following statement:

> *"I do expect that they ensure these negotiations go well so that everyone can access care everywhere. And I believe that is not always the case now, that you can really go everywhere, but rather to a large extent. But yes, I would expect them to make care as accessible as possible for people. So that you have the choice to go somewhere yourself."*
> *(Participant #7)*

With regard to the accessibility of care, another participant made the following statement:

> *"Well, ensure that the patient can make a choice from the treatment options that are available. So options of hospitals nearby or far away."*
> *(Participant #9)*

One of the participants specifically mentioned that attention should also be paid to the accessibility of care for rare diseases, as follows:

> *"I also expect that they enforce a certain level of care, meaning that they say [to healthcare providers] 'you must also provide this care', even if it yields little benefit for the caregivers themselves in that regard. Focusing more on rare diseases in particular."*
> *(Participant #1)*

Furthermore, some participants think that insurers should play a role in critically evaluating reimbursements. According to several participants, the health insurer should more closely monitor what constitutes truly effective care. Some participants mentioned that homeopathic treatments are not covered by health insurers, while certain treatments prove to be effective for some patients. One participant made the following statement about this issue:

> *"Well, I heard this week that homeopathic remedies don't work at all. But why do they still exist? Look at what does work and maybe promote that, because there are definitely things that are effective. I think that through natural medicine there are enough options to solve problems. Unfortunately, this is not always reimbursed, and that's a shame."*
> *(Participant #16)*

In addition to the accessibility of care, some participants also consider guidance on suitable care to be an important role. They expect the health insurer to identify solutions for issues related to care or medication supply and to maintain contact with all healthcare providers. A few participants also see facilitating accessible and personal contact as an important role for health insurers. They expect the health insurer to provide customised services in which the interests of the individual patient are represented. A participant made the following statement:

> *"I do think it's very important that, even though everything is digital nowadays, insurers remain reachable by phone. It's crucial that everyone can easily contact their insurer if there are things that need to be discussed."*
> *(Participant #6)*

Transparent communication regarding policy conditions was also mentioned by some participants as an important role. Participants indicated that policy conditions are not always clearly formulated and that there is a lack of transparency regarding the financial aspects and costs of care. Furthermore, they consider it important for the health insurer to communicate which providers they have and have not entered into contracts with. One participant made the following statement:

> *"Well, I think it's very important that they [health insurers] are very transparent about this [contracted healthcare providers]. Actually, every year I find it strange that you hear and see on the site that it is not yet known whether we will have a contract with them next year. Surely that should just be known the moment we get the choice to choose a health insurer."*
> *(Participant #8)*

Furthermore, some participants believe that it is important for the health insurer to be transparent about any profits it may make, as well as how any remaining revenue is used. Some of the participants suspect that the premium is spent on organisational costs, including advertising. They believe that the costs and benefits of the health insurer should be openly disclosed. One participant who was not aware of what health insurers do with profits made the following statement:

> *"No, but I do think it's important that those, that they provide that. Because ehm, actually you should just know what your health insurer does with its profits of course."*
> *(Participant #14)*

According to some of the participants, health insurers also play an important role in controlling and distributing healthcare spending. These participants indicated that health insurers have a role to play in healthcare purchasing, making difficult decisions about healthcare spending, and controlling healthcare costs. One participant pointed out that it is important for the health insurer to keep income and expenses balanced, as follows:

"The main task is to manage and disburse the pot of insurance money according to the clients' or patients' demand for care. Then. The main part of that task is balancing the incoming flows and the outgoing flows and they can turn to that by increasing premiums on the one hand or keeping healthcare costs in check on the other."
(Participant #1)

In addition to distributing healthcare spending, one participant considers it a duty of the health insurer to monitor and steer the quality and efficiency of care. In addition, a few participants believe that it is critical for health insurers to maintain high standards of care, compensate healthcare workers well, and prepare for the future (sustainable care). According to one participant, health insurers should make investments in the medical field to prepare the Dutch healthcare system for the future, as follows:

"Should you not put that [care premium] somewhere else, for instance into making more staff available in the end? Because we do face such a problem together. An ageing population in The Netherlands. More and more people are getting diseases and therefore more demand for care. And I do wonder whether the health insurers are sufficiently aware that this demand for care will soon have to be met. So the quality is good now. But what about ten years from now? I'm curious about that."
(Participant #7)

Several participants believe that health insurers must prioritise preventive measures more. When putting prevention programs and strategies into place, health insurers ought to take the initiative more often, according to these participants. One of the participants indicated that health insurers should take a leading role in promoting healthy living among citizens and expressed the following opinion:

"They should try that, thus with education. They are already working on that. Towards healthier living of human beings. And they have to take the lead in that even more. But they don't have to do that alone, but they can initiate that. Yes, they have to finance it, so I also think they should have a leading role in that."
(Participant #15)

5.5 Discussion

The aim of this study was to gain an in-depth understanding of how enrollees perceive health insurers, what factors contribute to these perceptions, and how these perceptions may be related to trust.

First of all, according to the literature, trust in health insurers may be influenced by health insurers being perceived by enrollees as for-profit organisations (18). Our study indicates that some participants believe that health insurers prioritise money over the quality and efficiency of care. This is in line with results from previous research, which has shown that over two-thirds of enrollees think that health insurers consider saving money more important than purchasing the care they need (27). Additionally, some participants feel that health insurers are mainly focused on profit maximisation instead of delivering quality care. The impression that financial considerations outweigh patients' health and well-being may potentially lead to a feeling of alienation and mistrust, as enrollees may not feel supported in their search for the best care. In practice Dutch health insurers do not distribute profits, and there are rules governing their reserves. This did not appear to be known to all participants. Several participants mistakenly believed that health insurers in The Netherlands operate as for-profit organisations that distribute profits to shareholders. Health insurers could therefore focus more on communicating that they are organised as not-for-profit cooperatives, as well as disclosing what they do with their revenue. Furthermore, it is essential to explore how negative perceptions can be changed by, for example, providing more transparency regarding the decisions made by health insurers in terms of quality and costs when purchasing care. Our results and recommendations are similar to those of the study by Yildirim et al., which also noted that the majority of participants view health insurers as profit-driven organisations and recommended that more attention should be given to addressing the misconceptions surrounding this perception (28).

Secondly, experiences with the health insurers are mentioned in the literature as one of the factors that contribute to trust in health insurers (18). Therefore, we investigated our participants' experiences with health insurers and where they see room for improvement. Some participants reported unexpected payments due to the mandatory deductible as a negative experience with health insurers. The experience of having to pay may undermine trust, as this can create a financial burden for individuals, especially those with lower incomes or chronic health conditions that require frequent medical visits. This financial strain may lead to feelings of frustration and resentment towards the insurer. It is important for the health insurer to be transparent about payments due to the deductible, as a lack of clarity around payments may undermine trust in health insurers (27).

Another issue participants reported from their experience was the contact options provided by the health insurer. Some participants mentioned long waiting times on the phone. Furthermore, a participant mentioned the use of chatbots, which create a sense of distance and impersonality. The fact that enrollees generally do not favour this mode of communication is in line with previous studies, which found that insurance enrollees typically tend to reject interacting with chatbots (29, 30, 31, 32, 33). Additionally, some participants find that an increasing number of digital skills is required to contact health insurers, posing an extra barrier. This finding shows how important it is for health insurers to offer personal contact options.

A third factor that is mentioned in the literature and may contribute to trust in health insurers is media coverage (18). The results of our study reveal that according to the participants, the media often highlights profitability and cost control with respect to health insurers, evoking mixed reactions. While some participants critically assess media coverage and are aware of its emotionally charged nature, others report a negative influence on their perception of health insurers. The literature shows that public trust is closely linked to communication about the factors that create value for stakeholders (34). Positive reporting on how health insurers are committed to issues that create value for healthcare and society, such as quality of care, accessibility, patient satisfaction, innovation, prevention, and cooperation with healthcare providers, may contribute to a more positive perception. This may translate into greater public trust (34). In addition, umbrella organisations of healthcare providers and patient associations may be strong allies in regaining public trust (35). If they openly express support for purchasing plans from health insurers, it is likely that their members will also support these plans (35).

Lastly, a lack of knowledge among enrollees about the role of health insurers in the healthcare system has been identified in the literature as negatively affecting trust in the health insurer (18). We therefore examined what roles participants attribute to health insurers. Participants expect health insurers to make care accessible and fairly distributed, closely monitor what constitutes truly effective care, provide guidance on appropriate care, and ensure transparent communication about policy conditions and healthcare costs. Additionally, they emphasise the importance of preventive measures and proactive initiatives in promoting public health. The variety of expectations surrounding the tasks and roles of health insurers mentioned by participants show that there is knowledge among enrollees about the different roles of health insurers in the healthcare system. However, not all enrollees recognise the roles of the health insurer in their entirety, and not all expected roles align with the actual roles, leading to false expectations. For instance, some participants believe that health insurers decide

what is included in the basic health insurance package, noting that homeopathic treatments are not covered. However, in The Netherlands, the National Health Care Institute (Zorginstituut Nederland) actually makes these decisions and advises the Minister of Health, Welfare, and Sport (VWS), while health insurers are responsible for implementing and adhering to these decisions. Research by Yildirim et al. shows similar results regarding the extent to which policyholders in The Netherlands are fully aware of the purchasing role of the health insurer (28). To increase knowledge, health insurers could highlight their role in purchasing care, ensuring access to care, setting premiums, verifying claims, and promoting preventive and sustainable care in communications, thereby fostering a full understanding and appreciation of their services. Furthermore, communicating about the execution of their broad role allows enrollees to see the execution of important tasks reflected. This is important because previous research has shown that enrollees who feel that health insurers do not perform important tasks have less trust in health insurers (27).

We recommend clear communication about health insurers' broad role, non-profit status, decision-making regarding quality and costs when purchasing care, and enrollees' payment obligations, as this may improve trust in health insurers; however, it is important to note that the effectiveness of communication may also depend on the recipients' health insurance literacy and the communication channels used (36, 37, 38, 39, 40). Additionally, not everyone may be sufficiently interested in information about health insurers to actually engage with it. Health insurers and the government should therefore tailor their communication about health insurers to different target groups and ensure that this information is accessible through various channels, as this may improve citizens' attitudes and engagement (41, 42).

Strengths and limitations

A strength of this study is that it is one of the first to qualitatively examine, through interviews, the factors that the literature associates with enrollees' trust in health insurers. In addition, a notable strength of this study is that by using the Nivel DHCCP, we were able to approach citizens with a diversity of background characteristics, since this information is available for the panel members. By conducting the interviews not only via Teams but also by phone, less digitally skilled participants were also able to participate. Nevertheless, a limitation is that the Nivel DHCCP lacks people with low literacy skills or people with a migrant background who do not speak Dutch. As a result, these groups were not represented in this study. To include them in the research, we would need to recruit in a different way, for example through snowball sampling or indigenous field worker sampling (43). Another limitation is that although participants were partly selected based on their reported level of trust in the questionnaire they had completed, this did

not always fully align with their interview responses. Initially, we mainly aimed to select participants with low trust to understand their reasons. However, the interviews revealed more variation in trust levels than expected. Although the questionnaire led us to select eleven participants with low trust and six with high trust, the interviews showed five with low trust, six with high trust, and six who were neutral. While this shift was not intended, it may have provided us with a broader and more nuanced understanding of the factors contributing to trust or distrust in health insurers, enriching our results with diverse perspectives as we spoke to different groups represented in society. In addition, while the final group was diverse in gender, age, income, and health status, the respondents were all Nivel DHCCP panel members. These panel members may have an above-average interest in healthcare, leading to a potential bias. Furthermore, certain groups, such as participants with low education, participants with low literacy, and migrants, were underrepresented. Although data saturation was reached, it is possible that if we interviewed people from these groups, additional perspectives might have emerged. Future research could focus on perspectives from these specific groups. Finally, the findings of our study are oriented on the Dutch situation and therefore might not be entirely applicable to other countries' healthcare systems. While the results should be interpreted within the context of the Dutch healthcare system, findings such as the importance of transparency are also relevant in the international context.

5.6 Conclusions

This study highlights the diverse perceptions of health insurers among enrollees. While some view insurers primarily as financial managers, others acknowledge their broader role in ensuring accessibility, quality of care, and equitable cost distribution. The literature indicates that trust in health insurers in The Netherlands is generally low. To improve perceptions and foster trust, insurers could enhance communication about their non-profit status and the use of profits. Increasing transparency about decision-making regarding the quality and cost of care could also help change negative perceptions, as previous studies have suggested that transparency can enhance trust (28, 44).

Negative experiences, such as unexpected payments and impersonal contact methods, may undermine trust. Therefore, clear communication about payment obligations and maintaining personal contact options are important for improving trust. The media's potential influence suggests the need for strategic communication about insurers' contributions to healthcare, highlighting their role and impact positively. Lastly, increasing awareness through transparent communication about the health insurers' broad role and activities can help build trust. Further research could explore effective communication strategies to enhance transparency towards enrollees.

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5.8 Appendix

Table 5.A1. Interview guide.

Interview guide question	Relevant research question
1. What can you tell me about how you view health insurers? a. Do you view your own health insurer differently compared to other health insurers? Why or why not, can you explain?	A. How do enrollees perceive health insurers in general?
2. What can you tell me about your personal experiences with health insurers?	B. What are the experiences of enrollees and their relatives with health insurers?
3. Do people in your area ever share their experiences with health insurers with you? a. If so, what kind of experiences do people around you share?	B. What are the experiences of enrollees and their relatives with health insurers?
4. Do you ever read media reports about health insurers? a. If so, what type of messages do you see in the media?	C. What is the role of the media in enrollees' perceptions of health insurers?
5. How much trust do you have in health insurers? a. Can you explain that?	A. How do enrollees perceive health insurers in general?
6. What do you expect from a health insurer? a. What do you think the role of health insurers is in the healthcare system? Why? b. What do you think are important tasks for health insurers? Why?	D. What do enrollees perceive as the tasks and roles of health insurers in the healthcare system?
7. What is your opinion about how health insurers carry out their tasks? Why?	D. What do enrollees perceive as the tasks and roles of health insurers in the healthcare system?
8. What do you think health insurers can do better or differently?	D. What do enrollees perceive as the tasks and roles of health insurers in the healthcare system?
9. Do you think health insurers should be allowed to make a profit? a. What do you know about that? b. If so, what do you think about that?	A. How do enrollees perceive health insurers in general?
10. What do you think about the fact that most health insurers are associations or cooperatives; non-profit organisations?	A. How do enrollees perceive health insurers in general?

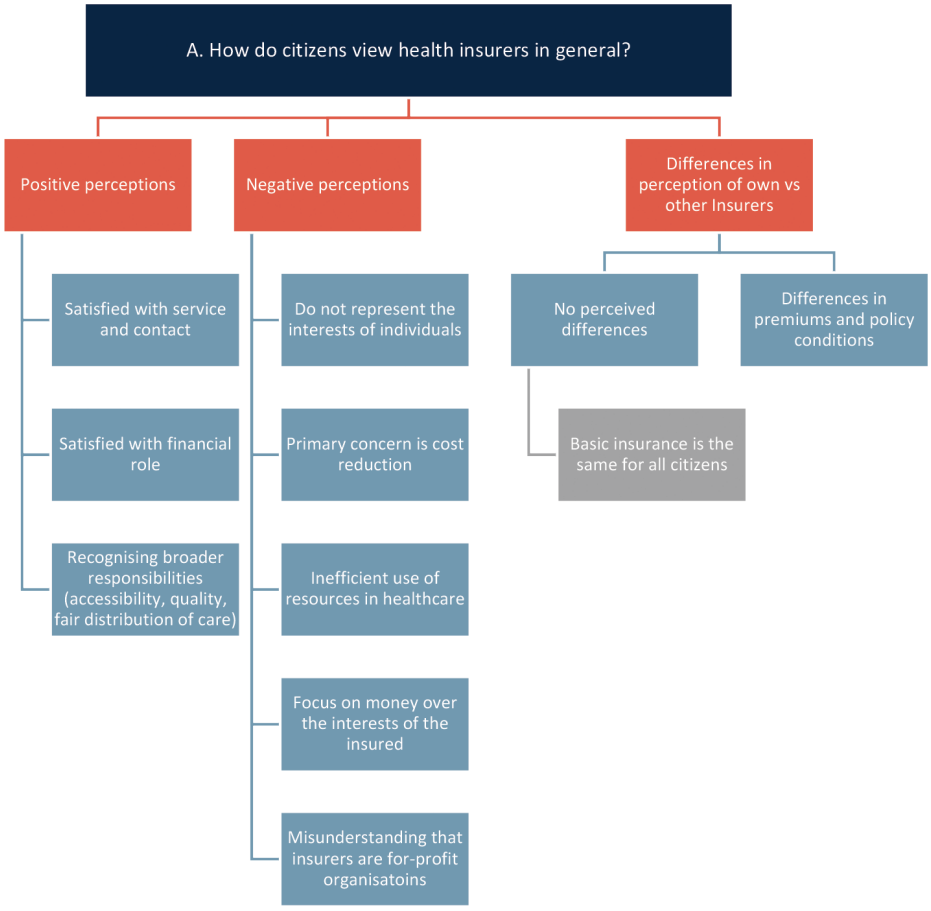

Figure 5.A1. Coding tree related to research question 1: 'How do citizens view health insurers in general?'

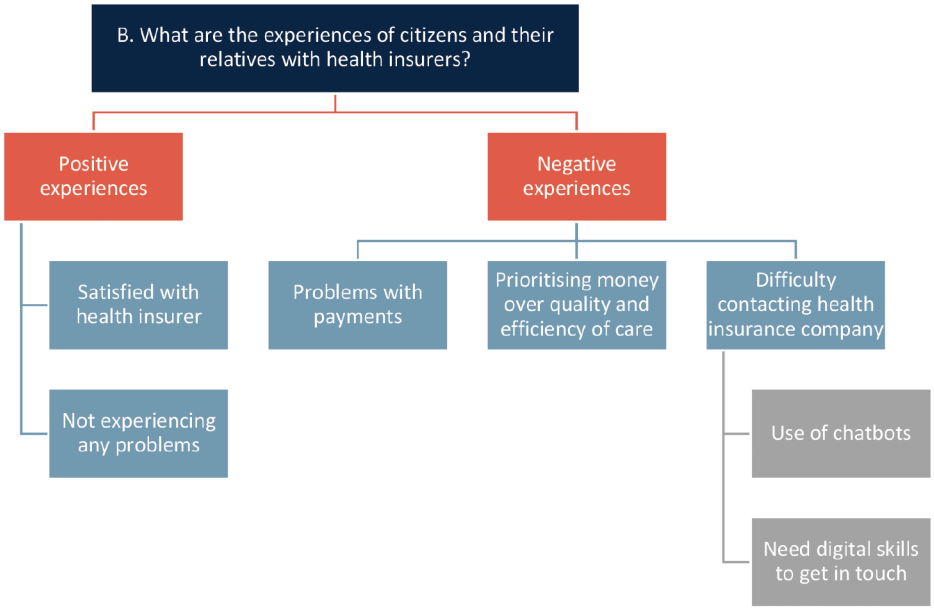

Figure 5.A2. Coding tree related to research question 2: 'What are the experiences of citizens and their relatives with health insurers?'

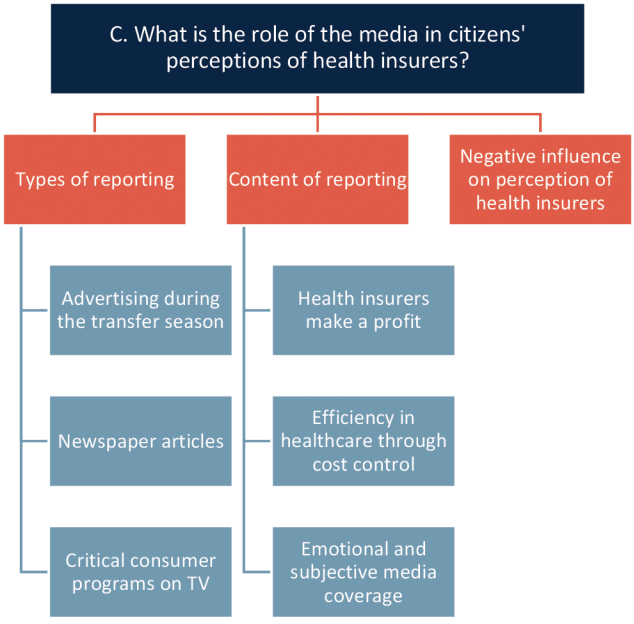

Figure 5.A3. Coding tree related to research question 3: 'What is the role of the media in citizens' perceptions of health insurers?'

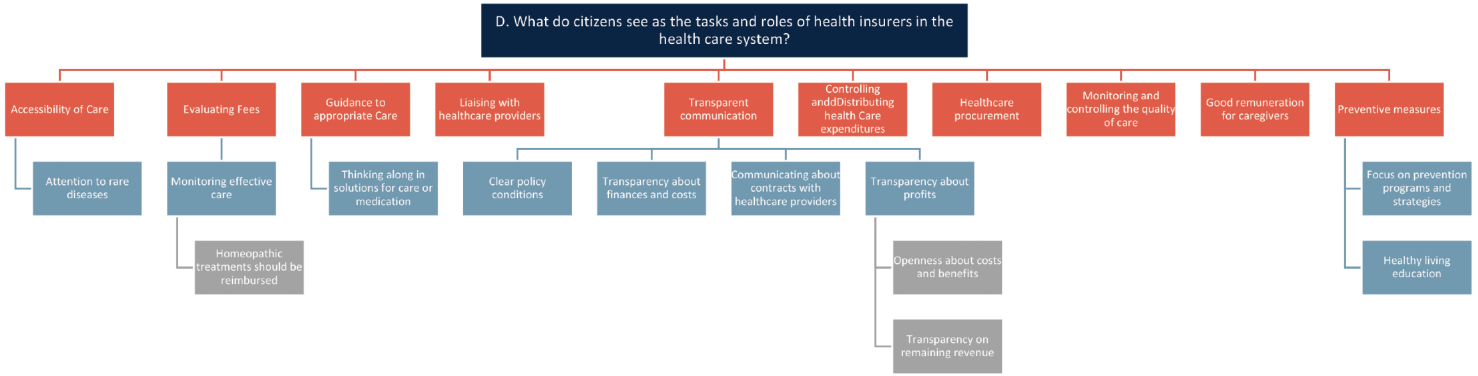

Figure 5.A4. Coding tree related to research question 4: 'What do citizens see as the tasks and roles of health insurers in the healthcare system?'

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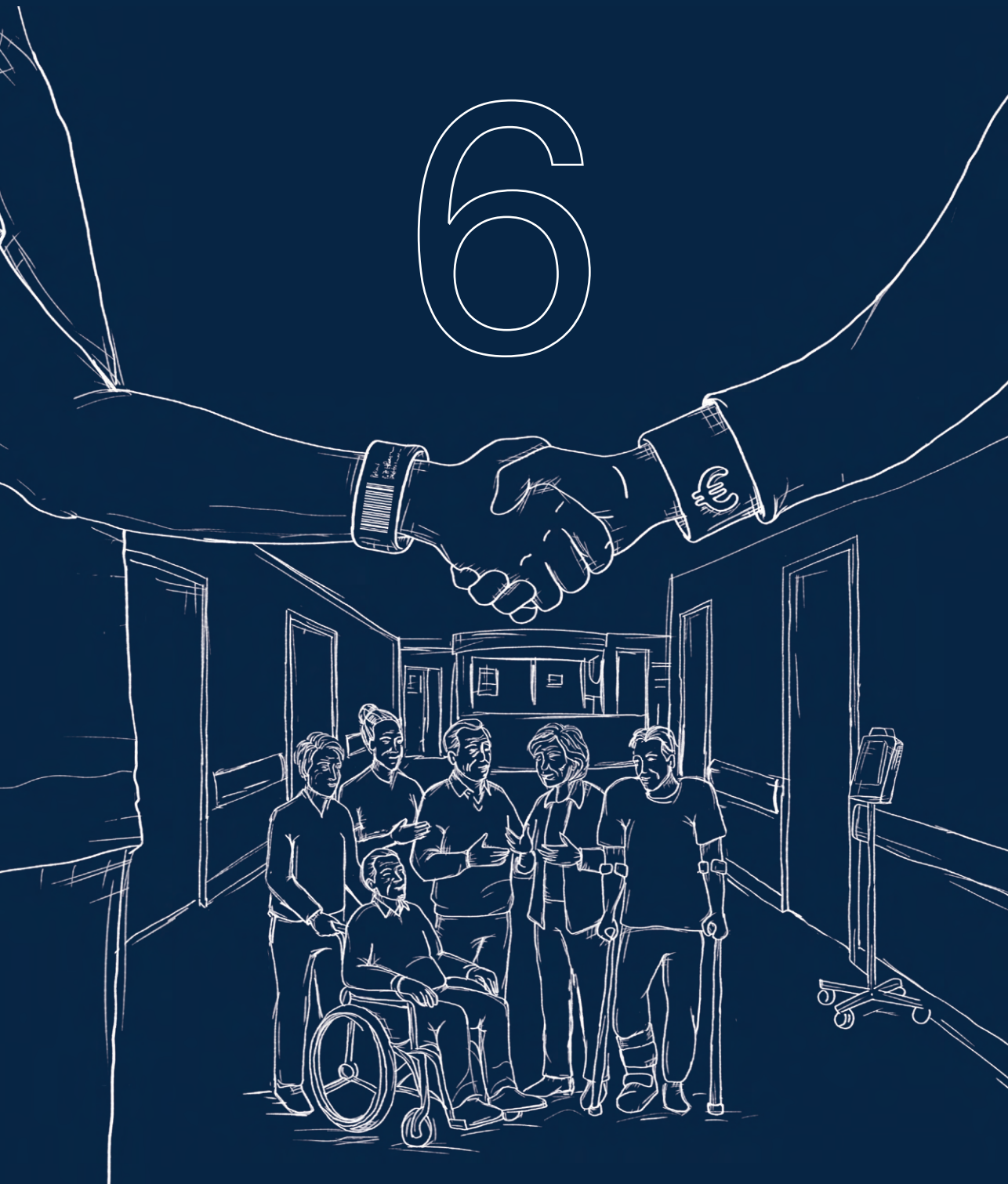

Chapter 6

The relationship between enrollees' perceptions of health insurers' tasks and their trust in them

van der Hulst F. J. P., Prins B. A., Brabers A. E. M., Timans R., de Jong J. D.

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6.1 Abstract

Background

Health insurers' role in healthcare systems based on managed competition comprises various tasks. Misconceptions about these tasks may result in low public trust, which may hamper health insurers in performing their tasks. This study examines the relationship between enrollees' perceptions of health insurers' tasks and their trust in them.

Methods

A questionnaire in November 2021 asked respondents to indicate to what extent health insurers have to perform certain tasks, whether they actually perform them, and whether they think these tasks are important. Trust was measured using a validated multiple-item scale. The results from 837 respondents (56 per cent response rate) were analysed using multivariate regression models.

Results

A larger mismatch between enrollees' expectations about health insurers' tasks and their actual statutory tasks is related to less trust regarding the categories 'controlling healthcare costs' and 'mediation and quality of care'. Second, a larger mismatch between expectations and actually performed tasks is related to less trust for all categories. Importance of tasks only affects this relationship concerning 'informing about price and availability of care'.

Conclusions

This study emphasises the importance of reducing enrollees' misconceptions as trust in health insurers is necessary to fulfil their role as purchaser of care.

6.2 Background

Managed competition plays an important role in the healthcare system of several countries, such as the Netherlands, Germany, and Switzerland (1–3). Based on the theory of managed competition, health insurers function as the prudent purchasers of care on behalf of their enrollees (2, 4, 5). Health insurers should negotiate each year with healthcare providers about the price, quantity, and quality of care (6, 7). As health insurers compete with each other in the health insurance market, it is expected that they have an incentive to offer an attractive health insurance policy. Health insurers are therefore expected to be striving for lower prices and higher quality of care during the negotiations with healthcare providers (1, 6, 7). In practice, however, from the Dutch experience, it appears that in these negotiations, it is mainly the price and quantity of care that play a role. Quality considerations play only a minor role (7).

Managed competition has played a role in Dutch healthcare, the focus of this study, since the introduction of the Health Insurance Act (HIA) in 2006 (8). Since then, basic health insurance has been obligatory for everyone who legally lives or works in the Netherlands (8, 9). Everyone aged 18 and above contributes to the cost of healthcare through premiums, contributions, and taxes (8, 9). Citizens are free to choose between different health insurance policies offered by private health insurers (9). The government determines the content of the basic health insurance package, which includes many necessary medical treatments, medicines, and aids (9). Although there is a legal requirement to offer the same general cover in every basic health insurance policy, the premiums and conditions may differ. Health insurers are free to contract, selectively, with healthcare providers. They can offer health insurance policies with restrictive conditions that are usually offered at a lower premium and which, mostly, do not fully reimburse care from non-contracted providers.

The introduction of the HIA meant a new role and a change of tasks for health insurers. In this model of regulated competition, health insurers should not only ensure that costs are paid but also act as efficient, customer-oriented directors of care. However, they are obliged to accept everyone for the basic health insurance regardless of their health status or other characteristics (9). In addition, the health insurer has been assigned significant responsibility for the quality, accessibility, and affordability of care. Furthermore, health insurers have a duty of care, meaning that their enrollees have access to all care from the basic health insurance package within a reasonable time and travelling distance (10). Furthermore, health insurers are expected to provide good information to their enrollees on policies, costs, reimbursements, and waiting times for care and support (11).

Hoefman et al. (2015) divided various tasks undertaken by health insurers into three statutory categories (12). These are 'controlling healthcare costs', the 'mediation and quality of care', and 'informing about the price and availability of care' (12). In addition, a fourth category, 'health insurers' non-statutory tasks', has been assigned, which includes tasks that health insurers do not actually have, according to the HIA, but which could be potential tasks of health insurers. The study has indicated that there are misconceptions among enrollees about the current tasks of Dutch health insurers (12). It was found that the tasks of insurers, as stated in the HIA, are not always in line with the expectations of their tasks according to enrollees (12). In addition, enrollees may feel that the tasks of the insurer are not always carried out (12).

These mismatches between the performance of tasks by health insurers and the expectations and experiences of enrollees may be related to trust in health insurers. The most used definition of trust found in the healthcare literature is 'the optimistic acceptance of a vulnerable situation in which the truster believes the trustee will care for the truster's interests' (12). Trust is one of the key elements for enabling the social licence to operate (SLO) (12–15). SLO can be defined as a contractarian basis for the legitimacy of a company's specific activity or project (16). The trust of enrollees in health insurers is vital for the insurers' SLO as purchasers of healthcare (12, 17). Nevertheless, different studies have shown that trust among the Dutch enrollees in health insurers is low (12, 17, 18).

The effective purchasing of care by health insurers may be hampered when public trust in health insurers is low (19, 20). Low trust in the health insurer may result in people being less inclined to choose policies with restrictive conditions. In this type of health insurance policy, the health insurer chooses, through selective contracting, which healthcare providers enrollees can receive treatment from without having to pay a co-payment, in addition to the mandatory deductible. But with low trust in their health insurer, enrollees may not feel that health insurers are contracting the best healthcare providers for them. In addition, low trust plays a negative role in the willingness to receive healthcare advice from the health insurer (21). Both policies with restrictive conditions and healthcare advice are instruments that may enable health insurers to steer enrollees to preferred providers. If these instruments cannot be used, this could lead to a weakening of the bargaining position of health insurers towards healthcare providers and may result in health insurers being restrained in their ability to steer on cost and/or quality of care.

This study focuses on the extent to which enrollees' perceptions of the tasks of health insurers are related to their trust in them. This research will provide more clarity on the reasons why trust in health insurers in the Netherlands is low and thus reveal opportunities to increase this trust. The aim of this study is, therefore, to examine

whether a mismatch between enrollees' expectations about the health insurer's tasks and their perceptions of what they actually do may be a reason why trust in health insurers in the Netherlands is low. While our study primarily examines the Dutch situation, it may also offer valuable insights for other countries with healthcare systems based on managed competition. The main research question of this study is: 'What is the relationship between enrollees' perceptions of the tasks of health insurers and enrollees' trust in them?' To answer this question, we formulated three subsidiary research questions. First, what is the relationship between any mismatch between enrollees' expectations of the tasks of health insurers and those as defined in the HIA and their trust in health insurers? Second, what is the relationship between any mismatch between enrollees' expectations of the tasks of health insurers and what they see is actually performed and their trust in health insurers? And, third, what is the influence of the importance enrollees attach to certain tasks on the relationship between any mismatch between enrollees' expectations and what they see is actually performed and their trust in health insurers?

Hypotheses

Based on the expectation that enrollees who believe that health insurers are not performing their expected tasks have less trust in them compared to enrollees who do (12), we hypothesise:

> *H1: Enrollees who show a higher degree of mismatch between their expectations of the tasks of health insurers and the tasks as defined in the HIA will have less trust in health insurers.*

Research has also shown that the tasks expected of an insurer according to enrollees are not always in line with those they believe are actually performed (12). This is because enrollees' perception of the health insurer's actual performance is based on personal experience and information obtained either from others and through the media (22). Enrollees' views on the health insurers' performed tasks are expected to influence their trust. More than the insurers' objective purchasing behaviour, perception influences the level of trust in the insurer (23). If the perception is not in line with the expectation about the health insurer, then we expect this to influence enrollees' trust in them. We expect that if there is a higher degree of mismatch between the enrollees' expectations of the tasks of health insurers and the tasks they believe are actually performed, then enrollees will have less trust in health insurers. This results in the following hypothesis:

H2: Enrollees who show a higher degree of mismatch between their expectations of the tasks of health insurers and what they see is actually performed will have less trust in health insurers.

As everyone has different norms and values, enrollees' opinions on the importance of tasks can differ. As a result, the interest in specific topics or activities can differ per person (24). Enrollees may feel that, for a certain task, there is a mismatch between what the health insurer does according to them versus what they expect. If they, in addition, consider that task to be important, then trust may be affected more than for less important roles. This results in the following hypothesis:

H3: The more important enrollees consider a task, the higher the impact of the mismatch between their expectations of the tasks of health insurers and what they see is actually performed on trust in health insurers.

The hypotheses are visualised in the conceptual model presented in Figure 6.1. When the factors on the left are not in line with each other, this has a negative influence on trust in health insurers. The minus sign indicates, therefore, a negative relationship.

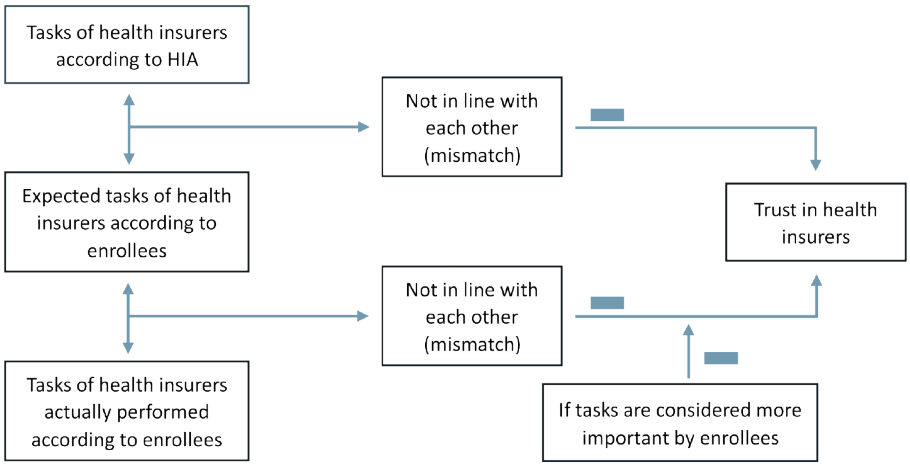


Figure 6.1. The conceptual model of this study.

6.3 Methods

Data

Data were collected using the Dutch Health Care Consumer Panel, an access panel managed by Nivel (the Netherlands Institute for Health Services Research) (25). The panel collects citizens' opinions, knowledge, expectations, and experiences regarding healthcare. At the time of the study, November 2021, the panel had approximately 11,500 members from the general Dutch population aged 18 and over. Their background characteristics, such as age, gender, education level, and self-reported health status, were recorded at the start of their membership. People can join the panel by invitation only. Data have been assessed, processed, and pseudonymised in accordance with the panel's privacy policy, which corresponds to the General Data Protection Regulation.

Under Dutch law, approval of a medical ethics committee is not required to conduct research with the panel (25). Informed consent is obtained from the participants to the panel as follows: an intended participant receives an invitation to participate in the panel, including information about the purpose, scope, method, and use of the panel. Based on that information, a participant can give permission to participate in the panel. This is a written consent that since 2020 can also be given digitally. Participants are asked to complete a questionnaire a few times a year. Prior to each survey, the participants receive information on the subject and the length of the survey. Participation is voluntary, and members are not obliged to participate in the survey or answer any questions in the survey. They can stop their membership at any time without giving a reason.

Questionnaire

In November 2021, a questionnaire was sent to a sample of 1,500 members of the Dutch Health Care Consumer Panel. This was a representative sample of the adult population in the Netherlands with regard to age and gender. The questionnaire was developed by three of the authors of this article (FH, AB, and JDJ), who each have expertise on this research topic and in conducting research based on surveys. A draft version of the questionnaire was submitted to the programme committee of Nivel's Dutch Health Care Consumer Panel, who had the opportunity to provide feedback. The committee consists of representatives from different healthcare stakeholders, including the Dutch Ministry of Health, Welfare and Sport (VWS), the Dutch Consumers Association, and 'Zorgverzekeraars Nederland', the umbrella organisation of health insurers. The questionnaire could be filled in online or by post, depending on personal preference. The panel members could fill in the questionnaire from the 4th of November until the 1st of December 2022. Completing the questionnaire should have taken respondents approximately 15–20 minutes. A maximum of two reminders were sent

to respondents who had not yet completed the online questionnaire and one reminder to those who had not yet completed the paper questionnaire. The questionnaire was completed by 837 panel members, a response rate of 56 per cent. The online questionnaire was completed by 698 respondents (83 per cent) and the paper questionnaire by 139 respondents (17 per cent, most of them elderly).

Measures

Trust in health insurers

Trust in health insurers was measured using the Health Insurer Trust Scale (HITS), a validated scale to measure patients' trust in health insurers, developed by Zheng et al. (2002) (26). This assumes that trust in a health insurer is based on four dimensions: (1) fidelity – caring for the subject's interests or welfare; (2) competence – making correct decisions and avoiding mistakes; (3) honesty – telling the truth and avoiding intentional falsehoods; and (4) confidentiality – the proper use of sensitive information (26). We used the validated Dutch translation of this scale for this study (27). The scale consists of 11 items (Table 6.1). The 11 questions of the HITS were asked with respect to health insurers in general. The response categories for every item are completely agree (score 5), agree (score 4), neutral (score 3), disagree (score 2), and completely disagree (score 1). The scoring is reversed in the case of a negative question (items 2, 4–7, and 9). Trust is measured by the sum of the 11 item scores ranging from 11 to 55. A higher score indicates more trust. A score has only been calculated if the respondents have replied to all the statements on the scale. The scores of respondents who completed the scale partially (n=14) or not at all (n=60) were converted to missing scores.

The tasks of health insurers

Three questions were asked in order to gain insight into the views on the tasks of health insurers. Each question had to be answered for the 16 different tasks presented in Table 6.2. As the tasks may be seen as shared tasks between the health insurer and other parties within the healthcare sector, such as healthcare providers or the government, a 5-point Likert scale was applied for the answer options for each question to include this aspect.

First, the respondents were asked to indicate to what extent health insurers have to perform these tasks. For these questions, a score of 1 on the 5-point Likert scale meant 'totally not the task of a health insurer', while a score of 5 meant 'totally the task of a health insurer'.

Table 6.1. Health Insurer Trust Scale (HITS) (Zheng et al., 2002).

	Items	Response categories
1.	You think the people at health insurers are completely honest.	completely agree (score 5); agree (score 4); neutral (score 3); disagree (score 2); completely disagree (score 1)
2.	Health insurers care more about saving money than about getting you the treatment you need.	completely agree (score 1); agree (score 2); neutral (score 3); disagree (score 4); completely disagree (score 5)
3.	As far as you know, the people at health insurers are very good at what they do.	completely agree (score 5); agree (score 4); neutral (score 3); disagree (score 2); completely disagree (score 1)
4.	If someone at health insurers made a serious mistake, you think they would try to hide it.	completely agree (score 1); agree (score 2); neutral (score 3); disagree (score 4); completely disagree (score 5)
5.	You feel like you have to double check everything health insurers do.	completely agree (score 1); agree (score 2); neutral (score 3); disagree (score 4); completely disagree (score 5)
6.	You worry that private information health insurers have about you could be used against you.	completely agree (score 1); agree (score 2); neutral (score 3); disagree (score 4); completely disagree (score 5)
7.	You worry there are a lot of loopholes in what health insurers cover that you don't know about.	completely agree (score 1); agree (score 2); neutral (score 3); disagree (score 4); completely disagree (score 5)
8.	You believe health insurers will pay for everything they are supposed to, even really expensive treatments.	completely agree (score 5); agree (score 4); neutral (score 3); disagree (score 2); completely disagree (score 1)
9.	If you got really sick, you are afraid health insurers might try to stop covering you altogether.	completely agree (score 1); agree (score 2); neutral (score 3); disagree (score 4); completely disagree (score 5)
10.	If you have a question, you think health insurers will give a straight answer.	completely agree (score 5); agree (score 4); neutral (score 3); disagree (score 2); completely disagree (score 1)
11.	All in all, you have complete trust in health insurers.	completely agree (score 5); agree (score 4); neutral (score 3); disagree (score 2); completely disagree (score 1)

Second, the respondents were asked to indicate to what extent health insurers actually perform these tasks. For these questions, a score of 1 on the 5-point Likert scale meant 'health insurers do not perform this task at all', while a score of 5 meant 'health insurers always perform this task'. Third, the respondents were asked to indicate to what extent they think it is important that health insurers perform these tasks. For these questions, a score of 1 on the 5-point Likert scale meant they thought it was 'very unimportant', while a score of 5 meant 'very important'.

The 16 tasks presented in Table 6.2 were derived from the study of Hoefman et al. (2015) (12). The list of tasks in the study of Hoefman et al. (2015) was drawn up, based on discussions with the Dutch Healthcare Authority, by three Nivel researchers, including two of this study's authors, AB and JDJ. The list consists of tasks that, according to the HIA, must actually be performed and of those tasks that do not have to be performed. In order to keep the number of questions manageable for the respondents in the current study, the number of tasks was reduced from 26 to 16 tasks, as presented in Table 6.2. The choice of these 16 tasks resulted from discussions between three researchers (FH, AB, and JDJ), all of whom have expertise in the Dutch healthcare system. These tasks were divided in four categories, as was also done by Hoefman et al. (2015) (12). These four categories are (1) informing about the price and availability of care, (2) controlling healthcare costs, (3) mediation and quality of care, and (4) health insurers' non-statutory tasks. Cronbach's alpha was used to test the reliability of the categories used for this study (28). All categories met the requirement of an acceptable alpha value of 0.6 or higher (29).

Table 6.2. List of proposed tasks of the health insurer derived from Hoefman et al. (2015).

Categories		Items
Informing about the price and availability of care	1.	Making information available about the price of care
	2.	Informing which costs enrollees have to pay themselves
	3.	Informing about the policy conditions
	4.	Making information available about with which healthcare providers a contract has been concluded
Controlling healthcare costs	5.	Controlling healthcare costs
	6.	Checking the bills of healthcare providers I visited
	7.	Negotiating the price of care
Mediation and quality of care	8.	Giving advice to enrollees when choosing a healthcare provider
	9.	Giving advice to enrollees when choosing a treatment
	10.	Making quality information about healthcare providers available
	11.	Mediating between the healthcare provider and the patient regarding shorter waiting times
	12.	Negotiating the quality of care
	13.	Determining with which healthcare providers a contract is concluded
Health insurers' non-statutory tasks	14.	Determining for which treatments enrollees are reimbursed
	15.	Determining which care is included in the basic package
	16.	Monitoring the quality of care

Mismatch scores

For examining the first research question, we investigated the degree of mismatch between enrollees' expectations of the tasks of health insurers and the tasks of the insurer as defined in the HIA. This was calculated by subtracting the score of the extent to which, according to enrollees, health insurers have to perform a task from the score of the extent to which, according to the HIA, it is a task of the insurer.

The scores to the question about the extent to which, according to enrollees, an item is a task of the insurer were added up for each category. After that, the mean score of each category was calculated. In case of a missing value, a respondent was still included if they completed at least 66 per cent of the questions of this category. In this case, the mean score was calculated by adding up the completed scores and dividing by the number of questions the respondent completed.

We then determined the extent to which, according to the HIA, an item is a task of the insurer. The items in the first three categories of Table 6.2 (informing about the price and availability of care, controlling healthcare costs, mediation and quality of care) achieved a score of 5, meaning that this, according to the HIA, was a task of the insurer. The items in the last category of Table 6.2 (health insurers' non-statutory tasks) achieved a score of 1, meaning that this, according to the HIA, was not a task of the insurer.

In summary, this meant, for example, for the category 'informing about the price and availability of care', the following:

- Degree of mismatch = $A_i - \frac{\sum B_i}{C_i}$, where:
  - A_i = The extent to which the category is among the tasks of the insurer according to the HIA = 5 (or = 1 for non-statutory tasks).
  - ΣB_i = Sum of the scores of the extent to which health insurers have to perform the tasks of this category according to enrollees.
  - C_i = The number of questions in this category that the respondent has filled in.

A greater difference between A_i and $\frac{\sum B_i}{C_i}$ meant a higher mismatch score. This means that a mismatch score could potentially be negative. For the analyses, the mismatch scores were converted into absolute values. This was carried out because the influence of the presence of a mismatch on trust was examined, without giving any direction.

Next, for the second research question, we examined the degree of mismatch between enrollees' expectations of the tasks of health insurers and what they see as actually performed. This was calculated by subtracting the score, according to enrollees, of the

extent to which a task is actually performed from the score of the extent, according to enrollees, to which an item is a task of the insurer.

The scores of the questions relating to the extent, according to enrollees, to which a task is actually performed, and the extent to which, according to enrollees, an item is a task of the insurer were added up for each category. After that, the mean score of each category was calculated. In case of a missing value, a respondent was still included if they completed at least 66 per cent of the questions from this category. In that case, the mean score was calculated by adding up the completed scores and dividing by the number of questions the respondent completed.

In summary, this meant the following:

- Degree of mismatch = $\frac{\sum D_i}{E_i} - \frac{\sum F_i}{G_i}$, where:
  - ΣD_i = Sum of the score of the extent, according to enrollees, to which health insurers have to perform the tasks of this category.
  - E_i = Number of questions in this category that the respondent has filled in.
  - ΣF_i = Sum of the score of the extent, according to enrollees, to which health insurers actually perform the tasks of this category.
  - G_i = The number of questions in this category that the respondent has filled in.

A greater difference between $\frac{\sum D_i}{E_i}$ and $\frac{\sum F_i}{G_i}$ means a higher mismatch score. Again, the mismatch scores were converted into absolute values, because the influence of the presence of a mismatch on trust was examined, without giving any direction.

The importance, according to enrollees, of the task

With regard to the third research question, the respondents were asked to indicate to what extent the respondent thinks that it is important that health insurers perform these tasks. This was measured to include in the analysis what an enrollee attaches more value to. For these questions, a 5-point Likert scale was used ('very unimportant' = score 1; 'very important' = score 5).

For each category, the scores of the questions about the extent to which the respondent thinks that it is important that health insurers perform specific tasks were added up. After that, the mean score of each category was calculated. A higher score meant that this task was considered by enrollees as more important. Also here, where there was a missing value, a respondent was still included if he completed at least 66 per cent of the questions of this category. In that case, the mean score was calculated by adding up the completed scores and dividing by the number of questions the respondent completed.

Background variables

The background variables that are known from the panel members, and are included in the analyses, concern: age (continuous); gender (0 = male, 1 = female); educational level (1 = low – that is none, primary school, or pre-vocational education, 2 = middle – that is secondary or vocational education, 3 = high – that is professional, higher education, or university); selfreported health status (1 = bad/fair, 2 = good, 3 = very good/excellent); and self-reported use of care (1 = none/very little, 2 = little, 3 = much/very much).

Data analyses

Descriptive statistics were computed to describe the characteristics of the respondents. Multivariate regression analyses were used to test if, for all four categories of tasks, both mismatch scores were significantly related to trust in the health insurer. In these analyses, the relevant mismatch score was the independent variable, while trust was the dependent variable. Gender, age, education level, self-reported general health of the respondent, and the self-reported amount of use of care were used as control variables. This is because some other studies found associations of these characteristics with trust (30–33). To examine the third hypothesis, we examined, for all four categories, the interaction effects between the mismatch – as used in H2 – and the importance someone attaches to the tasks. Trust was once more the dependent variable for these analyses. For all regression analyses, age was centred around the mean. In addition, for the regression analysis related to the examination of hypothesis 3, the mean importance scores were subtracted by one. This was carried out so that the intercept of these models relates to someone of average age with a mean importance score per category of 1. A significance level of 5 per cent ($p \leq 0.05$) was maintained for these analyses. All analyses were performed using STATA version 16.1.

6.4 Results

Descriptive statistics

The questionnaire was sent to 1,500 members of the Dutch Healthcare Consumer Panel. After sending the reminders, 837 questionnaires were received (56 per cent). Table 6.3 presents the descriptive statistics of the respondents, the mean score measured on the Health Insurer Trust Scale, and the generated mismatch and importance scores of the categories of tasks. The mean mismatch scores on all individual tasks are shown in Table 6.A7 (Appendix).

Table 6.3. Descriptive statistics of the respondents.

	Number of respondents (n)	Percentage (%) or mean ± SD	General Dutch adult population n (%) or mean (CBS, 2021; CBS, 2022)
Gender	**837**		**14,164,193**
Male	395	47%	6,989,909 (49%)
Female	442	53%	7,174,284 (51%)
Age (years)	**837**	**57.98 ± 16.65**	**49.56**
18 – 39 years	174	21%	4,853,247 (34%)
40 – 64 years	412	49%	5,853,411 (41%)
65 years and older	251	30%	3,457,525 (24%)
Education[a]	**823**		
Low	79	10%	3,644,740 (26%)
Middle	362	44%	8,749,435 (62%)
High	382	46%	1,636,850 (12%)
Health (self-reported)	**731**		
Excellent/very good	260	36%	
Good	336	46%	
Moderate/bad	135	18%	
Use of care	**733**		
None/very little	327	45%	
Little	284	39%	
Much/very much	122	17%	
Health Insurer Trust Scale (range 11-55)	**762**	34.38 (6.32) (range: 13-55)	
Mismatch between enrollees' expectations of the tasks of health insurers and the tasks as defined in the HIA			
Informing about the price and availability of care	760	0.60 (0.73)	
Controlling healthcare costs	760	1.25 (0.88)	
Mediation and quality of care	760	1.73 (0.82)	
Health insurers' non-statutory tasks[b]	760	-2.09 (1.11)	
Mismatch between enrollees' expectations of the tasks of health insurers and what they see is actually performed			
Informing about the price and availability of care[b]	736	0.90 (1.10)	
Controlling healthcare costs[b]	733	0.39 (1.07)	
Mediation and quality of care[b]	736	0.30 (0.92)	
Health insurers' non-statutory tasks[b]	734	-0.18 (1.13)	

	Number of respondents (n)	Percentage (%) or mean ± SD	General Dutch adult population n (%) or mean (CBS, 2021; CBS, 2022)
Importance tasks (range 1-5)[c]			
Informing about the price and availability of care	729	4.36 (0.72)	
Controlling healthcare costs	729	3.82 (0.91)	
Mediation and quality of care	729	3.46 (0.89)	
Health insurers' non-statutory tasks	728	3.42 (1.15)	

a Education: Low = none, primary school or pre-vocational education. Middle = secondary or vocational education. High = professional higher education or university
b For regression analyses, only absolute values of the mismatch scores were used, but this table shows the actual values to provide insight into the direction of the mismatches.
c A higher score means more importance: scores range between 1 (very unimportant) and 5 (very important)

Mismatch scores

Looking at the mean mismatch scores on all individual tasks (Table 6.A7, Appendix), it is apparent that advice on choosing a healthcare provider or treatment is something that enrollees least expect from the health insurer. Enrollees must expect the health insurer to inform them about policy conditions and the costs insured have to incur. Nevertheless, according to enrollees, the actual performance of the tasks related to providing information on costs, contracting, and prices deviates the most from their expectation of this performance.

Hypothesis testing

H1: Enrollees who show a higher degree of mismatch between their expectation of the tasks of health insurers and the tasks as defined in the HIA will have less trust in health insurers.

For the categories, 'controlling healthcare costs', 'mediation and quality of care', and 'health insurers' non-statutory tasks', a significant relationship was found ($p = 0.00$) (Table 6.4). For the categories 'controlling healthcare costs' and 'mediation and quality of care', the negative estimated coefficient indicated that a higher degree of mismatch between enrollees' expectations of the tasks of health insurers and the tasks of the insurer as defined in the HIA was related to less trust in the health insurer (Table 6.4). For these two categories, the results are in line with H1.

Table 6.4. The relationships between a mismatch between enrollees' expectations of the tasks of health insurers and the tasks as defined in the HI, and trust in the insurer, examined with regression analysis.

Dependent variable: trust		Informing about the price and availability of care (n=699) (R^2=0.03)		Controlling healthcare costs (n=699) (R^2=0.07)		Mediation and quality of care (n=699) (R^2=0.05)		Health insurers' non-statutory tasks (n=699) (R^2=0.07)	
		Coefficient	**P-value**	**Coefficient**	**P-value**	**Coefficient**	**P-value**	**Coefficient**	**P-value**
Mismatch score[a]		0.19	0.58	-1.30	0.00*	-1.13	0.00*	1.13	0.00*
Gender	Male	Reference		Reference		Reference		Reference	
	Female	-0.58	0.22	-0.56	0.23	-0.53	0.26	-0.64	0.17
Age[b]		0.04	0.02*	0.03	0.05*	0.04	0.01*	0.03	0.05
Education[c]	Low	Reference		Reference		Reference		Reference	
	Middle	-0.30	0.73	-0.40	0.63	-0.41	0.63	-0.03	0.97
	High	1.38	0.12	1.45	0.09	1.54	0.08	2.11	0.02*
Health (self-reported)	Very good/excellent	Reference		Reference		Reference		Reference	
	Good	-1.24	0.04*	-1.34	0.02*	-1.36	0.02*	-1.26	0.03*
	Bad/moderate	-2.02	0.02*	-2.18	0.01*	-2.21	0.01*	-2.17	0.01*
Use of care	None/very little	Reference		Reference		Reference		Reference	
	Little	-0.02	0.97	0.08	0.88	0.06	0.92	-0.00	1.00
	(Very) much	1.09	0.19	1.29	0.12	1.22	0.14	1.44	0.08
Constant		34.85	0.00*	36.57	0.00*	36.88	0.00*	32.13	0.00*

* Significant p-value ($p<0.05$); a. Absolute value, ranging between zero (no mismatch) and four (greatest mismatch); b. Centred around the mean; c. Low = none, primary school or pre-vocational education. Middle = secondary or vocational education. High = professional higher education or university.

The results are not in line with H1, however, for the other two categories. The results for the category, 'health insurers' non-statutory tasks' showed that a higher degree of mismatch between enrollees' expectations of the tasks of health insurers and the tasks of the insurer, as defined in the HIA, is related to more trust in the health insurer (Table 6.4). For the category, 'informing about the price and availability of care', no significant relationship was found between a mismatch between enrollees' expectations of the tasks of health insurers and the tasks of the insurer as defined in the HIA and trust in the health insurer ($p = 0.543$) (Table 6.4).

Furthermore, for all categories, significant relationships were found between trust and the control variables age and self-reported health (Table 6.4). In general, older enrollees and enrollees in very good or excellent health had more trust in health insurers than younger enrollees and those in good, bad, or moderate health. However, the effect of age on trust in the health insurer was small.

H2: Enrollees who show a higher degree of mismatch between their expectations of the tasks of health insurers and what they see is actually performed will have less trust in health insurers.

A significant relationship was found for all four categories ($p = 0.000$) (Table 6.5). The negative coefficients mean that a higher degree of mismatch between enrollees' expectations of the tasks of health insurers and, according to enrollees, the actual tasks performed was related to less trust in the insurer (Table 6.5). These results are in line with the second hypothesis. In addition to this, all categories found significant relationships between trust and the control variables age and self-reported health (Table 6.5). Older enrollees and enrollees in very good or excellent health had more trust in health insurers than younger enrollees and those in good health. However, also in this analysis, the effect of age on trust in the health insurer was small.

H3: The more important enrollees consider a task, the higher the impact of the mismatch between their expectations of the tasks of health insurers and what they see is actually performed on trust in health insurers.

For the category 'informing about the price and availability of care', a significant relationship was found for the interaction variable (mismatch * importance) and trust in the insurer ($p = 0.01$) (Table 6.6). The negative coefficient means that a mismatch has a more negative effect on trust if a task was seen as more important (Figure 6.2). For this category, the results are in line with H3. For the categories 'controlling healthcare costs', 'mediation and quality of care', and 'health insurers' non-statutory tasks', no significant relationship was found for the interaction between importance and the mismatch score on trust ($p > 0.05$) (Table 6.6). For these categories, the results do not support H3.

Table 6.5. Relationships between a mismatch between enrollees' expectations of the tasks of health insurers and what they see is actually performed, and trust in the insurer, examined with regression analysis.

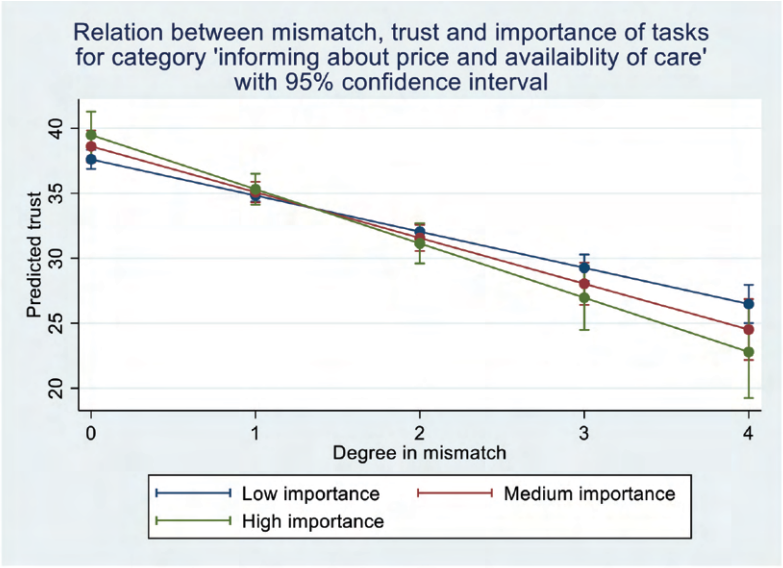
Dependent variable: trust		**Informing about the price and availability of care (n=692) (R^2=0.17)**		**Controlling healthcare costs (n=689) (R^2=0.08)**		**Mediation and quality of care (n=692) (R^2=0.08)**		**Health insurers' non-statutory tasks (n=690) (R^2=0.07)**	
		Coefficient	**P-value**	**Coefficient**	**P-value**	**Coefficient**	**P-value**	**Coefficient**	**P-value**
Mismatch score[a]		-2.60	0.00*	-1.81	0.00*	-2.15	0.00*	-1.64	0.00*
Gender	Male	Reference		Reference		Reference		Reference	
	Female	-0.46	0.30	-0.58	0.21	-0.45	0.34	-0.52	0.26
Age[b]		0.04	0.01*	0.03	0.04*	0.05	0.00*	0.04	0.01*
Education[c]	Low	Reference		Reference		Reference		Reference	
	Middle	-0.09	0.91	-0.22	0.79	-0.40	0.63	-0.37	0.66
	High	1.53	0.06	1.42	0.10	1.20	0.16	1.45	0.09
Health (self-reported)	Very good/excellent	Reference		Reference		Reference		Reference	
	Good	-1.08	0.05*	-1.16	0.045*	-1.33	0.02*	-1.35	0.02*
	Bad/moderate	-1.41	0.08	-1.43	0.09	-1.82	0.03*	-1.52	0.07
Use of care	None/very little	Reference		Reference		Reference		Reference	
	Little	-0.12	0.82	-0.40	0.48	-0.18	0.74	-0.20	0.72
	(Very) much	0.76	0.33	0.37	0.65	0.62	0.45	0.54	0.51
Constant		37.49	0.00*	36.55	0.00*	36.69	0.00*	36.40	0.00*

* Significant p-value ($p<0.05$); a. Absolute value, ranging between zero (no mismatch) and four (greatest mismatch); b. Centred around the mean; c. Low = none, primary school or pre-vocational education. Middle = secondary or vocational education. High = professional higher education or university.

Table 6.6. The relationships between a mismatch between enrollees' expectations of the tasks of health insurers and what they see is actually performed, taking into account the importance to enrollees of a task, and trust in the insurer, examined with regression analysis.

Dependent variable: trust		Informing about the price and availability of care (n=691) (R^2 =0.18)		Controlling healthcare costs (n=688) (R^2=0.10)		Mediation and quality of care (n=691) (R^2=0.10)		Health insurers' non-statutory tasks(n=689) (R^2=0.08)	
		Coefficient	**P-value**	**Coefficient**	**P-value**	**Coefficient**	**P-value**	**Coefficient**	**P-value**
Mismatch score[a]		0.56	0.63	-3.32	0.00*	-1.51	0.14	-1.58	0.01*
Gender	Male	Reference		Reference		Reference		Reference	
	Female	-0.51	0.25	-0.72	0.12	-0.62	0.18	-0.74	0.12
Age[b]		0.034	0.02*	0.02	0.11	0.05	0.00*	0.03	0.03*
Education[c]	Low	Reference		Reference		Reference		Reference	
	Middle	-0.22	0.78	-0.01	0.99	-0.22	0.80	-0.11	0.89
	High	1.26	0.12	1.80	0.03*	1.70	0.050	1.96	0.03*
Health (self-reported)	Very good/excellent	Reference		Reference		Reference		Reference	
	Good	-0.96	0.08	-1.15	0.04*	-1.47	0.01*	-1.34	0.02*
	Bad/moderate	-1.30	0.10	-1.59	0.06	-2.05	0.01*	-1.62	0.05
Use of care	None/very little	Reference		Reference		Reference		Reference	
	Little	-0.17	0.75	-0.39	0.48	-0.15	0.79	-0.24	0.67
	(Very) much	0.63	0.42	0.52	0.52	0.78	0.34	0.58	0.48
Importance tasks[d]		1.25	0.01*	0.42	0.27	1.21	0.00*	0.53	0.10
Mismatch * importance[d]		-0.93	0.01*	0.50	0.07	-0.28	0.43	0.04	0.87
Constant		33.50	0.00*	35.23	0.00*	33.60	0.00*	34.80	0.00

* Significant p-value ($p<0.05$); a. Absolute value, ranging between zero (no mismatch) and four (greatest mismatch); b. Centred around the mean; c. Low = none, primary school or pre-vocational education. Middle = secondary or vocational education. High = professional higher education or university; d. Tasks that are important for insurers to perform: scores range between 0 (very unimportant) and 4 (very important), because the scores were calculated minus one for interpretation reason.



* Low importance = average score on importance minus one time the standard deviation on importance. Medium importance = average score on importance. High importance = average score on importance plus one time the standard deviation on importance.

Figure 6.2. The relationship between a mismatch between enrollees' expectations of the tasks of health insurers and the tasks they see actually performed in the category 'Informing about the price and availability of care', taking into account the importance to enrollees of these tasks.

6.5 Discussion

We found different relationships between the enrollees' perception of the tasks of health insurers and their trust in health insurers. In general, we found a relationship between a mismatch between enrollees' expectations about the tasks of health insurers and their tasks, as stated in the HIA, and trust. Furthermore, we found that a higher degree of mismatch between enrollees' expectations of the tasks of health insurers and the tasks they see are actually performed was significantly related to less trust in the insurer. Lastly, the interaction between the importance of a task and a mismatch between enrollees' expectations of the tasks of health insurers and the tasks they see actually performed was only significantly related to trust for the category 'informing about the price and availability of care'.

Regarding the first subsidiary research question, the results for the categories 'controlling healthcare costs' and 'mediation and quality of care' show that the more enrollees think health insurers should not be responsible for these roles, the less trust they have in health insurers. This is in line with our first hypothesis. There may be two reasons why enrollees expect less than what the insurer, according to the HIA, is obliged to do. They

may not be aware that this is a statutory duty of the health insurer or they feel it is not a task of the health insurer, either because they do not see its importance or feel it should be a task of another party. It is not clear why a relationship with trust was found for the categories, 'controlling healthcare costs' and 'mediation and quality of care', but not for 'informing about the price and availability of care'. A possible explanation may be that enrollees, whether or not they trust health insurers, generally find it appropriate to be well informed about price and accessibility of care. This may be shown by the lower average mismatch score for this category than for the other categories.

For the category, 'health insurers' non-statutory tasks', a mismatch means that enrollees think it should be the health insurers' role, when according to the HIA, it is not. We found that a higher degree of mismatch between enrollees' expectations of the tasks of health insurers of a health insurer and the tasks of the insurer, as defined in the HIA, is related to more trust in health insurers. This is not in line with our hypothesis, as we expected this mismatch to be related to less trust. We could not indicate causation in this study, but an explanation could be that the relationship is running in the other direction. Enrollees with more trust in health insurers may be more likely to feel that health insurers should perform these tasks. This is because trust is one of the key elements for achieving the SLO (12–15).

Regarding the second subsidiary research question, we found in line with our hypothesis 2 that for all categories, a higher degree of mismatch between enrollees' expectations of the tasks of health insurers and the tasks enrollees believe are actually performed is related to less trust in the insurer. Literature suggests that enrollees' perception affects the amount of trust in the insurer (23). If the perception is not in line with the expectation of the insurer, this leads to unmet expectations, which has a negative effect on trust (34). These results are in line with those of Hoefman et al. (12).

From Table 6.A7 (Appendix), it can be seen that especially in the area of information provision, enrollees' expectations are higher than their experience. A possible explanation is that enrollees are not always well informed about certain aspects of their health insurance. For example, research shows that a large proportion of enrollees are not aware that their insurer does not have a contract with their healthcare provider (35). In addition, previous research showed that a large group of enrollees were not aware in advance that they had to make a copayment when they visited a non-contracted provider (36). These are signals of possible information deficiencies by health insurers, which we may also see reflected by the higher mismatch scores related to information provision. Future research and policy interventions could focus on improving health insurers' means of effectively reaching enrollees with this kind of information, as this might also have a positive influence on trust in the health insurer.

Lastly, regarding the third subsidiary research question, our study showed that the greater the importance enrollees attach to health insurers informing them about the price and availability of care, then the greater impact a mismatch between the expected versus the actual information provided has on trust in the health insurer. This is in line with hypothesis 3. The reasons why this effect was found for this category, and not for the other categories, is possibly because receiving information about the price and availability of care is of personal interest for enrollees when they use care. As stated earlier, a higher mismatch score may mean that enrollees feel that they were being poorly informed. This could result in incurring more costs than expected. Enrollees with a more negative experience as the result of poor information will probably see this role as more important. At the same time, their trust in health insurers is affected the most. Nevertheless, for the other categories, no interaction effect was found between importance and this mismatch on trust in the health insurer, which is not in line with our third hypothesis. This may be because any mismatch in these categories is less directly related to a personal negative consequence.

If we consider the characteristics of the respondents, we found that age and health status were positively related to trust in health insurers. In the context of research on reasons why trust in health insurers in the Netherlands is low, our study therefore shows that younger people and people with poorer health are groups on which more attention can be focused in follow-up research on the topic. These findings are in line with literature. Several studies confirm the relationship between age and trust in general by finding that older people are more trusting than younger people (30–33). Furthermore, the study of Goold et al. (2006), which specifically focused on predictors of trust in health insurers, had found an association between health status and trust in health insurers (31).

Here, we examined the presence of a mismatch without giving the direction of this mismatch. The focus was specifically on whether a deviation from the expectation of the health insurers' tasks is related to trust. However, Table 6.A7 (Appendix) may provide some more insight into the direction of each task's mismatches by showing whether the mean of the calculated mismatches is positive or negative. It shows that the mean mismatch scores are mostly positive and that particularly negative mismatch scores can be seen for the category 'health insurers' non-statutory tasks'. However, with respect to the mismatch between enrollees' expectations and the tasks as defined in the HIA, it should be noted that the negative mean mismatch score for this category is due to defining Ai = 1 in the formula, whereas Ai is defined as 5 for other categories. As explained in the Methods section, this is because a score of 1 indicates it is not a task of the health insurer, whereas a score of 5 indicates it is. Future research could focus on whether the relationship between trust and a mismatch between task

performance and expectations is different when enrollees think health insurers fall short in their tasks than when they think health insurers do more than they would prefer. Furthermore, conducting qualitative research, such as interviews with enrollees, can provide additional insight into why enrollees' trust in health insurers is generally low and can verify whether enrollees cite their perceptions of task performance as one of the underlying aspects.

Mismatches that result in lower trust in health insurers may have implications for the healthcare system. For example, people may not choose policies with selective contracting if there is a lack of trust in the relationship between the enrollee and insurer (5, 37). In addition, a low level of trust plays a negative role in the willingness to receive healthcare advice from the health insurer (21). Policies with selective contracting and healthcare advice are both instruments that enable health insurers to direct their enrollees to preferred providers. The ability to channel enrollees is of crucial importance if health insurers are to act as prudent healthcare purchasers (5, 38–40). If these instruments cannot be used to channel enrollees, then the bargaining power of health insurers over healthcare providers may weaken. As a result, health insurers will be restrained in their ability to influence costs and/or the quality of care.

Enrollees' idea of the actual role of an insurer is formed by personal experience, information from others, and information through various media (22). A potential solution to reduce misconceptions, therefore, could be through providing better information about the roles the health insurer has in the healthcare system and the importance of these roles. Both health insurers themselves and also the government may need to improve information about the insurer's roles. This is evidenced, for example, by the study of Potappel et al. (2018), which found that more than half of the enrollees are not aware that health insurers make price information about treatments publicly available (41). Furthermore, as can be seen in Table 6.A7 (Appendix), the highest mean score of the mismatch between enrollees' expectations of the tasks of health insurers and the tasks as defined in the HIA was found for 'Giving advice to enrollees when choosing a treatment'. This is in line with previous research, which already showed that many enrollees do not yet seem to be aware of this role of the health insurer (42). In our study, we found that lower expectations about tasks within the category 'mediation and quality of care' is negatively associated with the amount of trust in the health insurer. This may indicate that it is important for health insurers and the government to emphasize this advisory role, as it can serve as a means of increasing trust in the health insurer. Future research could focus on the current state of information provision about the health insurer's roles and how best to reach enrollees with this type of information.

Strengths and limitations

A strength of our study is that this is one of the first studies in this area. There is not much literature available on public trust in health insurers. The insight this study offers into this relationship is important in order to achieve a better understanding of where the problem of trust in health insurers comes from. In addition, a strength of this study is that a validated questionnaire was used to measure trust. Furthermore, the data were collected both on paper and online. This makes it accessible for most respondents, even those with low digital skills, to participate in this study, and it reduces non-response bias (43). This is demonstrated by the fact that paper questionnaires were, for the most part, completed by the elderly, making it likely this group would not have participated if the questionnaire had only been offered online.

A limitation of this study is that the respondents were not completely representative for the Dutch population of 18 years and older, based on age, gender, and educational level. Our respondents are relatively older and more highly educated compared to the general Dutch population (44, 45). This could affect the level of trust we measured, as several studies have found a relationship between age or level of education with trust (30–33). However, our regression results are not expected to have been affected, as all subgroups are sufficiently large to perform association analyses. Another limitation is that our data were obtained using a cross-sectional study design, and as such, this study cannot demonstrate causal relationships. A third limitation is the low R^2 values of our regression models. However, our research focuses on one specific explanation for low trust in health insurers while trust is a complex construct determined by multiple influences. As the low R^2 values indeed suggest other variables and explanations also play a role, further research could aim to identify and understand these additional factors. A further limitation is that in this study, we did not look at the experience people have with their current health insurer, while this could influence both trust and the mismatch. We were not able to include this, as we did not have background information on this.

Lastly, a limitation is that there was no officially validated questionnaire used to measure the perceptions of insurer tasks. However, the original questionnaire derived from Hoefman et al. (2015) was based on discussions with the Dutch Healthcare Authority. Furthermore, the involvement of the programme committee of Nivel's Dutch Health Care Consumer Panel, which includes representatives from different healthcare stakeholders who had the opportunity to provide feedback on the questionnaire, increases its validity. In addition, Cronbach's alpha was used to test the reliability of the task categories used for this study, which showed all categories met the requirement of an acceptable alpha value of 0.6 or higher (28, 29).

6.6 Conclusion

This study confirms that mismatches regarding the tasks of the health insurer are related to trust. For the categories 'controlling healthcare costs' and 'mediation and quality of care', a higher degree of mismatch between enrollees' expectations of the tasks of health insurers and the tasks of the insurer as defined in the HIA is related to less trust. Furthermore, this study shows that a higher degree of mismatch between enrollees' expectations of the tasks of health insurers and the tasks they see actually performed is related to less trust in the health insurer. These results emphasise the importance of reducing enrollees' misconceptions as trust in health insurers is necessary to fulfil their role as purchasers of care. Our study focuses on the Dutch situation but also provides valuable insights for other countries with healthcare systems based on managed competition. By understanding and addressing the misconceptions about the tasks of the insurer in the healthcare system, policymakers or other stakeholders can enhance trust in health insurers, potentially leading to a more effective healthcare system. In this context, our study highlights the importance of clear communication about the responsibilities of health insurers in the healthcare system.

6.7 References

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6.8 Appendix

Table 6.A7. The mean mismatches scores on all individual tasks.

	Number of respondents (n)	Mean ± SD
Mismatch between enrollees' expectations of the tasks of health insurers and the tasks as defined in the HIA		
Informing about the price and availability of care	760	0.60 (0.73)
1. Making information available about the price of care	756	1.09 (1.14)
2. Informing which costs enrollees have to pay themselves	757	0.43 (0.83)
3. Informing about the policy conditions	759	0.36 (0.78)
4. Making information available about with which healthcare providers a contract has been concluded	758	0.50 (0.89)
Controlling healthcare costs	760	1.25 (0.88)
5. Controlling healthcare costs	759	1.55 (1.21)
6. Checking the bills of healthcare providers I visited	758	0.94 (1.02)
7. Negotiating the price of care	759	1.25 (1.24)
Mediation and quality of care	760	1.73 (0.82)
8. Giving advice to enrollees when choosing a healthcare provider	761	2.12 (1.32)
9. Giving advice to enrollees when choosing a treatment	760	2.67 (1.36)
10. Making quality information about healthcare providers available	759	1.35 (1.18)
11. Mediating between the healthcare provider and the patient for shorter waiting times	760	1.17 (1.14)
12. Negotiating the quality of care	750	1.57 (1.38)
13. Determining with which healthcare providers a contract is concluded	755	1.51 (1.30)
Health insurers' non-statutory tasks[a]	760	-2.09 (1.11)
14. Determining which treatments are reimbursed for insured[a]	759	-1.98 (1.42)
15. Determining which care is included in the basic package[a]	760	-1.69 (1.45)
16. Monitoring the quality of care[a]	753	-2.61 (1.36)
Mismatch between enrollees' expectations of the tasks of health insurers and what they see is actually performed[a]		
Informing about the price and availability of care	736	0.90 (1.10)
1. Making information available about the price of care	729	0.99 (1.62)
2. Informing which costs enrollees have to pay themselves	734	0.96 (1.34)
3. Informing about the policy conditions	734	0.71 (1.18)
4. Making information available about with which healthcare providers a contract has been concluded	729	0.96 (1.38)

	Number of respondents (n)	Mean ± SD
Controlling healthcare costs	733	0.39 (1.07)
5. Controlling healthcare costs	728	0.30 (1.48)
6. Checking the bills of healthcare providers I visited	729	0.57 (1.31)
7. Negotiating the price of care	729	0.31 (1.48)
Mediation and quality of care	736	0.30 (0.92)
8. Giving advice to enrollees when choosing a healthcare provider	739	0.24 (1.48)
9. Giving advice to enrollees when choosing a treatment	734	0.01 (1.40)
10. Making quality information about healthcare providers available	730	0.78 (1.47)
11. Mediating between healthcare provider and patient for shorter waiting times	730	0.61 (1.29)
12. Negotiating the quality of care	717	0.44 (1.41)
13. Determining with which healthcare providers a contract is concluded	723	-0.29 (1.48)
Health insurers' non-statutory tasks[a]	734	-0.18 (1.13)
14. Determining which treatments are reimbursed for insured	730	-0.62 (1.64)
15. Determining which care is included in the basic package	734	-0.48 (1.45)
16. Monitoring the quality of care	719	0.58 (1.42)
Importance tasks (range 1-5)[b]		
Informing about the price and availability of care	729	4.36 (0.72)
1. Making information available about the price of care	728	3.99 (1.04)
2. Informing which costs enrollees have to pay themselves	727	4.58 (0.76)
3. Informing about the policy conditions	272	4.54 (0.79)
4. Making information available about with which healthcare providers a contract has been concluded	726	4.34 (0.92)
Controlling healthcare costs	729	3.82 (0.91)
5. Controlling healthcare costs	729	3.67 (1.19)
6. Checking the bills of healthcare providers I visited	729	4.09 (0.98)
7. Negotiating the price of care	726	3.71 (1.18)
Mediation and quality of care	729	3.46 (0.89)
8. Giving advice to enrollees when choosing a healthcare provider	730	3.22 (1.34)
9. Giving advice to enrollees when choosing a treatment	729	2.66 (1.39)
10. Making quality information about healthcare providers available	726	3.86 (1.12)
11. Mediating between healthcare provider and patient for shorter waiting times	728	3.88 (1.14)
12. Negotiating the quality of care	724	3.61 (1.30)
13. Determining with which healthcare providers a contract is concluded	723	3.57 (1.20)

	Number of respondents (n)	Mean ± SD
Health insurers' non-statutory tasks[a]	728	3.42 (1.15)
14. Determining which treatments are reimbursed for insured	728	3.40 (1.36)
15. Determining which care is included in the basic package	726	3.15 (1.43)
16. Monitoring the quality of care	727	3.71 (1.26)

a For regression analyses, only absolute values of the mismatch scores were used, but this table shows the actual values to provide insight into the direction of the mismatches.
b A higher score means more importance: scores range between 1 (very unimportant) and 5 (very important)

Appendix 6.8.B. - Questionnaire about the tasks of the health insurer (translated)

We would like to ask you questions about the tasks of health insurers. These questions seem very similar. However, they are different. Please read the questions carefully and answer them all.

1. Below are several tasks. To what extent do you think these are tasks that health insurers have to perform? Please indicate this per task.

	1 Totally not the task of a health insurer	2	3	4	5 Totally the task of a health insurer
Giving advice to enrollees when choosing a healthcare provider	❑	❑	❑	❑	❑
Giving advice to enrollees when choosing a treatment	❑	❑	❑	❑	❑
Making quality information about healthcare providers available	❑	❑	❑	❑	❑
Making information available about the price of care	❑	❑	❑	❑	❑
Informing which costs enrollees have to pay themselves	❑	❑	❑	❑	❑
Informing about the policy conditions	❑	❑	❑	❑	❑
Making information available about with which healthcare providers a contract has been concluded	❑	❑	❑	❑	❑
Controlling healthcare costs	❑	❑	❑	❑	❑
Checking the bills of healthcare providers I visited	❑	❑	❑	❑	❑
Negotiating the price of care	❑	❑	❑	❑	❑
Monitoring the quality of care	❑	❑	❑	❑	❑
Negotiating the quality of care	❑	❑	❑	❑	❑
Determining with which healthcare providers a contract is concluded	❑	❑	❑	❑	❑
Determining which treatments are reimbursed for insured	❑	❑	❑	❑	❑
Determining which care is included in the basic package	❑	❑	❑	❑	❑
Mediating between healthcare provider and patient for shorter waiting times	❑	❑	❑	❑	❑

2. To what extent do you think health insurers actually perform these tasks? Please indicate this per task.

	1 Health insurers do not perform this task at all	2	3	4	5 Health insurers always perform this task
Giving advice to the insured when choosing a healthcare provider	❑	❑	❑	❑	❑
Giving advice to the insured when choosing a treatment	❑	❑	❑	❑	❑
Making quality information about healthcare providers available	❑	❑	❑	❑	❑
Making information available about the price of care	❑	❑	❑	❑	❑
Informing which costs enrollees have to pay themselves	❑	❑	❑	❑	❑
Informing about the policy conditions	❑	❑	❑	❑	❑
Making information available about with which healthcare providers a contract has been concluded	❑	❑	❑	❑	❑
Controlling healthcare costs	❑	❑	❑	❑	❑
Checking the bills of healthcare providers I visited	❑	❑	❑	❑	❑
Negotiating the price of care	❑	❑	❑	❑	❑
Monitoring the quality of care	❑	❑	❑	❑	❑
Negotiating the quality of care	❑	❑	❑	❑	❑
Determining with which healthcare providers a contract is concluded	❑	❑	❑	❑	❑
Determining which treatments are reimbursed for insured	❑	❑	❑	❑	❑
Determining which care is included in the basic package	❑	❑	❑	❑	❑
Mediating between healthcare provider and patient for shorter waiting times	❑	❑	❑	❑	❑

3. To what extent do you think it is important that health insurers perform these tasks? Please indicate this per task.

	1 Very un-important	2	3	4	5 Very important
Giving advice to the insured when choosing a healthcare provider	❑	❑	❑	❑	❑
Giving advice to the insured when choosing a treatment	❑	❑	❑	❑	❑
Making quality information about healthcare providers available	❑	❑	❑	❑	❑
Making information available about the price of care	❑	❑	❑	❑	❑
Informing which costs enrollees have to pay themselves	❑	❑	❑	❑	❑
Informing about the policy conditions	❑	❑	❑	❑	❑
Making information available about with which healthcare providers a contract has been concluded	❑	❑	❑	❑	❑
Controlling healthcare costs	❑	❑	❑	❑	❑
Checking the bills of healthcare providers I visited	❑	❑	❑	❑	❑
Negotiating the price of care	❑	❑	❑	❑	❑
Monitoring the quality of care	❑	❑	❑	❑	❑
Negotiating the quality of care	❑	❑	❑	❑	❑
Determining with which healthcare providers a contract is concluded	❑	❑	❑	❑	❑
Determining which treatments are reimbursed for insured	❑	❑	❑	❑	❑
Determining which care is included in the basic package	❑	❑	❑	❑	❑
Mediating between healthcare provider and patient for shorter waiting times	❑	❑	❑	❑	❑

7

Chapter 7

General discussion

7.1 Context

In healthcare systems structured around the theory of managed competition, where health insurers act as prudent purchasers of care on behalf of enrollees, the establishment of trust in insurers by enrollees is important. Enrollees may doubt the intentions of health insurers in healthcare contracting and healthcare advice when trust is low (1, 2). When enrollees have trust in the health insurer, it is expected that it may help health insurers guide their enrollees to preferred providers (3). This strengthens the negotiating power of health insurers when contracting with healthcare providers, enabling them to more effectively manage both the quality and costs of care, which are key objectives of managed competition (4–7). Literature shows that trust in health insurers in the Netherlands is low (3, 8, 9). Since limited previous studies focused on the potential impact of low trust on the functioning of the healthcare system, we investigated in this dissertation whether low trust in the health insurer poses a problem in making healthcare systems based on managed competition work as intended. The main question of this dissertation was: 'What role does enrollees' trust in health insurers play in the effective functioning of a healthcare system based on managed competition?'

This general discussion opens by presenting the main findings of the dissertation and placing them within the broader context of existing research. It then explores the implications for the healthcare system, health insurers, and healthcare policy. Following this, the chapter highlights key methodological considerations and offers recommendations for future research. The chapter ends with a short general conclusion.

7.2 Main findings

This dissertation explored the relationship between trust in health insurers and both the choice of health insurance policy and the willingness to receive healthcare advice. It also examined enrollees' awareness of policy conditions, how enrollees' trust in health insurers is shaped, which responsibilities enrollees associate with health insurers and how these perceptions contribute to their lack of trust. We aimed to answer five specific research questions that will structure our main findings.

RQ1: What is the role of trust in enrollees' choice of a health insurance policy?

The level of enrollees' trust in health insurers is low, but people tend to have more trust in their own health insurer than in others

We found, first of all, that the level of trust in health insurers is low. Around one third (35%) of the respondents indicated that they agree, or completely agree, with the

statement that they trust health insurers completely (Chapter 2). Moreover, 22% of the respondents (completely) disagreed with the statement, and 44% indicated they were neutral. Furthermore, we found that the level of enrollees' trust is slightly higher in enrollees' own health insurer versus other health insurers. This applies both to trust in general and specifically to trust in the purchasing strategy. The low level of trust we found in health insurers is consistent with a more recent study by Stolper et al. (2025), which found that only 19% of their respondents have (very) high trust in insurers acting as buyers on their behalf, while 28% reported having little or no trust in this role (10). Furthermore, the level of trust we found in health insurers is much lower than the level of citizens' trust in other stakeholders within the Dutch healthcare sector in 2022, the year of the study, such as general practitioners (92%), medical specialists (88%) or hospitals (77%) (11). In addition, there are different signs of low trust found in other studies, as concluded in the article of Maarse and Jeurissen (2019) (12). In other countries with relatively similar system, like Switzerland and Germany, trust in health insurers appears to be higher (13–15). For example, in 2024, 81% of Swiss people said they were satisfied with their health insurance system (13). From literature we know that satisfaction is related to trust (16, 17). Furthermore, in 2017, 86% of the citizens of Germany said they trusted their sick fund or health insurer (15).

General trust in health insurers is not related to whether enrollees switch insurers

Furthermore, we found that general trust in health insurers is not related to whether enrollees switch insurers (Chapter 2). This finding was unexpected, as we had anticipated that higher levels of trust in health insurers would be associated with a greater likelihood of switching. Given that trust has been shown to reduce perceived risk (2, 18, 19), we hypothesised that it would mitigate concerns about ending up worse off with a new insurer. Conversely, we hypothesised that low trust may increase the perceived risk of switching, as it does not alleviate concerns regarding potentially less favorable conditions with a new health insurer. Despite the unexpected result, similar to our study, Stolper et al. (2025) also found no significant difference in trust regarding health insurers' purchasing role between respondents who switched once or multiple times in the last 5 years and those who did not switch at all (10).

Trust is not related to the choice of a policy with restrictive conditions

In addition, we found that trust, both in general, and specifically in the health insurer and its purchasing strategy, is not related to the choice of a policy with restrictive conditions (Chapter 2). This was not in line with our hypothesis, in which we expected that trust in the health insurer would play a key role in the acceptance of selective contracting. We hypothesised that enrollees perceive a risk that their insurer may not prioritise their interests when selectively purchasing care from providers, and that trust

helps to reduce this perceived risk (2, 18, 19). Therefore, we reasoned that enrollees with higher trust in their insurer would be more likely to choose a policy with restrictive conditions. Previous research by Bes et al. (2013) found that trust in the health insurer is an important condition for the acceptance of selective contracting among their enrollees (2). It was not studied how this affected insurance choice. While the study by Bes et al. (2013) asked about the level of acceptance of selective contracting, actually choosing a policy with restrictive conditions is a different matter, which may explain the difference in outcome between both studies.

RQ2: To what extent do enrollees with restrictive conditions in their health insurance policy know about these conditions?

More than a third of the respondents did not consider which providers are fully reimbursed

We found (Chapter 3) that more than a third of the respondents with a policy with restrictive conditions did not consider which providers are fully reimbursed when choosing their health insurance policy. Once enrolled, one-fifth of them appear to be totally unfamiliar with the restrictive conditions of their policy. The proportion of respondents (35%) who indicated that they have not considered which providers are fully reimbursed when choosing their health insurance policy is relatively high compared to other studies. A survey-based study from the US, found that 21% of their respondents were somewhat or not at all likely to check which hospitals and physicians are covered in each plan when comparing plans (20). Our results may be partly explained by the study of Holst et al. (2021), which showed that citizens in the Netherlands find it difficult to comprehend health insurance information (21). For example, Holst et al. (2021) showed that more than half of the respondents find it difficult to compare different types of health insurance policies (21). A recent study by Meijer et al. (2025) reveals that at the beginning of the year, many enrollees (about half) are still unsure which care providers their insurer has contracts with, even though two-thirds of enrollees consider it important to know this (22). The same study found that only three out of ten enrollees find the information about selective contracting to be very understandable (22). In contrast, 14% of enrollees find this information either completely unclear or only somewhat understandable (22). These findings suggest that there is a gap in communication and finding or understanding information regarding selective contracting among a substantial group of enrollees.

Being enrolled in a policy with restrictive conditions does not always seem to affect enrollees' choice of a provider

Furthermore, our results (Chapter 3) show that being enrolled in a policy with restrictive conditions does not always seem to affect enrollees' provider choice. In the 12 months before the questionnaire, three out of five respondents who wanted to go to a particular provider who was not fully reimbursed, still went to that non-contracted provider. Of the respondents who initially wanted to visit a provider not contracted by their health insurer, only 12% changed their mind and chose a contracted provider instead. These results are in line with some findings from other studies. For example, the study by Meijer et al. (2025) showed, although based on a small number of respondents, that half of the respondents who reported having used non-contracted care indicated they would be willing to use such care again in the future (22). Nevertheless, this does not mean that financial incentives are never effective in steering insured individuals. There is also previous research on choices in pharmaceutical care that shows that financial incentives in restrictive care plans are effective in channelling patients to contracted pharmacies in the Netherlands (4, 23, 24).

A considerable number of enrollees with a policy which includes restrictive conditions have faced unexpected costs

Our results (Chapter 3) show that there is a considerable number of enrollees with a policy which includes restrictive conditions who have faced unexpected costs in the 12 months before the questionnaire. The majority (62%) of the respondents who said they had to pay extra in the 12 months before the questionnaire, because hospital care was not fully reimbursed, did not know this in advance. For 30% of these respondents, this was a serious problem. This is 2% of the total number of respondents. When we compare the results with the existing literature, the percentage that did not know in advance that they had to pay extra (62%) seems to be high. The study of Paez & Mallery (2014) showed for example that 42% of the respondents in the United States indicated that they were not at all or only somewhat likely to check what their plan will and will not cover before getting health services (20).

RQ3: What is the relationship between trust in the health insurer and the willingness of enrollees to receive healthcare advice from their health insurer?

When enrollees have more trust in the health insurer, they are more willing to approach them for healthcare advice

We found an association between trust in the health insurer and the willingness to receive healthcare advice from the health insurer (Chapter 4). We found that when enrollees have more trust in the health insurer, they are more willing to approach them for healthcare

advice, and are also more positive about being actively approached by their health insurer. The role of trust in the willingness to receive healthcare advice is not proven to differ between groups with regard to educational levels, health status or age. From Chapter 2 and various literature, we know that trust in the Netherlands in the health insurer is low (1–3). This may help explain why existing literature around healthcare advice shows that a large group of Dutch enrollees is not open to healthcare advice from the health insurer (8, 25, 26). For instance, the study of Bes et al. (2012) showed that half of the respondents indicated that they would not like it if their health insurer took on an advisory role in choosing a healthcare provider (8). In addition, research by Victoor et al. (2019), showed that only four out of ten enrollees indicated that they would approach their health insurer for advice on a suitable healthcare provider (11).

RQ4: How do enrollees perceive health insurers and the role they have in the healthcare system, how are these perceptions formed, and how are these related to trust?

Some enrollees have the perception that health insurers' financial considerations take precedence over patients' health and well-being

Our interview study (Chapter 5) found that some participants believe health insurers prioritise money over the quality and efficiency of care. This aligns with previous research, which found that more than two-thirds of enrollees believe health insurers prioritise saving money over purchasing the care they need (27). Furthermore, we found that some participants feel that health insurers are mainly focused on profit maximisation instead of delivering quality care. The perception that financial considerations take precedence over patients' health and well-being could lead to feelings of alienation and mistrust, as enrollees may feel unsupported in their search for the best care. Moreover, we found that some participants were unaware that, although Dutch health insurers are not legally prohibited from distributing profits, they are organised as not-for-profit entities and do not distribute profits to shareholders in practice. Instead, they believed that health insurers function like for-profit organisations that distribute profits. This is in line with what was found in the study by Yildirim et al. (2023), which also noted that a majority of participants view health insurers as profit-driven organisations organisations, and recommends addressing the misconceptions surrounding this (28).

Important tasks of health insurers according to insured: make care accessible and fairly distributed, closely monitor what constitutes truly effective care, provide guidance towards appropriate care, and ensure transparent communication about policy conditions and spending healthcare costs

We found in our interview study also that participants see as important tasks of health insurers that they make care accessible and fairly distributed, closely monitor what constitutes truly effective care, provide guidance towards appropriate care, and ensure transparent communication about policy conditions and spending healthcare costs (Chapter 5). Moreover, participants highlighted the significance of preventive measures and proactive initiatives in advancing public health. The range of expectations regarding the tasks and roles of health insurers, as mentioned by participants, indicates that enrollees have some knowledge of the different roles health insurers play in the healthcare system. However, not all enrollees fully recognise these roles, and some expectations do not align with the actual roles, creating misconceptions. For instance, some participants believe health insurers decide what is included in the basic health insurance package, while in the Netherlands the National Health Care Institute (Zorginstituut Nederland, ZIN) provides expert advice and assessments regarding coverage decisions, but the final decisions are made by the Minister of Health, Welfare, and Sport (VWS). Health insurers are then responsible for implementing and complying with these official decisions (29). This is in line with research by Yildirim et al. (2023), which presents similar findings on how well enrollees in the Netherlands understand the purchasing role of health insurers (28).

Participants address negative experiences with unexpected payments due to the mandatory deductible

Our findings revealed several negative experiences with health insurers that may be related to trust (Chapter 5). One of the main findings was that participants reported unexpected payments due to the mandatory deductible. This experience of additional costs can undermine trust, particularly for individuals with lower incomes or chronic health conditions that require frequent medical visits, as it may create a financial burden. This reasoning is in line with the study of Hoefman et al. (2015), which also described that a lack of clarity regarding payments may undermine trust in health insurers (27). Furthermore, we found that participants mentioned that contact options with the health insurer were an issue. Some participants mentioned long waiting times on the phone or the use of chatbots, creating a sense of distance and impersonality. The fact that enrollees generally do not favor chatbots aligns with previous studies, which found that insurance enrollees typically tend to reject interacting with chatbots and prefer personal contact options (30–33).

Some participants report that media focus on insurers' profitability and cost control shapes their perception of health insurers negatively

Additionally, the results of our study show that, according to the participants, the media frequently emphasize profitability and cost control by health insurers, leading to mixed reactions (Chapter 5). Participants reported being exposed to various forms of media coverage about health insurers, ranging from advertisements to critical reports and consumer programs. They reported to see this especially during the annual switching period. While some were aware of media bias and emotional framing, others acknowledged that such coverage, particularly related to insurer profitability or efficiency, negatively influenced their perceptions. Larger insurers appeared to attract more media attention than smaller ones, and several participants stated that media portrayals shaped their overall views of health insurers. Literature suggests that public trust is strongly influenced by how effectively health insurers communicate about the ways they add value for stakeholders (34). When insurers clearly demonstrate their commitment to important societal and healthcare-related goals, such as improving care quality, ensuring access, enhancing patient satisfaction, fostering innovation and prevention, and collaborating with care providers, this can help shape a more favorable public image. In turn, this positive perception can lead to increased trust among the public (34).

RQ5: What is the relationship between enrollees' perceptions of the tasks of health insurers, and enrollees' trust in them?

A mismatch between enrollees' expectations about the tasks of health insurers and their actual tasks is related to trust

Last of all, we found different relationships between the enrollees' perception of the tasks of health insurers, and their trust in health insurers (Chapter 6). In general, we found a relationship between a mismatch between enrollees' expectations about the tasks of health insurers and their tasks, as stated in the Health Insurance Act (HIA), and trust. However, notably, for non-statutory tasks, a greater mismatch was actually associated with higher levels of trust, and for 'Informing about the price and availability of care', no significant relationship was found. Furthermore, we found that a higher degree of mismatch between enrollees' expectations of the tasks of health insurers and the tasks they see are actually performed, was significantly related to less trust in the insurer. Lastly, the interaction between the importance of a task and a mismatch between enrollees' expectations of the tasks of health insurers and the tasks they see actually performed, was only significantly related to trust for the category 'Informing about the price and availability of care'. Most of these findings are in line with the literature that suggests that enrollees' perceptions affect the level of trust in the insurer

(12). If the perception does not align with the expectation of the insurer, this leads to unmet expectations, which negatively impacts trust (35). Furthermore, these results are consistent with those of Hoefman et al. (2015) (27).

7.3 Implications for the functioning of the healthcare system

To ensure a well-functioning healthcare system, it is essential that enrollees face no obstacles when switching health insurers. Equally important is that insurers have the ability to guide their enrollees toward preferred providers through selective contracting and healthcare advice. In the following section, we discuss how the findings of this study impact these key aspects of the healthcare system.

Low levels of trust are not a barrier to switching health insurers

The Dutch healthcare system is based on regulated managed competition. Citizens can choose between insurers, and insurers purchase healthcare on their behalf. Competition exists if citizens make an active choice between health insurers. One indicator of this is that a sufficient number of enrollees change health insurers each year, or consciously consider doing so. In that case, insurers feel that there is a genuine threat of enrollees leaving them. In Chapter 2, however, we found no relationship between trust in the health insurer and actually switching insurers, suggesting that low overall trust in health insurers in this regard is not necessarily a threat to the functioning of the healthcare system. Instead, it could be that other factors besides trust come into play in the context of switching behaviour, such as the range of care offered by the health insurer, premium differences or ease of switching. For example, research shows that dissatisfaction with the premium amount is the most frequently mentioned reason for policyholders to switch health insurers (36).

Not a lack of trust, but a lack of knowledge undermines steering through selective contracting

In addition, a requirement for creating competitive markets is that health insurers are able to guide their enrollees to preferred providers (4–7). In that case healthcare providers must seriously consider the possibility that an insurer and their enrollees switch to a competitor (4, 5). According to the theory of managed competition, this gives care providers an incentive to improve the quality of care and reduce the price of care (4, 5, 37). One of the instruments to guide enrollees to preferred providers is via selective contracting. The more enrollees choose restrictive health insurance policies, in which selective contracting is applied, the more selective contracting may become an effective key element in creating competition between healthcare providers.

The results of this study show that general trust seems not to be related to the choice of a policy with restrictive conditions. Thus, low levels of trust do not appear to pose a significant barrier in this context.

What does pose a threat to the functioning of the healthcare system is that not all enrollees with a policy that includes restrictive conditions are aware of its conditions. Health insurers are better able to channel enrollees, when it will be more likely that they will opt for a contracted provider to avoid having to pay extra. In recent years, various efforts have been made in the Netherlands to better inform citizens about health insurance policies with restrictive conditions, thereby enabling them to make more conscious choices (38–40). For example, regulations have been introduced requiring both healthcare providers and insurers to clearly and proactively inform consumers about key aspects of their health insurance coverage, including contract status, reimbursement implications, and potential out-of-pocket expenses (39, 40). Nevertheless, a recent study by Meijer et al. (2025) indicates that a significant portion of enrollees still experience difficulties in accessing, understanding, or interpreting information related to selective contracting, suggesting that this issue remains relevant despite the measures taken (22).

Limited trust does undermine steering via healthcare advice

Providing information and steering towards contracted providers can also be achieved by providing healthcare advice from the health insurer. From Chapter 4 follows that trust plays a role in the willingness to receive healthcare advice from the health insurer. We found that when enrollees have more trust in the health insurer, they are more willing to approach them for healthcare advice, and are also more positive about being actively approached by their health insurer. The association between the two emphasizes the importance of high trust in the health insurer so that the health insurer can take on this role of healthcare adviser. The ability to channel enrollees to preferred providers is essential for health insurers to act as prudent purchasers of care (1, 6, 7, 41). An inability to use these instruments to channel enrollees could lead to a weakening of the bargaining position of health insurers towards healthcare providers.

7.4 Implications for the health insurer

For health insurers to take up their role as prudent purchasers of care, it is important that enrollees have trust in them. However, our results show that trust in the health insurer in the Netherlands is low, and this dissertation has brought insight into some elements associated with this low trust.

Negative perceptions and ignorance can weaken trust and the position of health insurers

This dissertation reveals a lack of knowledge about policy conditions and selective contracting among some enrollees. This may lead to unexpected costs or limitations in access to healthcare providers. These surprises may cause confusion, frustration, or even financial difficulties for enrollees, and may also result in complaints or negatively affect the public perception of the health insurer. Combined with the perception among some enrollees that financial interests are more important than the quality of care, this may be linked to why trust in health insurers in the Netherlands is low. This low level of trust may be reinforced by the fact that many people are unaware that Dutch health insurers operate on a non-profit basis. In addition, when enrollees feel that insurers are not adequately fulfilling their social responsibility, trust in their social role may be further undermined.

Preventing low levels of trust among enrollees is crucial for social legitimacy to fulfil their role as healthcare purchasers and advisors in the healthcare landscape. Trust is essential in this context, as it can be seen as the glue between policy and its acceptance: without that glue, legitimacy and public support crumble. In that case, it becomes more difficult for health insurers to explain their policy to enrollees when developments require measures to be taken. Cooperation with other parties in the healthcare chain, such as hospitals, general practitioners and policymakers, may also come under pressure as a result. They would then lose their position as a reliable partner for enrollees, which is undesirable. The findings from this dissertation call for health insurers to take active steps to strengthen trust, for example by communicating transparently, consistently, and accessibly about their health insurance plans, the conditions attached to those plans, and their role and responsibilities within the healthcare system.

7.5 Implications for policy

This dissertation is grounded in the concept of managed competition as applied in the Dutch healthcare system, which entails regulated competition among health insurers and healthcare providers. The findings of this study have important implications for healthcare policy. They highlight the need for targeted interventions that can strengthen the role of health insurers and improve the functioning of the healthcare system. In particular, the results point to two key areas where policy action is needed: increasing public awareness of the roles and responsibilities of health insurers, and supporting citizens in making well-informed choices about their health insurance. The following section elaborates on these implications.

Increase knowledge among enrollees about the roles and responsibilities of health insurers

Knowledge among enrollees about the roles and responsibilities of health insurers, and how these fit within the broader context of the Dutch healthcare system, can help to better highlight the collective interest and explain why insurers operate the way they do. Chapter 5 and 6 of this dissertation indicate a gap in this knowledge. The results from Chapter 5 revealed that not all enrollees recognise the roles of the health insurer in their entirety, and Chapter 6 showed that not all expected roles align with the actual roles, leading to misconceptions. Also other research suggests that enrollees do not always have a clear understanding of the role of health insurers. A study by Yildirim et al. (2023) revealed that participants were aware that health insurers are responsible for purchasing care, but reported having a limited understanding of what this role entails (28). The same study found that respondents who believe health insurers are transparent about how they purchase care, who have more knowledge of the healthcare system, and who were reasonably familiar with the purchasing tasks in advance, also tend to have more trust in the execution of these tasks by health insurers (28). Increasing knowledge may therefore play a crucial role in increasing trust in health insurers.

The best way in which knowledge can be increased among enrollees should be further researched. We recommend that the government and health insurers provide clear communication regarding the broad role of health insurers, their non-profit status, decision-making processes related to quality and cost when purchasing care, and enrollees' payment responsibilities. Such transparency could help improve trust in health insurers. However, it is crucial to recognize that the effectiveness of this communication may vary depending on the recipients' health insurance literacy and the channels through which the information is delivered (42–46). Mass media such as television programs and radio, alongside social media campaigns, may offer the opportunity to reach a wide audience, while local communities and trusted figures, such as GP's, other healthcare providers and community leaders, may help reach vulnerable groups, for example, through information sessions in community centers or via translated materials for non-Dutch speakers (47, 48). A combined communication approach may therefore be considered to engage as many people in society as possible (49, 50). In addition, it is important that this type of information is clearly presented and easy to find on the websites of health insurers and government bodies, ideally supported by short videos, infographics, and real-life examples.

Support citizens in making informed decisions regarding the choice of health insurance

Citizens seeking health insurance can visit the websites of individual insurers to review available policy options and make a decision. Health insurers in the Netherlands are legally required to clearly and promptly inform consumers about their policy terms, reimbursements, contracted healthcare providers, and the deductible (39, 40). Additionally, digital tools such as comparison websites and interactive apps can assist users in making informed choices. Research shows that these comparison websites are widely used in the Netherlands (51). In 2024, four out of ten (41%) consumers who switched health insurers took out their new insurance via a (price) comparison website (51). However, choosing a health insurance policy is still perceived as a difficult task by many citizens (52). One of the reasons for this is the large number of roughly 60 basic policies to choose from in the Netherlands (52). Such selection tools should explain in an understandable way what selective contracting is, which basic policies it applies to, what a budget policy can mean for enrollees in terms of costs, quality and freedom of choice, and where enrollees can go for contracted care. When this is better known and enrollees act on this information, health insurers will also be better able to steer enrollees towards preferred providers through selective contracting. Such comparison websites already exist in the Netherlands, but they are commercial. There is no independent decision-making aid from the government. It is advisable to further examine the effectiveness of the information provided on health insurers' websites as well as these comparison websites, and to address any shortcomings that may be identified. Depending on the results of that study, consideration could be given to introducing an independent, non-commercial decision-making aid from the government. In addition, it is important that people with limited digital skills can receive support by phone or in person to help them make an appropriate policy choice. Both ideas were also described in the dissertation of Holst (2025) (66). As described by Holst, the “Information Point Digital Government” (Informatiepunt Digitale Overheid), located in Dutch public libraries, could play a facilitating role in this (52, 53).

7.6 Methodological considerations

This dissertation is based on five studies, most of which rely on data collected through the Dutch Health Care Consumer Panel (DHCCP). Additionally, three of the studies make substantial use of the Health Insurer Trust Scale (HITS) developed by Zheng et al. (54) and translated in Dutch by Hendriks at al. (55). While the individual strengths and limitations of each study have been discussed separately, several broader methodological considerations apply across this dissertation as a whole. These considerations primarily relate to issues of sample selectivity, representativeness,

limitations of survey-based data collection, and the implications of using cross-sectional study designs.

Selectivity and representativeness

This dissertation makes use of data from the Dutch Health Care Consumer Panel (DHCCP) (56). The DHCCP is an access panel, consisting of individuals who have agreed to participate in health-related surveys. By using the DHCCP, the study had a relatively large and stable sample. This made it possible to make statements with sufficient statistical power, including statements about various subgroups within the population. While this method allows for efficient data collection and generally high response rates, it also raises concerns about sample representativeness. Respondents who participate in healthcare panels may differ from the general population in terms of interest and engagement with health-related topics. This introduces the risk of selection bias. However, the DHCCP attempts to mitigate such bias by recruiting new panel members via random sampling. Individuals cannot register for the Consumer Panel on their own initiative. Instead, new panel members are recruited through two main methods. One approach involves using a purchased address list, which enables the random selection of individuals from the general population in the Netherlands. The other method involves recruiting through general practices that take part in the Nivel Primary Care Database (56).

Furthermore, people with limited reading or writing skills, or who are less comfortable with the Dutch language in which the survey is administered, are less likely to participate or to complete the survey accurately. Across the different studies in this dissertation, respondents were found to be relatively older and more highly educated than the general Dutch population. Younger individuals and those with lower education levels were underrepresented, and people from non-Western migration backgrounds who do not speak Dutch were not involved. Moreover, individuals with low literacy were unlikely to participate, given the reliance on written questionnaires. As literature presents low trust as the result of lack of health insurance literacy, this might have influenced the results by limiting the generalizability of the findings (12). These kind of selection effects are however not unique to research with the DHCCP but are common in survey-based studies more generally.

Measurement with the Health Insurer Trust Scale

The studies in this dissertation also make use of the Health Insurer Trust Scale (HITS) developed by Zheng et al. (2022) (54). This scale consists of four key dimensions: commitment, competence, honesty, and confidentiality. Their study resulted in an 11-item questionnaire designed to capture these dimensions. The measurement relies on self-

reported attitudes, experiences, and anticipated behaviours. Respondents indicate their level of agreement with each statement using a five-point Likert scale: strongly agree, agree, neutral, disagree, and strongly disagree. Trust is measured as the sum score across all 11 items, after reverse coding the negatively worded items. In this dissertation, the validated Dutch translation of the HITS, developed by Hendriks et al. (2007), was used (55). This is a strength, as this questionnaire demonstrated good reliability and construct validity, and therefore offers a solid foundation for measuring trust in health insurers. The use of this scale across multiple studies within the dissertation contributes to consistency in measurement and enables reliable quantification of trust.

However, a limitation of using a questionnaire is that, while it provides quantitative data on trust in insurers, it does not reveal why respondents give particular answers. The scale primarily captures the outcomes of perceptions or experiences, but it does not allow for deeper exploration of the underlying motives, personal contexts, or interpretations of the respondents. As a result, although low trust scores can be identified, it remains unclear, without additional qualitative data, whether these scores reflect negative experiences, fundamental objections, limited understanding, or broader societal distrust. We addressed this limitation through the qualitative interviews presented in Chapter 5, which offer valuable insights into the underlying reasons for the low levels of trust observed in the Dutch health insurance context.

Cross-sectional study design and causality

Another limitation of this dissertation lies in the predominantly cross-sectional nature of the included studies. While such designs are useful for identifying patterns and associations between variables at a single point in time, they do not permit any conclusions about causal direction. Since there is no longitudinal data that follows individuals over time, it is not possible to determine how trust evolves, declines, or responds to changes such as new policies or personal experiences. This means the findings must be interpreted with caution, particularly when considering potential policy implications or interventions aimed at building or restoring trust. To draw stronger conclusions about causality and change over time, future studies should consider longitudinal or experimental research designs.

7.7 Recommendations for further research

The findings of this dissertation offer valuable insights into trust in health insurers and open up new opportunities for further research. These findings are situated within the context of the Dutch healthcare system, which operates under the principle of managed competition. Therefore, the insights derived from this dissertation may be

particularly instructive for countries operating under similar principles of managed competition. However, the role of trust in the health insurer may vary considerably in healthcare systems built on other foundations. Further research could therefore explore the ways in which trust in health insurers affects system performance across different healthcare models, and how institutional differences shape the consequences of low trust in health insurers.

Another direction of further research would be to focus on groups that were underrepresented in the studies presented in this dissertation. These include individuals with limited reading or writing skills, those less comfortable with the Dutch language in which the survey was conducted, as well as younger people and individuals with lower levels of education. These groups in society were unlikely to participate due to the written format of the questionnaires. Future research should make a concerted effort to involve these groups to ensure that findings are more reflective of the general population, possibly by applying a more qualitative research approach.

Furthermore, conducting longitudinal research would be valuable for understanding the dynamics of trust between enrollees and their health insurer over time. Unlike cross-sectional studies, longitudinal designs allow for the tracking of changes and trends in trust, particularly in response to factors such as policy modifications, media coverage of health insurers, or customer service interactions. This approach facilitates the identification of causal relationships and provides a deeper understanding of which factors contribute to create trust among enrollees.

In addition, we found that many enrollees are not fully aware of the conditions of their health insurance policies. Individuals with lower incomes and those in poorer health were more likely to report not knowing that they had to pay extra for certain hospital care, and they also more frequently experienced financial difficulties as a result. Our findings also suggest that there are common misconceptions about the roles and responsibilities of health insurers. This is supported by earlier research, such as the study by Potappel et al. (2018), which found that more than half of enrollees were unaware that health insurers publicly share price information about treatments (57). These findings highlight the importance of improving knowledge among enrollees, so they can make informed choices when selecting a health insurance policy. However, to our knowledge, there has been no comprehensive investigation into the current state of information provision in the Netherlands or the most effective ways to reach enrollees. It is important to recognize that the effectiveness of communication may vary depending on individuals' health insurance literacy and the channels used to deliver the information. Moreover, not everyone may be sufficiently motivated or interested to engage with information

about health insurers. Future research could focus on the current state of information provision about the health insurer's roles and how best to reach enrollees with this type of information. Health insurers and policymakers could use these insights to adapt their communication about health insurers to suit diverse audience groups.

7.8 Conclusion

Limited previous studies have examined whether low trust in the health insurer poses a problem in making healthcare systems based on managed competition work as intended. In this dissertation, we therefore investigated whether enrollees' trust in the health insurer is related to the functioning of the healthcare system with managed competition. We found that trust in health insurers is low. There are several reasons for this, but the common denominator is that many enrollees are not fully aware of how the healthcare system in the Netherlands is organised and what roles and tasks health insurers have within this system. According to some enrollees, health insurers are profit-oriented and do not act in the interests of enrollees. The findings of this dissertation indicate that low trust does not seem to pose a major risk to the functioning of the healthcare system with managed competition. Low trust is not a barrier for enrollees to switch health insurers. It primarily seems to be a lack of knowledge about policy conditions that undermines steering through selective contracting. Further research could focus on how enrollees are informed by their health insurers and whether and how they use this information. While the findings of this dissertation suggest that low trust does not significantly undermine the functioning of the healthcare system with managed competition, it remains possible that trust is more consequential in other domains or interactions within the system. Where low trust does play a threat for example, as the results of this dissertation show, is in the acceptance of healthcare advice. This, while healthcare advice can be a strong element in stimulating competition by steering enrollees towards preferred providers. As the literature on this subject is scarce, future studies should examine potential approaches for increasing public trust in health insurers.

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A

Appendices

SUMMARY

Introduction

Since the introduction of the Health Insurance Act in 2006, the system of managed competition has been in place in the Netherlands. Health insurers play an important role in this system, as they purchase care on behalf of their enrollees. Citizens are obliged to take out basic insurance, and insurers seek to attract and retain customers by offering appealing health insurance packages. In theory, this encourages insurers to purchase good quality care at a competitive price.

Health insurers will have a strong position during the negotiations with healthcare providers if they can guide enrollees to preferred providers. This is because providers must then seriously consider the possibility that an insurer and their enrollees switch to a competitor. Insurers can steer enrollees towards preferred healthcare providers through selective contracting and healthcare advice. Selective contracting means that health insurers do not enter into contracts with all healthcare providers. When enrollees opt for a health insurance policy with restrictive conditions, which is usually offered at a lower premium, care from non-contracted care providers is not always fully reimbursed. Enrollees with such a health insurance policy are required to use contracted healthcare providers; otherwise, they must pay a co-payment.

Another way to direct enrollees to preferred care providers is by providing healthcare advice. Healthcare advice can consist of various services, such as mediation with waiting lists, advice on the most suitable healthcare provider, advice and guidance in arranging care or medical devices, arranging a second opinion, advice aimed at prevention and health promotion, and assistance in preparing for an appointment with a doctor.

Trust may play a crucial role in being able to steer enrollees. Trust is mostly defined as 'the optimistic acceptance of a vulnerable situation in which the truster believes the trustee will care for the truster's interests'. Our hypothesis is that when trust is low, enrollees are less likely to opt for health insurance policies with restrictive conditions and are less likely to be open to advice, which weakens the negotiating position of insurers. In the Netherlands, trust in health insurers is relatively low. According to the available literature, this is partly due to limited knowledge of enrollees about health insurers, the perception that insurers mainly pursue profit, concerns among enrollees about interference in the doctor-patient relationship and negative portrayal in the media. An important bottleneck is that insurers struggle to convince enrollees that

they are committed to providing high-quality care in addition to controlling costs. As a result, enrollees are often reluctant to accept healthcare advice from their insurer.

If health insurers are unable to effectively use selective contracting and healthcare advice to guide enrollees in their choice of healthcare provider, their ability to manage quality and costs becomes limited. This dissertation therefore focuses on the question whether trust in the health insurer is related to the functioning of a system of managed competition. This also involves examining how trust is formed and to what extent enrollees' expectations regarding the role of health insurers are related to this. This dissertation specifically focuses on the Dutch healthcare system. The central research question is: 'What role does enrollees' trust in health insurers play in the effective functioning of a healthcare system based on managed competition?'.

Key findings

Trust and policy choice

In **Chapter 2** the role of trust in health insurers in the choice of health insurance is examined. In order for the healthcare system with managed competition to work properly, enrollees must be able to consciously switch health insurers every year. This encourages insurers to make an effort for their customers. In addition, a growing number of enrollees choosing health insurance policies with restrictive conditions increases the effectiveness of selective contracting, which in turn stimulates competition among healthcare providers. According to theories of consumer behaviour, trust is essential in situations of uncertainty: the greater the perceived risk, the more trust is needed to make a choice. The central research question of this chapter, therefore, was: *What is the role of trust in enrollees' choice of a health insurance policy?* To answer this question, a questionnaire was sent to 2,000 members of the Nivel Dutch Health Care Consumer Panel in February 2022. A total of 1,125 respondents completed the questionnaire (response rate: 56%). The study focused on switching behaviour and the choice of policies with restrictive conditions, where trust was measured with the Dutch version of the Health Insurer Trust Scale (HITS), a validated scale. The results were analysed using descriptive analysis and logistic regression models. The results show that general trust in health insurers is low: only 35% of the respondents indicated that they have (full) trust in health insurers. However, trust in one's own health insurer is slightly higher than in other health insurers. It is striking that this trust does not have a significant influence on switching health insurers or choosing a policy with restrictive conditions. Although trust influences how people perceive their health insurer, it does not appear to directly drive their behaviour in the health insurance market.

Awareness of restrictive policy conditions

Chapter 3 focused on the role of health insurers in providing clear information about healthcare costs. Insufficient or inadequate communication can lead to enrollees being confronted with unexpected costs. This can put pressure on trust in the insurer, especially in policies with limited freedom of choice, where a personal contribution applies to non-contracted care providers. Chapter 3 therefore examined the extent to which enrollees with a health insurance policy with restrictive conditions are aware of the consequences of this type of policy. The central research question of this chapter was: *To what extent do enrollees with restrictive conditions in their health insurance policy know about these conditions?* In August 2020, an online questionnaire was distributed to enrollees with such a policy. The study benefits from a large amount of data, with 13,588 completed questionnaires, although the response rate was relatively low (3.4%). The results were analysed using descriptive analysis. From the results follows that a significant proportion of respondents are insufficiently familiar with their policy: 35% did not take contracted care providers into account when making their choice and 20% were completely unaware of the restrictive conditions after taking out. Only 30% found the information on selective contracting very clear. This lack of awareness regularly leads to unexpected costs: 62% of respondents who had to pay extra for hospital care did not know this beforehand, and 30% experienced this as a serious problem (2% of the total number of respondents). These findings point to inadequate communication and knowledge, which can undermine trust in health insurers and limit the effectiveness of selective contracting as a steering tool.

Trust and healthcare advice

In **Chapter 4** the relationship between trust in the health insurer and the willingness of enrollees to receive healthcare advice is investigated. Healthcare advice is an important instrument with which health insurers can guide enrollees to contracted care providers. This can contribute to quality improvement and cost control. The central research question was: *What is the relationship between trust in the health insurer and the willingness of enrollees to receive healthcare advice from their health insurer?* In February 2021, a questionnaire was sent to 1,500 members of the Nivel Dutch Health Care Consumer Panel. A total of 885 panel members completed the questionnaire (response rate: 59%). Trust was measured with a validated scale, the Health Insurer Trust Scale (HITS), and analysed via logistic regression models. The results show a clear and significant relationship: the greater the trust in the health insurer, the greater the willingness to seek healthcare advice and to be approached proactively by the health insurer. This applied to various forms of advice, such as help in choosing a care provider, arranging care and receiving preventive support. The relationship between trust and willingness to receive advice was found to be consistent across age groups,

education levels and health status. Given the low level of trust in health insurers in the Netherlands, strengthening that trust is essential to enable health insurers to better fulfil their advisory role and thus contribute to a more efficient healthcare system.

Perception and trust in health insurers

In **Chapter 5** is examined how enrollees experience health insurers and their role within the Dutch healthcare system of regulated competition, how these perceptions are formed and how they are related to trust. Theoretical explanations for the low level of trust in health insurers include a lack of knowledge among enrollees about the role of health insurers, enrollees' critical attitude towards market forces in healthcare, the idea among enrollees that insurers are profit-driven and interfere in the relationship between doctor and patient, and negative media attention. Yet, little qualitative research has been done into the origin of this limited trust. The central research question of this chapter was: *How do enrollees perceive health insurers and the role they have in the healthcare system, how are these perceptions formed, and how are these related to trust?* To answer this question, semi-structured interviews were conducted in March and April 2023 with 17 members of the Nivel Dutch Health Care Consumer Panel. The data were analysed according to Braun and Clarke's six-step method for inductive thematic analysis. The results show that several participants have a critical attitude towards health insurers. Some experience that financial interests outweigh the well-being of patients, which leads to low levels of trust. This lack of trust is partly fueled by misconceptions, such as the belief that health insurers distribute profits to shareholders, which does not occur in practice. At the same time, enrollees expect health insurers to guarantee fair and accessible care, monitor treatments, provide appropriate guidance and communicate transparently about policy conditions and healthcare costs. Negative experiences, such as unexpected costs due to the mandatory deductible and impersonal contact via chatbots, reinforce the negative image. Media attention to profit and cost control also contributes to a skeptical attitude among various participants. While some participants positively rate the role of health insurers in making care accessible and managing (financial) resources, overall trust remains low. Improving communication about their public role, emphasizing their non-profit status and increasing transparency in healthcare procurement and cost allocation could contribute to increase trust.

Expectations and trust

In **Chapter 6** the study examined the extent to which enrollees' perceptions of the tasks of health insurers are related to their trust in these organisations within the Dutch system of regulated competition. Previous research shows that there are misconceptions among enrollees about the tasks of health insurers, as laid down in the

Health Insurance Act. These tasks do not always match the expectations that enrollees have. This mismatch between expectations and observed practice can undermine trust. This chapter's central research question was: *What is the relationship between enrollees' perceptions of the tasks of health insurers and enrollees' trust in them?* To answer this question, a questionnaire was sent to 1,500 members of the Nivel Dutch Health Care Consumer Panel in November 2021. A total of 837 respondents completed the questionnaire (response rate: 56%). Respondents indicated which tasks they considered important, which they expected from health insurers, and to what extent they thought these tasks were actually performed. Trust was measured with a validated scale, the Health Insurer Trust Scale (HITS), and analysed via multivariate regression models. The results show that enrollees have less trust in health insurers when their expectations about tasks do not match the statutory powers of health insurers. This is especially true for tasks in the field of cost control and quality mediation. In addition, the results show that a greater mismatch between expectations and perceived tasks is associated with lower trust. For tasks involving information about the price and availability of care, trust decreases more markedly as these tasks are perceived as more important. These findings underline the importance of clear communication and public awareness about the role of health insurers, so that they can effectively fulfil their task as purchasers of care.

Conclusions

This dissertation investigated how trust of enrollees in health insurers is related to the functioning of the Dutch healthcare system with managed competition. Although trust is low, this is not a direct obstacle to switching behaviour or the choice of policies with restrictive conditions. The biggest bottleneck appears to be a lack of knowledge about policy conditions and the role of health insurers. This hinders effective steering through selective contracting and can lead to misunderstandings and financial problems, especially among vulnerable groups. Trust, on the other hand, does play a crucial role in the acceptance of healthcare advice, an important instrument for guiding enrollees to preferred providers. In order to strengthen the trust and effectiveness of the current healthcare system, it is important that health insurers communicate transparently and accessibly about their tasks, powers and social role. Follow-up research should focus on how information provision can be better tailored to various target groups, including people with limited language or digital skills and the less educated. By improving communication and increasing knowledge, enrollees can make more informed choices and trust in health insurers can be sustainably increased.

DUTCH SUMMARY (Nederlandse samenvatting)

Inleiding

Sinds de invoering van de Zorgverzekeringswet in 2006 kent Nederland een systeem van gereguleerde marktwerking in de zorg. Zorgverzekeraars spelen een belangrijke rol in dit systeem, omdat zij namens hun verzekerden zorg inkopen bij zorgaanbieders. Burgers zijn verplicht een basisverzekering af te sluiten, en verzekeraars proberen klanten aan zich te binden door aantrekkelijke zorgverzekeringspakketten aan te bieden. In theorie stimuleert dit verzekeraars om zorg van goede kwaliteit tegen een scherpe prijs in te kopen.

Zorgverzekeraars hebben een sterke positie bij onderhandelingen met zorgaanbieders wanneer zij hun verzekerden kunnen doorverwijzen naar voorkeursaanbieders. Zorgaanbieders moeten dan serieus rekening houden met de mogelijkheid dat een verzekeraar en zijn verzekerden overstappen naar een concurrent. Verzekeraars kunnen verzekerden naar voorkeurszorgaanbieders sturen door middel van selectieve contractering en zorgadvies. Selectieve contractering betekent dat zorgverzekeraars niet met alle zorgaanbieders contracten afsluiten. Wanneer verzekerden kiezen voor een polis met beperkende voorwaarden, die meestal tegen een lagere premie wordt aangeboden, wordt zorg van niet-gecontracteerde zorgaanbieders niet altijd volledig vergoed. Verzekerden met een dergelijke polis moeten gebruikmaken van zorgaanbieders waarmee een contract is afgesloten; anders moeten zij een eigen bijdrage betalen.

Een andere manier om verzekerden te sturen naar voorkeurszorgaanbieders is via zorgadvies. Voorbeelden hiervan zijn wachtlijstbemiddeling, advies over geschikte zorgverleners, hulp bij het regelen van zorg of medische hulpmiddelen, het aanvragen van een second opinion, advies over preventie en gezondheidsbevordering, en ondersteuning bij het voorbereiden van een afspraak met een arts.

Vertrouwen speelt mogelijk een cruciale rol bij het kunnen sturen van verzekerden. Vertrouwen wordt vaak omschreven als ‘het aanvaarden van een kwetsbare situatie, waarbij de vertrouwende partij gelooft dat de ander diens belangen zal behartigen’. Onze hypothese is dat bij weinig vertrouwen verzekerden minder snel kiezen voor polissen met beperkende voorwaarden en minder openstaan voor advies, wat de onderhandelingspositie van verzekeraars verzwakt. In Nederland is het vertrouwen in zorgverzekeraars relatief laag. Volgens de beschikbare literatuur komt dit onder andere door gebrekkige kennis van verzekerden over zorgverzekeringen, de indruk dat verzekeraars vooral uit zijn op winst, zorgen bij verzekerden over inmenging in de

arts-patiëntrelatie, en negatieve beeldvorming in de media. Een belangrijk knelpunt is dat verzekeraars moeite hebben om verzekerden te overtuigen dat zij zich inzetten voor kwalitatief goede zorg, naast het bewaken van kosten. Hierdoor zijn verzekerden vaak terughoudend in het accepteren van zorgadvies van hun verzekeraar.

Als zorgverzekeraars selectieve contractering en zorgadvies niet effectief kunnen inzetten om verzekerden te sturen in hun keuze voor een zorgaanbieder, beperkt dat hun mogelijkheden om kwaliteit en kosten goed te beheersen. Dit proefschrift richt zich daarom op de vraag of vertrouwen in de zorgverzekeraar verband houdt met het functioneren van een systeem met gereguleerde concurrentie. Daarbij wordt ook gekeken naar hoe vertrouwen ontstaat en in hoeverre verwachtingen van verzekerden over de rol van de zorgverzekeraar hiermee samenhangen. Binnen dit proefschrift wordt specifiek gekeken naar het Nederlandse zorgstelsel. De centrale onderzoeksvraag luidt: 'Welke rol speelt het vertrouwen van verzekerden in zorgverzekeraars bij het effectief functioneren van een zorgstelsel met gereguleerde concurrentie?'.

Belangrijkste bevindingen

Vertrouwen en poliskeuze

In **hoofdstuk 2** is onderzocht welke rol vertrouwen in zorgverzekeraars speelt bij de keuze van een zorgverzekering. Voor een goed functionerend zorgstelsel met gereguleerde marktwerking is het belangrijk dat verzekerden ieder jaar bewust kunnen overstappen van zorgverzekeraar. Dit stimuleert verzekeraars om zich in te zetten voor hun klanten. Daarnaast vergroot een groeiend aantal verzekerden dat kiest voor polissen met beperkende voorwaarden de effectiviteit van selectieve contractering, wat de concurrentie tussen zorgaanbieders stimuleert. Volgens theorieën over consumentengedrag speelt vertrouwen een cruciale rol bij onzekerheid: hoe groter het ervaren risico, hoe meer vertrouwen nodig is om een keuze te durven maken. De centrale onderzoeksvraag van dit hoofdstuk luidde daarom: *Wat is de rol van vertrouwen bij de keuze van verzekerden voor een zorgverzekering?* Om deze vraag te beantwoorden, werd in februari 2022 een vragenlijst verstuurd naar 2.000 leden van het Nivel Consumentenpanel Gezondheidszorg. In totaal vulden 1.125 respondenten de vragenlijst in (responspercentage: 56%). Het onderzoek richtte zich op overstapgedrag en de keuze voor polissen met beperkende voorwaarden, waarbij vertrouwen werd gemeten met de Nederlandse versie van de Health Insurer Trust Scale (HITS), een gevalideerde schaal. De resultaten zijn geanalyseerd met beschrijvende statistiek en logistische regressiemodellen. De resultaten tonen aan dat het algemene vertrouwen in zorgverzekeraars laag is: slechts 35% van de respondenten gaf aan

(volledig) vertrouwen te hebben in zorgverzekeraars. Wel is het vertrouwen in de eigen zorgverzekeraar iets hoger dan in andere zorgverzekeraars. Opvallend is dat dit vertrouwen geen significante invloed heeft op het overstappen naar een andere zorgverzekering of de keuze voor een polis met beperkende voorwaarden. Hoewel vertrouwen van invloed is op hoe mensen de zorgverzekeraar ervaren, blijkt het daarmee geen directe aanleiding te zijn voor hun gedrag op de zorgverzekeringsmarkt.

Bewustzijn van de beperkende polisvoorwaarden

Hoofdstuk 3 richt zich op de rol van zorgverzekeraars in het verstrekken van duidelijke informatie over zorgkosten. Onvoldoende of onduidelijke communicatie kan ertoe leiden dat verzekerden worden geconfronteerd met onverwachte kosten. Dit kan het vertrouwen in de verzekeraar onder druk zetten, vooral bij polissen met beperkte keuzevrijheid, waarbij een eigen bijdrage geldt voor niet-gecontracteerde zorgverleners. In hoofdstuk 3 is daarom onderzocht in hoeverre verzekerden met een zorgpolis met beperkende voorwaarden zich bewust zijn van de consequenties van dit type polis. De centrale onderzoeksvraag van dit hoofdstuk luidde: *In hoeverre zijn verzekerden met beperkende voorwaarden binnen hun zorgverzekering op de hoogte van deze voorwaarden?* In augustus 2020 werd een online vragenlijst verspreid onder verzekerden met een dergelijke polis. Het onderzoek beschikt over een grote hoeveelheid data dankzij 13.588 ingevulde vragenlijsten, al was het responspercentage relatief laag (3,4%). De resultaten zijn geanalyseerd met beschrijvende statistiek. Uit de resultaten blijkt dat een aanzienlijk deel van de respondenten onvoldoende bekend is met hun polis: 35% hield bij de keuze geen rekening met gecontracteerde zorgverleners en 20% was na afsluiting volledig onbekend met de voorwaarden. Slechts 30% vond de informatie over selectieve contractering zeer duidelijk. Dit gebrek aan bewustzijn leidt regelmatig tot onverwachte kosten: 62% van de respondenten die extra moesten betalen voor ziekenhuiszorg wist dit vooraf niet, en 30% ervoer dit als een serieus probleem (2% van het totaal aantal respondenten). Deze bevindingen wijzen op gebrekkige communicatie en kennis, wat het vertrouwen in zorgverzekeraars kan aantasten en de effectiviteit van selectieve contractering als sturingsinstrument beperkt.

Vertrouwen en zorgadvies

In **hoofdstuk 4** is onderzocht wat de relatie is tussen vertrouwen in de zorgverzekeraar en de bereidheid van verzekerden om zorgadvies te ontvangen. Zorgadvies is een belangrijk middel waarmee zorgverzekeraars verzekerden kunnen helpen bij het vinden van gecontracteerde zorgaanbieders. Dit kan bijdragen aan kwaliteitsverbetering en kostenbeheersing. De centrale onderzoeksvraag luidde: *Wat is de relatie tussen vertrouwen in de zorgverzekeraar en de bereidheid van verzekerden om zorgadvies van hun zorgverzekeraar te ontvangen?* In februari 2021 werd een vragenlijst verstuurd naar

1.500 leden van het Nivel Consumentenpanel Gezondheidszorg. In totaal vulden 885 panelleden de vragenlijst in (responspercentage: 59%). Vertrouwen werd gemeten met een gevalideerde schaal, de Health Insurer Trust Scale (HITS), en geanalyseerd via logistische regressiemodellen. De resultaten tonen een duidelijke en significante relatie aan: hoe groter het vertrouwen in de zorgverzekeraar, hoe groter de bereidheid om zelf zorgadvies te zoeken én om proactief benaderd te worden door de zorgverzekeraar. Dit gold voor verschillende vormen van advies, zoals hulp bij het kiezen van een zorgaanbieder, het regelen van zorg en het ontvangen van ondersteuning om gezondheidsproblemen te voorkomen. De relatie tussen vertrouwen en het openstaan voor advies bleek consistent over leeftijdsgroepen, opleidingsniveaus en gezondheidstoestand. Gezien het lage vertrouwen in zorgverzekeraars in Nederland, is het versterken van dat vertrouwen essentieel om zorgverzekeraars beter in staat te stellen hun adviserende rol te vervullen en zo bij te dragen aan een doelmatiger zorgsysteem.

Beeldvorming en vertrouwen in zorgverzekeraars

In **hoofdstuk 5** is onderzocht hoe verzekerden zorgverzekeraars en hun rol binnen het Nederlandse zorgstelsel met gereguleerde marktwerking ervaren, hoe deze beeldvorming tot stand komt en hoe dit samenhangt met vertrouwen. Theoretische verklaringen voor het lage vertrouwen in zorgverzekeraars zijn onder andere een gebrek aan kennis onder verzekerden over de rol van zorgverzekeraars, een kritische houding van verzekerden ten opzichte van marktwerking in de zorg, de overtuiging van verzekerden dat zorgverzekeraars vooral gericht zijn op winst, het idee dat zorgverzekeraars zich mengen in de relatie tussen arts en patiënt, en negatieve media-aandacht. Toch is er weinig kwalitatief onderzoek gedaan naar de oorsprong van dit lage vertrouwen. De centrale onderzoeksvraag van dit hoofdstuk luidde: *Hoe kijken verzekerden aan tegen zorgverzekeraars en hun rol in het zorgsysteem, hoe ontstaan deze percepties en hoe hangen ze samen met vertrouwen?* Om deze vraag te beantwoorden zijn in maart en april 2023 semigestructureerde interviews afgenomen met 17 leden van het Nivel Consumentenpanel Gezondheidszorg. De data zijn geanalyseerd volgens de zes-stappenmethode van Braun en Clarke voor inductieve thematische analyse. De resultaten laten zien dat verschillende deelnemers een kritische houding hebben ten opzichte van zorgverzekeraars. Sommigen ervaren dat financiële belangen zwaarder wegen dan het welzijn van patiënten, wat leidt tot minder vertrouwen. Dit lagere vertrouwen wordt deels gevoed door misvattingen, zoals het idee dat zorgverzekeraars winst uitkeren aan aandeelhouders, wat in de praktijk niet gebeurt. Tegelijkertijd verwachten verzekerden dat zorgverzekeraars eerlijke en toegankelijke zorg garanderen, behandelingen monitoren, passende begeleiding bieden en helder communiceren over polisvoorwaarden en zorgkosten. Negatieve ervaringen, zoals onverwachte kosten door het verplicht eigen risico en onpersoonlijk

contact via chatbots, versterken het negatieve beeld. Ook media-aandacht voor winst en kostenbeheersing draagt bij aan een sceptische houding bij diverse deelnemers. Hoewel sommige deelnemers de rol van zorgverzekeraars in het toegankelijk maken van zorg en het zorgvuldig omgaan met geld en andere middelen positief beoordelen, blijft het algemene vertrouwen laag. Het verbeteren van communicatie over hun maatschappelijke rol, het benadrukken van hun non-profit status en het vergroten van transparantie in zorginkoop en kostenverdeling zouden kunnen bijdragen aan het versterken van vertrouwen.

Verwachtingen en vertrouwen

In **hoofdstuk 6** is onderzocht in hoeverre percepties van verzekerden over de taken van zorgverzekeraars samenhangen met hun vertrouwen in deze organisaties binnen het Nederlandse stelsel van gereguleerde marktwerking. Eerder onderzoek toont aan dat er onder verzekerden misvattingen bestaan over de taken van zorgverzekeraars, zoals vastgelegd in de Zorgverzekeringswet. Deze taken sluiten niet altijd aan bij de verwachtingen die verzekerden hebben. Deze mismatch tussen verwachtingen en de waargenomen praktijk kan het vertrouwen ondermijnen. De centrale onderzoeksvraag van dit hoofdstuk luidde: *Wat is de relatie tussen de perceptie van verzekerden over de taken van zorgverzekeraars en het vertrouwen dat zij in deze organisaties hebben?* Om deze vraag te beantwoorden werd in november 2021 een vragenlijst verstuurd naar 1.500 leden van het Nivel Consumentenpanel Gezondheidszorg. In totaal vulden 837 respondenten de vragenlijst in (responspercentage: 56%). Respondenten gaven aan welke taken zij belangrijk vonden, welke zij verwachtten van zorgverzekeraars, en in hoeverre zij vonden dat deze taken daadwerkelijk werden uitgevoerd. Vertrouwen werd gemeten met een gevalideerde schaal, de Health Insurer Trust Scale (HITS), en geanalyseerd via multivariate regressiemodellen. De resultaten tonen aan dat verzekerden minder vertrouwen hebben in zorgverzekeraars wanneer hun verwachtingen over taken niet overeenkomen met de wettelijke bevoegdheden van zorgverzekeraars. Dit geldt vooral voor taken op het gebied van kostenbeheersing en kwaliteitsbemiddeling. Daarnaast blijkt dat een grotere mismatch tussen verwachtingen en waargenomen taken samenhangt met een lager vertrouwen. Voor taken rondom informatie over prijs en beschikbaarheid van zorg geldt bovendien dat het vertrouwen sterker afneemt naarmate deze taken als belangrijker worden gezien. Deze bevindingen onderstrepen het belang van duidelijke communicatie en publieke bewustwording over de rol van zorgverzekeraars, zodat zij hun taak als zorginkoper effectief kunnen vervullen.

Conclusies

Dit proefschrift onderzocht hoe het vertrouwen van verzekerden in zorgverzekeraars het functioneren van het Nederlandse zorgstelsel met gereguleerde marktwerking beïnvloedt. Hoewel het vertrouwen laag is, vormt dit geen directe belemmering voor overstapgedrag of de keuze voor polissen met beperkende voorwaarden. Het grootste knelpunt blijkt een gebrek aan kennis over polisvoorwaarden en de rol van zorgverzekeraars. Dit belemmert effectieve sturing via selectieve contractering en kan leiden tot misverstanden en financiële problemen, vooral bij kwetsbare groepen. Vertrouwen speelt daarentegen wél een cruciale rol bij de acceptatie van zorgadvies, een belangrijk middel om verzekerden te begeleiden naar voorkeursaanbieders. Om het vertrouwen en de effectiviteit van het huidige zorgstelsel te versterken, is het van belang dat zorgverzekeraars helder en toegankelijk communiceren over hun taken, bevoegdheden en maatschappelijke rol. Vervolgonderzoek zou zich moeten richten op hoe informatievoorziening beter kan worden afgestemd op diverse doelgroepen, waaronder mensen met beperkte taal- of digitale vaardigheden en lager opgeleiden. Door communicatie te verbeteren en kennis te vergroten, kunnen verzekerden beter geïnformeerde keuzes maken en kan het vertrouwen in zorgverzekeraars duurzaam worden vergroot.

IMPACT

This dissertation examines enrollees' trust in Dutch health insurers and its relevance for the functioning of the healthcare system. Previous studies have shown that many enrollees have low levels of trust in health insurers, but little research has explored whether this lack of trust affects how the system operates in practice. The studies presented in this dissertation therefore investigated how trust plays a role in the effectiveness of the Dutch healthcare system, which is based on the model of managed competition. This model assumes that when health insurers are able to direct enrollees to preferred providers - through selective contracting and healthcare advice - they gain bargaining power in negotiations with care providers. According to theory this enables insurers to purchase high-quality care at competitive prices. The dissertation explored whether trust plays a role in these steering mechanisms, which are important for the effective functioning of the Dutch healthcare system. In addition, the study examined the underlying factors contributing to the low level of trust in health insurers among enrollees in the Netherlands.

The findings show that trust in health insurers is generally low, and that many enrollees are not fully aware of the roles and responsibilities of health insurers. Misconceptions, such as the belief that insurers distribute profits to shareholders despite operating on a not-for-profit basis in practice, along with negative experiences and critical media coverage of cost-cutting measures, contribute to low levels of trust. Interestingly, low trust does not appear to significantly affect switching behaviour or the choice of policies with restrictive conditions, which are essential to maintaining competition. Rather than trust, a lack of knowledge about policy conditions seems to undermine the functioning of selective contracting. For instance, 35% of respondents with a restrictive policy did not consider whether a provider was contracted when choosing a healthcare provider. Trust does, however, play a role in other areas, such as openness to healthcare advice and expectations about insurers' responsibilities. A mismatch between enrollees' expectations and legal mandates is associated with lower trust in the health insurer.

Contributions to science

This dissertation makes a meaningful contribution to scientific knowledge about trust in health insurers within the Dutch healthcare system. While earlier research primarily documented low levels of trust in health insurers, this study offers a deeper understanding of the mechanisms behind this low trust and their consequences for the functioning of the system. It fills a gap in the literature by empirically examining how trust relates to key elements of managed competition, such as selective contracting and healthcare advice.

In addition, this dissertation offers qualitative evidence for factors that were previously only theorised as contributors to low trust, such as limited insurance knowledge, perceived profit motives, concerns about interference in the doctor-patient relationship, and negative media portrayals. This empirical validation accomplished by our research, strengthens the theoretical foundation of trust research in healthcare systems.

This dissertation also highlights the importance of expectation alignment: when enrollees' expectations about insurers' roles do not match their legal responsibilities this is related to lower trust. This discrepancy between perception and reality has received little attention in the literature; the insights from this dissertation contribute to a deeper understanding of the origins of institutional trust in health insurers.

Finally, our research shows that many enrollees lack sufficient knowledge of their insurance policies, leading to unexpected costs which can be problematic for certain groups of enrollees. This finding adds to the existing body of literature by emphasising that individual knowledge and information literacy are crucial for the effective functioning of healthcare systems based on regulated competition.

Contributions to society

In the Netherlands, all citizens are required to have health insurance and pay monthly premiums, making it essential that people understand and trust the system and the organisations that operate within it. This research shows that many insured individuals struggle to fully understand their insurance policies, particularly those policies with more restrictive conditions, which can lead to unexpected costs, confusion, and financial stress. These findings highlight the importance of clear and accessible communication from insurers and policymakers, and suggest that improving the way information is presented could help people make more informed choices and avoid unnecessary problems.

Beyond these practical implications, the findings also resonate with broader societal and political discussions about the organisation of healthcare in the Netherlands. There is an ongoing debate about the role of market forces and the potential need for systemic reform. For the healthcare system to be legitimate and sustainable, it is important that citizens not only accept its underlying principles but also trust the parties responsible for the implementation. This dissertation contributes to the understanding of trust in health insurers as central stakeholders in the healthcare system, and elaborates on how trust relates to crucial elements that determine whether the system functions as intended. It thus provides insights that can be used in the

broader societal debate on the future of the healthcare system and the conditions under which managed competition can be maintained.

Relevance for different stakeholders

The series of studies from this dissertation are valuable for various target groups, especially for researchers, policymakers, regulators, health insurers, and patient organisations.

For researchers, it provides extensive insights to further analyse the functioning of managed competition in healthcare. This dissertation provides insights on which to base follow-up studies. This could include longitudinal research into the behaviour of enrollees in the insurance market, comparative studies between countries with different healthcare systems, or intervention studies aimed at improving communication.

Policymakers and regulators can use these insights to better align the healthcare system with the way enrollees make decisions and process information, and to take into account the factors that are associated with trust in health insurers. Since this dissertation shows that not all enrollees are well informed or act in accordance with the conditions of their health insurance policy, there are clear opportunities for improvement in this area. Policymakers could, for example, use the findings to revise policies related to policy communication, consumer protection, and healthcare advice. This might include testing and requiring clearer communication about policy conditions, or promoting more personalised advice to help people make informed healthcare choices.

Health insurers can use the insights to improve their communication and services. The findings show that enrollees are not always well informed about the tasks, responsibilities, and societal role of health insurers, and that many perceive insurers as profit-driven. This perception is linked to low levels of trust. By using these insights and focusing on clearer communication about policy conditions, their roles and responsibilities, and their non-profit status, health insurers can foster greater trust. This, in turn, offers an opportunity to strengthen the relationship with enrollees and to more effectively fulfil their role as purchasers of care.

Lastly, patient organisations and advocacy groups can also use the results to represent the position of enrollees more strongly. Patient organisations can use these insights to better inform, support and represent their constituents in the public debate.

Dissemination

The results of this dissertation were brought to the attention through a range of communication methods and platforms. Firstly, all five studies included in this dissertation have been published in five different international, peer-reviewed scientific journals. These journals include: Health Policy, PLOS One, BMC Health Services Research, Health Economics, Policy and Law, and Journal of Market Access & Health Policy. Most of these journals are open access journals, which means that the articles are available for the public freely and without any restrictions. These articles have already been cited by authors of other scientific articles. Furthermore, findings in this dissertation have also been presented at the European Public Health Conference (EUPHA, 2022). Besides the peer-reviewed articles, we also published several Dutch reports and factsheets about our research, which are publicly available at the website of Nivel. Publications have also been actively shared through newsletters, including the Nivel newsletter and the newsletter of the Academische Werkplaats Duurzame Zorg (AWDZ). Moreover, findings from the research presented in this dissertation have been incorporated into official parliamentary communications (Parliamentary document 29689 nr. 1082 and Parliamentary document 29689, nr. 1141). Lastly, Nivel consistently informs the various stakeholders, such as representatives from the Dutch Ministry of Health, Welfare and Sport, the Dutch Health Insurers Association, the Netherlands Patient Federation, and the Dutch Consumers Association, about our research and publications. These organisations are all members of the program committee of the Nivel Dutch Health Care Consumer Panel, which ensures they are actively involved in and kept up to date with all research conducted using the panel.

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ABOUT THE AUTHOR

Frank van der Hulst (Franciscus Johannes Petrus) was born on 12 October 1994 in Oud Ade, the Netherlands. He completed his secondary education in 2013 at Visser 't Hooft Lyceum in Leiden. He then pursued a Bachelor's degree in Health Sciences at Vrije Universiteit Amsterdam (BSc, 2016), followed by a Master's degree in Health Economics, Policy & Law at Erasmus University Rotterdam (MSc, 2018).

After completing his studies, Frank held various positions within the healthcare sector, including roles at VU University Medical Center (VUmc) and Erasmus Medical Center (Erasmus MC), where he gained experience in healthcare registration and data analysis.

From 2020 to 2023, he worked as a junior researcher at Nivel, the Netherlands Institute for Health Services Research, within the research program Healthcare System and Governance. During this period, he contributed to research on the functioning of the Dutch healthcare system, with a particular focus on regulated market competition and consumer trust. He was involved in several projects associated with the Dutch Health Care Consumer Panel, primarily focusing on the health insurance market. Additionally, he served as the national project manager for the Netherlands in the international PaRIS (Patient-Reported Indicator Surveys) study, commissioned by the Organisation for Economic Co-operation and Development (OECD).

In parallel, Frank initiated a doctoral research project on consumer trust in health insurers, under the supervision of Professor Dr. Judith de Jong and Dr. Anne Brabers. The outcomes of this research are presented in this dissertation. In this context, he was affiliated as an external PhD candidate with the Faculty of Health, Medicine and Life Sciences at Maastricht University.

Since 2023, Frank has been employed as a consultant at Q-Consult Zorg, where he advises healthcare organisations on managerial and organisational challenges. In this role, he integrates his academic background with practical expertise in projects related to data analysis, process optimisation, process facilitation, and policy-oriented analyses.

LIST OF PUBLICATIONS

Publications in international journals (All included in this dissertation)

- 2025 | **Hulst, F.J.P. van der**, Huijgen, S., Brabers, A.E.M., Jong, J.D. de. Exploring trust in health insurers: insights from Enrollees' perceptions and experiences. Journal of Market Access & Health Policy: 2025, 13(2), p. 29.
- 2025 | **Hulst, F.J.P. van der**, Prins, B.A., Brabers, A.E.M., Timans, R., Jong, J.D. de. The relationship between enrollees' perceptions of health insurers' tasks and their trust in them. Health Economics, Policy and Law: 2025, p. 1-25.
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- 2021 | **Hulst, F. van der**, Meijer, M., Holst, L., Brabers, A., Jong, J. de. Infographic. Burgers ook in 2020 tevreden over hun vermogen om sociale rollen en activiteiten te vervullen. Sociale rollen en activiteiten 2016-2020. Utrecht: Nivel, 2021. 2 p.
- 2021 | **Hulst, F. van der**, Meijer, M., Holst, L., Brabers, A., Jong, J. de. Infographic. Mate waarin arts en patiënt samen beslissen over een behandeling nauwelijks veranderd tussen 2016-2020. Gezamenlijke besluitvorming 2016-2020. Utrecht: Nivel, 2021. 2 p.
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