

The boundaries of the Dutch health care system

Health care for homeless persons in Rotterdam

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Summary

Although (inter)national law concerning the right to health care describes that everyone should have equal access to good quality health care without discrimination and without unexplained delay (UN CESCR, 2000), this is not always the case. Homeless persons, who form a vulnerable group at the bottom of society, sometimes have difficulties to access health care facilities. By analyzing health care provision concerning homeless persons it is possible to explore the boundaries of the health care system with regard to the sufficiency to which it can foresee in necessary health care. The boundaries of the health care system are shown in the lack of reimbursement of necessary health care expenses. When there is no (sufficient) financial reimbursement, the health care won't be accessible for homeless persons as a result of their financial problems.

The consequences of the Dutch health care acts, rules and regulations for the financial accessibility of care for homeless persons are analyzed in this study using a case study. By looking at the case of Havenzicht, a shelter for homeless persons in the Netherlands where medical care is provided to homeless persons, it could be explored how well the Dutch health care system is able to provide necessary health care for this vulnerable group. Havenzicht has a very low threshold to enter their nursing ward and additionally has no access restrictions concerning the patients. The care process is often started before it is clear how Havenzicht will be reimbursed.

By comparing the overall care reimbursements as well as the overall provided amount of care over one year in the nursing ward of Havenzicht, one can conclude whether the reimbursements were enough to cover the costs. Additionally, because the data are gathered on patient level, analysis can be made concerning patient characteristics that determine the use of care as well. In order to check whether the overall provided amount of care could in theory be provided to the patients, the salaried hours are analyzed as well.

The comparison of costs and reimbursements shows a financial gap of 696.981,76 euro. Since care intensity packages assigned by the Care Assessment Centre (CIZ) are conform the somatic health condition of a patient, the extra hours of care necessary can be explained by the characteristics of the homeless persons other than his health status. The fact that homeless persons have more and more severe health conditions at earlier age is an explanatory factor, as well as substance use. However, the extra hours necessary are best explained by the fact that most homeless persons have a complex mixture of interrelated problems concerning different areas. In addition to their somatic conditions, the homeless persons often have psychological problems and one or multiple addictions as well. On top of this, homeless persons are known to be persistent care avoiders. The combination of these

problems makes the regular health care setting unsuited for the care concerning homeless persons.

Overall it can be concluded that the contemporary health care system doesn't take into account a complex mix of problems such as associated with homeless persons. The division in the current health care system between psychological and somatic health care problems makes that the system is not sufficient when there is a combination of multiple problems. Additionally, the current assessment of the health care need doesn't take the full scope of problems of a person into account while different problems are often interrelated. Especially psychosocial problems that impact the health of homeless persons are not sufficiently taken into account.

Based on the financial gap identified in the case study and the shortcomings of the health care policy that explain this gap, it can be concluded that the current financial coverage in the Dutch health care system is insufficient to foresee in medical necessary care for homeless persons in the intramural setting. Since the accessibility and availability of care for homeless persons is directly influenced by the financial coverage of care, it can be concluded that the outcome of the current health care policy is not in line with the international law concerning the right to health care. The future developments, especially the extramuralisation of care intensity packages and the increase of the own contribution will decrease the sufficiency even more.

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Abbreviation list

AWBZ: Exceptional Medical Expenses Act (Dutch: Algemene Wet Bijzondere Ziektekosten)

CBS: Central Bureau for Statistics (Dutch: Centraal Bureau voor de Statistiek)

CIZ: Care Assessment Centre (Dutch: Centrum voor Indicatiestelling)

CVD: Centrum Voor Dienstverlening

GBA: Municipality personal records database (Dutch: Gemeentelijke Basis Administratie)

HIU: Health Insurance Act (Dutch: Zorgverzekeringswet)

ICESCR: International Covenant on Economic, Social and Cultural Rights

NZa: Dutch Health Care Authority (Dutch: Nederlandse Zorgautoriteit)

UDHR: Universal Declaration of Human Rights

VWS: Ministry of Health, Welfare and Sports (Dutch: Ministerie van Volksgezondheid, Welzijn en Sport)

WMO: Social Support Act (Dutch: Wet Maatschappelijke Ondersteuning)

1. Introduction

Each country has organized their health care system in a different way. There are countries in which the government is dominant, countries that rely on the market and others that use a combination of both. The different ways to organize health care systems have among other things, different outcomes concerning financial accessibility of health care.

Although international law concerning the right to health care clearly describes that everyone should have equal access to good quality health care without discrimination and without unexplained delay (UN CESCR, 2000), this is not always the case. Not everyone gets the health care in accordance with their medical need as a result of reduced accessibility of health care. Accessibility is defined by Mackenbach and Van der Maas (2004) as 'availability of sufficient medical necessary care of sufficient quality for anyone who needs it, which can be timely used without thresholds.' A reduced accessibility of health care is especially shown at the underclass. By looking at vulnerable persons with a very low socio-economic status that form the underclass, it is possible to explore the boundaries of the health care system in a country. These boundaries are shown inter alia in the lack of reimbursement of medical necessary health care expenses. When these expenses are not reimbursed properly, the health care system is not sufficient to foresee in medical necessary health care. No proper reimbursement means that health care won't be financially accessible for everyone in society. Especially not for vulnerable low socio-economic groups.

One vulnerable group at the bottom of all societies is the group of homeless persons. The homeless in general have a poor health and in addition have a very vulnerable position in society (Ensign et al, 2008, Ramin et al. 2009, Sun et al, 2012). By focusing on the health care provision to the homeless persons one can learn a lot about how well the system is able to foresee in medical necessary health care to everyone. Areas where the system is not in compliance with domestic law and international treaty law, or where the rules of the system have undesired effects are revealed when one focuses on this specific group.

Because little literature is available concerning the boundaries of the health care systems for vulnerable persons in society, a case study is necessary to explore these boundaries. Therefore the case of Havenzicht is studied, which is a shelter for homeless persons in the Netherlands where medical care is provided to homeless persons. Havenzicht provides in their nursing ward health care services which are adapted to the needs of homeless persons. Although Havenzicht has the means and the motivation to provide this care, they currently experience many frustrations and limitations when trying to provide health care services to homeless persons. These limitations are mostly financial. Although the overall accessibility of health care is generally divided into financial accessibility, timely accessibility, geographical

accessibility and cultural accessibility (Mackenbach & Van der Maas, 2004), this study therefore focuses on the financial accessibility of health care. This fits well with the original assignment given by Havenzicht to provide insight in the current financial streams for the reimbursement of care provided by Havenzicht.

Next to the analysis of the financial streams, the rules and regulations will be analyzed as well concerning reimbursement of care and availability of means within the Exceptional Medical Expenses Act (AWBZ), Health Insurance Act (ZV) and Social Support Act (WMO). This in order to be able to explore how well the Dutch health care system can provide necessary health care to vulnerable homeless persons.

The main question: *Is financial coverage in the contemporary health care system in the Netherlands sufficient to foresee in medical necessary health care for homeless persons and how will contemporary health care policy developments (that have an impact on homeless persons) affect this?*

The main question will be answered using several sub questions:

- What are the characteristics of homeless persons?
- What is the role of Havenzicht in society and in the health care system specifically?
- What limitations does Havenzicht experience when providing health care to homeless persons?
- How is financial reimbursement of health care regulated in the Netherlands?
- How does the current care provision of Havenzicht fit the regular arrangements of care?
- Is the current financial reimbursement for the care for homeless persons in Havenzicht sufficient to foresee in the objective demand for care?
- Are there other ways to finance the provided care in Havenzicht considering the rules and regulation of the AWBZ, VZ and WMO?
- Is the accessibility and availability of health care for homeless persons in line with the Dutch domestic and international law concerning the right to health care?
- How will contemporary policy developments concerning health care reimbursement affect the extent to which homeless persons are able to receive health care?
- What advice can be given to the Dutch government concerning their policy on financial reimbursements for vulnerable inhabitants, especially concerning homeless persons.

In chapter 2 an introduction will be given concerning homeless persons and their health. In the following chapter the health care concerning homeless persons is discussed.

Additionally, the homeless shelter Havenzicht in which the financial streams concerning health care are analyzed will be introduced. The role of Havenzicht in society as well as the limitations Havenzicht experiences in providing health care will be discussed. Next, the Dutch health care system as well as the rules and regulations concerning health care provision and financial coverage to homeless persons will be discussed. After this, the contemporary policy and developments concerning homeless persons, health care and financial reimbursement are discussed. In the following chapter (3) the methods are discussed that will be used to analyze the health care provision in Havenzicht as well as the methods used to analyze the financial reimbursements. Additionally, the methods used to analyze the rules and regulations as well as to analyze the policy and its contemporary developments will be discussed in this chapter. This chapter is followed by the discussion of the data and analysis (chapter 4). The following chapter concerns a discussion of the results, methods and shortcomings of this study (chapter 5). Finally in chapter 6 the concluding remarks will be presented and discussed. The main question will be answered and advice will be given to the Dutch government concerning their policy on health care reimbursements for homeless persons.

2.1 Homeless persons and health

As appears from the introduction, this study focuses on a specific group; the homeless persons. The size of the group of homeless persons is shown in a report of the Central Bureau of Statistics (CBS). According to the CBS there were 17.5 thousand homeless persons in 2009 in the Netherlands (CBS, 2010). Homeless persons in the Netherlands are often unmarried men between the ages of 30 and 50. Not western immigrants are overrepresented with 36 percent (CBS, 2010). Homeless persons are often invisible and impossible to trace because they are not registered in the municipal personal records database (in Dutch: Gemeentelijke Basis Administratie, GBA). Homeless persons however become visible when they become (seriously) ill.

Different groups

The homeless persons can roughly be divided into three groups. Dutch residents, illegal immigrants from outside of Europe and legal European immigrants. Illegal immigration is the migration into a nation in violation of its immigration laws. Someone is considered to be an illegal immigrant when the Dutch government does not give permission to him to live in the Netherlands (Rijksoverheid (1), 2012). As a result of the free movement of goods and services in Europe, immigration within Europe is legal (Lötters et al, 2010). This group is therefore called the legal European immigrants.

As a result of the free movement of goods and services in Europe a substantial group of employees from middle and eastern Europe has moved to western European countries to work there (Lötters et al, 2010). Some of these middle and eastern Europeans don't return to their country when they lose their work. Because they are European residents they cannot be evicted by the Dutch government. When financial problems occur, a substantial part of this group becomes homeless (Lötters et al, 2010).

Health of the homeless persons

In the study of Nielsen et al (2011) and Whang (2000) it was identified that homeless persons in general have a poorer health and have many more health problems at earlier ages compared to others. The disease severity can be very high as a result of among other things, extreme poverty, delays in seeking care, no adherence to therapy and adverse effects of homelessness on health (Wood, 1992). Another study identified that homeless persons have a 'considerably worse Health Related Quality of Life than the general population' (Sun et al, 2012).

The study of Van Laere et al (2009) studied the characteristics of long term homeless adults, their social medical problems and mortality in the Netherlands confirms that homeless

persons in general have a poor health. The most distressing observation was that the average age of death of the research population of homeless persons in Amsterdam was 55 for both males and females (Van Laere et al, 2009).

Most homeless persons have a complex mixture of interrelated problems concerning different areas, of which the somatic condition is only one (Moore et al, 2011 & Van Laere et al, 2009). In addition to their somatic conditions, the homeless persons often have psychological problems as well. A study by North et al (2004) showed that levels of mental illness amongst homeless persons are much higher compared to the general population. They might have a psychic disorder or other substantive psychological problems (personal communication general practitioner and street-doctor, 2012). Additionally, most homeless persons have one or multiple addictions. In a study concerning risk factors for cardiovascular diseases in homeless adults (Lee et al, 2005) it was identified that substance abuse was up to seven times more prevalent concerning homeless persons compared to the general population. The addiction results in substantive behavioural problems. Especially in combination with their maladjusted behaviour, as a result of their tough life on the street and their psychological problems.

On top of this, homeless persons are known to be care avoiders as well (Ogden et al, 2011 & Flick et al, 2007). Where a normal person would visit a doctor, the homeless persons will not. According to care coordinator of Havenzicht (2012) homeless persons 'often set different priorities and additionally don't acknowledge they have a health problem'. The study of Martins et al (2008) confirms that homeless persons don't see their health problem as their most important problem. Additionally, they experience a subjective threshold when accessing care. The care avoiding behaviour is problematic because health problems in the early stages of development, or small health problems, will develop over time into severe somatic problems. In most cases homeless persons will develop multiple health problems.

'The combination of the [above mentioned] problems intensifies the effect of the separate problems and make the overall health problems of homeless persons worse. The effect of a somatic condition is for example worse when someone is not capable to take care of themselves by taking necessary medicines' (Personal communication general practitioner and street-doctor, 2012).

Psychological problems

The care avoiding behaviour discussed above is problematic. It is very difficult to provide care to someone who doesn't want to receive that care. In the law on special admissions to psychiatric hospitals (Dutch: Wet Bopz) the rules and circumstances are discussed when forced care is possible in the Netherlands. According to this law, the care can only be based

on psychiatric conditions when these are a serious threat to the person himself or for society. The psychological problems of the homeless persons are however most of the time not severe enough to force them into a closed setting. At the same time the psychological problems are severe enough to cause serious problems on multiple levels (Personal communication Manager Havenzicht, 2012).

Some homeless persons neglect themselves in such a way that it causes severe health problems. According to forensic psychologist M. Mol you can state that most homeless persons who seriously neglect themselves have psychological problems. Explanations why someone would neglect himself to the point that they are deathly ill or even die are not unambiguous. It depends among other things on the person, his experiences and the environment. The question that needs to be addressed first is how someone becomes homeless. There are numerous reasons, but most people become homeless when (financial) problems occur as a result of psychological problems or substance abuse, in combination with a lack of a structural supportive social environment. When someone becomes homeless he loses his basic needs (such as shelter, security and sanitation), as a result their problems worsen:

‘In their attempt to survive, these people are confronted with situations that result in a loss of face, honour and self-respect. These people often experience a downward spiral which will often result in a profound indifference that will also entail their health. People give up on themselves’ (Personal communication forensic psychiatrist, 2012).

The profound indifference causes people to seriously neglect themselves on multiple levels, with health being one of them. Health problems are ignored and health care is avoided. The psychiatric foundations apart from an addiction behind this indifference is not unambiguous and will differ per person. According to forensic psychiatrist M. Mol there are multiple foundations possible, namely a depression where someone will not care about anything and has no motivation to undertake anything, a phobia, a distorted bereavement, a confusional state, or dissociation (Personal communication forensic psychiatrist, 2012). These foundations can have different degrees and a combination of different psychiatric foundations is possible. In addition to these psychological foundations, homeless persons are known to experience life as unjust and have often an unrealistic judgement of situations. They often feel that the whole world is against them (Personal communication forensic psychiatrist, 2012).

Although it is clear how most foundations could explain psychological problems, dissociation needs more explanation. When someone experiences dissociation, he is not in touch with his own feelings. This is best explained with an example. Someone who smokes and has a

severe cough when he inhales, knows he has to stop smoking. Although he knows he has to stop, he doesn't feel a connection between the action (smoking) and the result (coughing) and will as a result not stop smoking. Another characteristic of dissociation is 'the feeling that you are not part of the surroundings and that you are outside of yourself' (Personal communication forensic psychiatrist, 2012).

As a result of their care avoiding behaviour, there is often no diagnoses of these psychological problems. Many homeless persons disappear for a long period and show themselves when a serious health problem arises (Lötters et al, 2010). When they enter a health care facility they not only have somatic health problems, but often have severe psychological problems as well which never have been treated before. Additionally, because the patients live on the street they can't function well in a normal setting. According to the care coordinator at Havenzicht 'they have developed different values, have a poor hygiene, are sometimes aggressive and on top of this, have severe trust issues.' As a result of the psychological problems or their tough life on the street, the homeless persons have substantive behavioural problems as well.

It is difficult to determine what problem is at the base of the other. But whether these problems are a result of their tough life on the street or their psychological condition, it is the existence of these problems that makes the provision of care difficult. The behavioural problems take up a lot of time of the health care professionals. A lot of time has to be invested to make the homeless persons trust them, in order to be able to give any health care to the patients. 'Homeless persons are used to the tough life on the streets and as a result trust nobody. With most patients it takes a lot of time before this defence mechanism is taken down and they accept care' (Personal communication nurse, 2012).

Substance use/ addiction

As mentioned before, many homeless persons have an addiction. This causes several (health) problems and additionally frustrates the care process. Someone who is addicted doesn't feel his health issues and therefore is not aware of them. Even if they feel something, they will prioritize their substance use over everything else. Additionally, an addiction makes someone susceptible for a diseases and small health issues will develop into severe health issues quickly. According to general practitioner and street-doctor Dr. Slockers (2012) 'counteracts the addiction the healing process severely as well when they become sick. When someone is addicted to cocaine or heroin there is often only minor healing, if any at all.' The care provision is challenging as well concerning addicted patients.

'The care process is very challenging [concerning addicted patients]. When the patient is high he will not cooperate which makes the provision of care difficult. And

when the patient is not high he will be restless and uptight, trying to get his drugs for the next high. Everything must give way in order for them to get their drugs or alcohol' (Personal communication nurse, 2012).

Self-help and understanding of the health status

Another problem associated with many homeless persons is that they don't understand their health status. According to shelter attendant Willems (2012) homeless persons 'as a result of their low intelligence, their damaged brain [as a result of their addiction] or their psychic disorder, don't understand their situation or the consequences of their behaviour [on inter alia their health].' Where normal persons are for example able to manage their own medicine, most homeless persons are not capable of doing this. This means that minor health care problems can develop into major health care problems if the person is not assisted by the nurses. The same problem arises with hygiene. The patients physical condition often allows them to shower by themselves. But they don't do it if they are not pushed by someone since they don't see the need to shower at all. Nursing personnel has to invest a lot of time to motivate them to shower every once in a while. And they need to invest even more time to change their behaviour so that they will in the future do it themselves without encouragement by others. It is very difficult to achieve any change in behaviour or lifestyle because every individual has their own instructions and rituals. These personal instructions and rituals frustrate the care process. Several nurses independent from each other said in interviews that not taking the rituals and the instructions of the individual into account is not an option because it will frustrate the care process even more. The individual will not cooperate with anything and it takes a lot of effort to change this again.

Overall, a lot of time is invested into learning them to take care of themselves on many levels. A lot of time is invested into corrections and situation management as well.

Social environment

Another important characteristic is the lack of a social environment, which homeless persons have often harmed as a result of their problems. The reasons their social environment is harmed are multiple, but the outcome is the same. They haven't got anybody that wants to help them in any way. This is problematic since homeless persons won't receive any informal care. Because the different problems of homeless persons are interrelated, it is insufficient to solely concentrate on the somatic health problems. The other problems have to be addressed as well to break with the vicious circle homeless persons are in.

Concluding remark

It can be considered that homeless persons have in general multiple, interrelated problems concerning different areas. They not only have (severe) somatic and psychological problems,

but often have an addiction as well. Additionally, they avoid care and haven't got a supporting social environment. The combination of these problems result in a (very) poor health and frustrates the care process as well.

2.2 Homeless persons and health care

An important issue in this study is whether homeless persons in the Netherlands can receive the health care they objectively need. An important precondition is the accessibility of health care. Accessible health care means that someone who needs care, can timely and without barriers access care. The overall accessibility of health care is generally divided into several forms of accessibility. Namely financial accessibility, timely accessibility, geographical accessibility and cultural accessibility (Mackenbach & Van der Maas, 2004). Although homeless persons in general experience problems on all forms of accessibility, this study focuses on the financial accessibility of health care for homeless persons.

Financial accessibility

The importance of financial accessibility can be explained using the relationship between health and insurance. Without an insurance the care is paid out of pocket, which creates a threshold to receive necessary care. Having an insurance takes away this financial threshold and improves the accessibility of care in general. Additionally, 'there is a substantial body of research supporting the hypotheses that having an insurance improves health' (Hadley, 2003).

According to Davis & Schoen (1977), individuals that are uninsured are less likely to have a regular source of care, more often delay seeking care and report more that they have not received needed care. Uninsured persons are three times more likely to experience adverse health outcomes than insured persons (National Research Council, 2000). The adverse health effects are a result of the financial threshold experienced to receive care when someone hasn't got an insurance. Overall, it can be considered that finances influence the accessibility of care and therefore health.

Homeless and financial accessibility

When homeless persons become (seriously) ill and require medical attention they become visible. However, when they require medical attention, assuming they are able to find their way to a health care provider, a problem occurs. The medical attention that is required is not always financially covered. Financial coverage is however important since homeless persons haven't got the financial means themselves to pay for medical care. This makes financial coverage an important precondition to be able to receive the necessary care.

The financial reimbursement is in the Netherlands linked with insurance. Although not every homeless person has a health insurance, this can easily be solved. Since health care insurers in the Netherlands are required to accept everyone, an insurance can be closed at any moment for residents of the Netherlands. But as already mentioned, not all the homeless

persons are Dutch residents. The illegal immigrants can't get a medical insurance because of their legal status. This is shown in the Dutch Benefit Entitlement Act (In Dutch: Koppelingswet). This act states that immigrants without a work or residence permit are not entitled to public goods (Rijksoverheid (1), 2012). The authorities in the field of health care, such as health insurers, have to prevent that illegal immigrants can rely on collectively financed benefits. Instead, an emergency fund was established to cover costs for acute medical necessary care for this group when they can't pay for this themselves (CVZ, 2009).

Unfortunately, legal European immigrants are not covered by this fund. When legal European immigrants don't return to their country when they lose their work, they can't be forced to leave the country. When these legal immigrants lose their work in the Netherlands they lose their insurance as well. If they also haven't got an insurance in their homeland, there is no financial coverage in the case they need medical care. On the grounds of their legal status and the lack of insurance they can be legally refrained from health care. Only when there is a life threatening situation it is possible to get health care on the ground of acute medical necessary care. A Dutch commission (Commissie Klazinga) recently assessed what necessary medical care actually is: 'responsible and appropriate health care that is effective and efficient, is patient oriented and suits the actual needs of the patient' (Pharos, 2007). The commission stated that financial coverage should not be the primary concern of health care professionals, they should instead take the health and care for the patient as their starting point. Only when care can be postponed and the patient is expected to stay in the Netherlands shortly, the health care professional can limit the treatment or refrain from it completely (Pharos, 2007). Thus, the health care professionals can't refrain from treatment of legal immigrants when there is an acute need (life threatening) for necessary medical care. However, after the life threatening situation is over and they are dismissed from the hospital, they still need health care either to recover or because their health status doesn't allow them to take care of themselves.

When homeless persons do have an insurance, the problem is not automatically solved. If the health care that is needed isn't covered by the basic package, this health care is out of reach for them. Homeless persons haven't got the financial means to pay for an additional insurance or for the care separately. Own contributions reduce the accessibility of health care substantially for homeless persons as well, again as a result of their financial situation. Another significant problem is the fact that regular health care settings are not prepared for the problems associated with homeless persons.

Health care settings

The combination of somatic problems, psychological problems and behavioural problems

discussed in the prior chapter, make that many health care settings are not prepared for sick homeless persons. Health care institutions are in general specialized in either psychological or somatic health care problems. Although some mental health care facilities treat somatic conditions as well, they are not prepared for substantive somatic health problems. In general homeless persons need more guidance and attention than other patients.

The regular healthcare institutions are normally not prepared for the combination of substantive mental health problems and substantive somatic health problems associated with homeless persons. Especially, when in addition to these problems, the homeless persons have substantive behavioral problems as well. These problems make it difficult for an institution such as a hospital or nursing home, to put a homeless person in the same room with other patients and treat him or her equally. Although health care professionals should provide necessary health care for homeless persons they often back out of their duty. In order to safeguard their own position, an official report will be made in which it is stated that the patient is rejecting the care. Thus, because the homeless persons don't fit in properly, they are sometimes excluded from regular health care settings leaving them with nowhere to go. Considering the above in combination with the financial accessibility, it can be stated that accessibility of health care for homeless persons in the Netherlands is troublesome.

When homeless persons are welcome in health care settings it is often under conditions that are simply too much for these patients. It must be taken into account that it concerns a group of people that rejects care. If a health care provider doesn't try to cooperate with them, they will just walk away. This is in the first place not a desirable situation for the person himself, but is definitely not a desirable situation for society as well. If there is no health care for these challenging homeless persons, they can be a serious threat for the public welfare. An untreated homeless person with an infectious disease (f.e. HIV, TBC) can spread this to others. The mental health problems can result in unpleasant and unsafe situations as well.

Introducing Havenzicht

There is however an organization that provides health care explicitly to homeless persons, namely Havenzicht. Havenzicht is a shelter that is part of the organization Centrum Voor Dienstverlening (CVD) in Rotterdam. Like other similar organizations it provides low profile care facilities in which homeless persons from Rotterdam can spend the night on a temporary base. What Havenzicht differentiates from other shelters is the fact that they also have a low profile nursing ward of 20 beds for severe ill homeless persons.

The complex, interrelated problems associated with homeless persons result in the situation that homeless persons with health problems are often between a rock and a hard place. In

Havenzicht however, these challenging patients are welcome. By cooperating with the patients and taking into account the lifestyle, rituals and instructions of the homeless persons, good results can be achieved by the nurses in Havenzicht. In Havenzicht they try to help the patients with somatic problems, with their psychological problems, their degree of self-help and if possible with their addiction.

Although the addiction causes many problems, Havenzicht is forced to tolerate the use of drugs and alcohol to a certain extent. If they would not permit it and would dismiss patients who do use alcohol or drugs, the patients would simply not get any help. In other words, Havenzicht has to tolerate the use of drugs and alcohol in order to be able to provide any care. The relatively short period that they are admitted to a health care setting is too short for rehabilitation from their addiction. This would frustrate the care process even more and patients will not voluntarily stay. Because forced care is a solution that can only be used in exceptional cases for which they are often not eligible, and homeless persons avoid care, they are between a rock and a hard place.

The characteristics associated with homeless persons make that the health care provision is challenging and time consuming. Naturally, this takes more time than would be necessary in the care process concerning normal patients.

Although Havenzicht doesn't meet all requirements in order to be a regular AWBZ institution, every health organization is able to declare a small percentage of care which they don't normally provide. Since Havenzicht is part of the bigger organization CVD, and the nursing ward is only a small part of the CVD, Havenzicht is able to get reimbursed for the care described in the Exceptional Medical Expenses Act (AWBZ).

In 2010 there were 96 homeless persons that were admitted 117 times to the nursing ward of Havenzicht. These were homeless persons with a somatic indication that had a health care demand that for a variety of reasons could not be treated in a regular health care settings (see above). The average stay in the nursing ward in 2010 was 58 days and the bed occupancy 96 percent (CVD, 2010).

For most of the homeless persons Havenzicht was the only organization where they could get their necessary health care. They had no access to other health care providers, or could not fit in the regular settings due to above mentioned reasons. The role Havenzicht plays in the Dutch society and the health care system in particular is important. Before the role of Havenzicht can be discussed the role of social care in society must be explained first.

Role of social care in society

Commissioned by the Ministry of Health, Welfare and Sports a cost-benefit analysis was

conducted concerning the effects of a project on social care in the Netherlands (Cebeon, 2011). This policy project concerned extensive assistance to homeless persons with the aim to get them off the streets and offer them a place to live. Not every homeless person is able to live completely independent, therefore the aim of this project is to give homeless a place to live in an environment that matches their level of independence. Most homeless will end up in an assisted living environment.

The main goal of this project was to study the effects of social care policy with regard to several stakeholders involved with homeless persons. This analysis showed that there are major benefits on the policy areas police, justice and insurance. The project's social care investment got most homeless off the street, which reduced criminal activity and other nuisance. This resulted in financial savings in areas such as police and justice, who had to deal with homeless persons less. The costs concerning health care increased dramatically, but this increase was less than the combined savings of 80 million on the other policy areas police, justice and insurance. The invested amount in health care resulted in a saving ratio of 1:2,19. In other words, the investment of one euro in health care results in a saving on other policy areas of two euros and nineteen cents. When analyzing the benefits of social care using a societal perspective one must conclude that investment in social care for homeless persons is a cost-effective approach. Certainly, when you take into account that for this particular analysis only the savings in public funds were included. Other effects on citizens and organizations were not included and would increase the scope of benefits even more (Cebeon, 2011).

Part of this project on social care in the Netherlands (Cebeon, 2011) is the local registration of homeless persons. Homeless persons have to register at the municipality they are socio-economically bonded to. When they are registered they are able to get a pass which gives them access to shelters in that municipality. The homeless persons that can turn to Havenzicht thus are limited to those who have a pass from the municipality of Rotterdam.

Role of Havenzicht

One important player in providing (social) care in the area of Rotterdam is Havenzicht. The increased health care expenses are made by organizations such as Havenzicht that offer health care to homeless persons. These investments in health and welfare in the end result in the substantial savings as mentioned above. Havenzicht tries to overcome thresholds experienced by homeless persons and tries to help them as well as possible without setting preconditions. In general, the above mentioned pass is a precondition for entering the nursing ward of Havenzicht. However, in practice Havenzicht provides care on the basis of need and will provide care to those without a pass as well.

In the attempt by Havenzicht to provide health care to homeless persons, they are hindered by the limited financial reimbursements for the provided care. Limited financial reimbursements in the end limits Havenzicht in their attempt to provide health care services.

Concluding remark

Overall, it can be considered that health care access is difficult for homeless persons, and that health care isn't always adjusted to their situation. Even if homeless persons are insured the health care system still asks for own financial contributions and the care they are entitled to might not fit their health care demand. The consequences of the Dutch health care acts, rules and regulations for the accessibility of care for homeless are further analyzed in chapter 2.3.

2.3 The Dutch Health care system

To gain insight in the extent to which homeless persons can receive necessary health care, the Dutch health care system and its rules and regulations have to be described as well. Therefore, in this chapter the overall goal of the health care system, as well as the rules and regulations concerning financial coverage are discussed. Theoretical limitations of the Dutch health care system, focused on the accessibility of health care in the Netherlands for homeless persons will be discussed. The sub-question 'Is the accessibility and availability of health care for homeless persons in line with the international law concerning the right to health care?' will be discussed in this chapter. Relevant national and international laws concerning health care for homeless persons will be discussed first.

2.3.1 International law, right to health (care)

Human rights are basic rights and freedoms that are inherent to being human. This means that homeless persons are entitled to all fundamental human rights as well, including the right to the highest attainable standards of physical and mental health (UN general assembly, 1966).

Although it is stated in article 25 of the Universal Declaration of Human Rights (Universal Declaration of Human Rights 1948 ets 25) that everyone has the right to a standard of living adequate for the health and wellbeing of himself (Hermans & Buijsen, 2006), this is not legally binding. Other treaties however, have integrated many of the rights and freedoms of the UDHR and made legal attainment possible (Reichert, 2003).

One very important treaty is the International Covenant on Economic, Social and Cultural Rights (ICESCR) article 12. In this article it is stated that everyone has the right to the 'highest attainable standard of physical and mental health' (UN general assembly, 1966). Although problems with interpretation occur, the ICESCR does give in subsection two of article 12 a practical set of conditions towards a full realization of the right to health by which governments can fulfill their obligations.

In general comment number 14 (2000) on health (UN CESCR, 2000), the right to the highest attainable health is further elaborated. There is no right to be healthy, but there are entitlements that include 'the right to a system of health protection, which provides equality of opportunity for persons to enjoy the highest attainable level of health' (UN CESR, 2000). For homeless persons this means that the government is obligated to provide all facilities, goods, services and conditions that are necessary to stay healthy. Among other things, the government must thus provide timely and appropriate necessary health care for the homeless persons which is of the same quality as for others in society. The core obligation

concerning the right to health care is providing equal access to good quality health care for everyone without unexplained delay (UN CESR, 2000).

Domestic law

Additionally, several rights are integrated into domestic law. The most prominent is the Dutch Constitution. In article 1 (Grondwet voor het Koninkrijk der Nederlanden, 1983) of the constitution it is stated that everybody within the Netherlands will in all cases, be treated equally. Discrimination on any ground is prohibited. Article 22 of the same constitution adds to this that the Dutch government should take adequate actions to ensure equal access to health care. It is difficult to challenge this social right, but it does teach us what the general intention of the Dutch health care system is. Conform the international law, the government must provide timely and appropriate health care for the homeless persons which is of the same quality as for others in society.

Next to the Dutch Constitution the Health Insurance Act (In Dutch: Zorgverzekeringswet) is important as well. This act as well as other rules and regulations concerning the Dutch health care system is discussed in the next paragraph.

2.3.2 Rules and regulations

The different rules and regulations, which represent the policy of the Dutch government, will be discussed concerning health care provision and coverage in general and for homeless persons specifically. These rules and regulation should be in line with the intention to provide equal access and quality concerning health care.

Health insurance

In 2006 the Dutch health insurance system was reformed when the Health Insurance Act was implemented. The aim of the reform was to improve the efficiency of the Dutch health care system as well as the quality, by implementing managed competition between health insurers. The new system concerns an uniform system in which every individual who legally lives or works in the Netherlands, is obliged to buy a health insurance (Enthoven, 2007). Although for acute medical care no insurance is necessary, you need a health insurance in order to be able to receive non-acute health care. This precondition to be able to receive non-acute care is considered legitimate and proportional since the contribution to the health care system by obtaining a health insurance is necessary to maintain this system. Because the Dutch health care system is based on the principle of solidarity it is a legitimate precondition (Den Exter, 2008).

Those who are not insured have to pay for the health care themselves and will receive a fine as well. The benefits of the insurance are specified by law and covers care by general

practitioners and specialists, as well as pharmaceuticals and the first year of hospital care (Rijksoverheid, 2012 (2)). The basic health insurance can however be extended with a supplemental insurance. The health insurers, who are heavily regulated in the contemporary health insurance system, are obliged to accept every Dutch resident for the same premium for the basic health insurance. The health insurer can however decline someone and is free to differentiate the premium concerning the supplemental health insurance (Hermans, 2006).

Exceptional Medical Expenses Act

Next to the basic and supplemental health insurance there is the Exceptional Medical Expenses Act (AWBZ). If you have a basic health insurance, you are automatically insured for the care described in the AWBZ as well. This act covers the long-term health care costs that are not covered by the normal health insurance. These costs, such as long term care and hospitalization beyond one year, are almost unaffordable for individuals. Contributions to the fund come from the income tax payments, the government's general revenue and co-payments from consumers. The AWBZ fund is managed by the Care Insurance Board (CVZ).

In order to be eligible for the care described in the Exceptional Medical Expenses Act, the insured should have a particular condition, limitation or handicap. The foundations are defined in order to determine whether it concerns AWBZ care. The foundations are a general medical condition or limitation, a psychogeriatric condition or limitation, a psychiatric condition or limitation, intellectual disabilities, physical disability, sensory disabilities and finally a psychosocial problem (CVZ, 2012). In order to keep the system flexible, these foundations are globally described.

In the Care Entitlement Rules AWBZ (Dutch: Besluit Zorgaanspraken AWBZ) it is described which functions of care are insured under the Exceptional Medical Expenses Act (AWBZ). These functions are guidance, treatment, personal care, residence, residence and treatment, nursing, transport and continued residence (Art. 2 BZa). These functions are linked with the amount of hours of care.

Concerning extramural care the NZa has developed certain performances based on these functions, concerning intramural care the NZa developed care intensity packages (Dutch: zorgzwaartepakketten). These care intensity packages are integral, demand driven packages in which the above mentioned functions of care are incorporated. Since 2011, these care intensity packages are the legal entitlements concerning intramural care (NZa, 2011). These entitlements are recorded in the Care Entitlement Rules AWBZ (Art. 2 BZa).

The care intensity package includes how much and what type of care an individual on average needs. The intensity of care the individual requires in combination with their medical condition determines the package.

Care Assessment Centre

In the Care Indication Resolution (In Dutch: Zorgindicatiebesluit) it is described how the care intensity should be determined. This resolution thus controls the access to the AWBZ. It is described that an independent organization called the Care Assessment Centre (CIZ) assesses the need for care. They give off an indication in which it is stated what care intensity package someone is entitled to. The indication is a necessary precondition to receive the required care because it is directly linked to the reimbursement. The content of the indication depends on the nature of the disease, the disorder, the limitation and the social environment (Art. 1-26 Zorgindicatiebesluit).

Reimbursement

As mentioned above, the AWBZ reimbursement is linked to care intensity packages. The care intensity packages are divided in three main categories conform the six foundations described above. The different categories are 'care and nursing' (Dutch: Verpleging en Verzorging, VV), 'mental health care' (Dutch: Geestelijke Gezondheidszorg, GGZ) and care concerning handicaps (Dutch: Gehandicaptenzorg, GZ). The latter category is divided into subcategories concerning the type of handicap. In this study however, the focus is on the categories VV and GGZ. Each category in her turn has different health care packages based on the intensity of care. The category VV has 11 care packages, while the GGZ category has 13. The GGZ category has an additional separation of packages with treatment and packages without treatment (CIZ, 2011).

Every care package is not only linked to a specific reimbursement, it is linked to a range of hours as well. The care providers should be able to provide the care within this range for the concerning client profile. This range, with a minimum and a maximum amount of hours, is used to create a flexible system in which the patient can indicate what should be provided in the available hours. The range is also meant to absorb the hours of care that are necessary when a patients temporarily needs extra care. If it is known in advance that the extra care will be necessary for longer than three months, it is possible to change the health care package (CIZ, 2011). In other words, a temporal health change of a patient should be absorbed by the range of the health care package. The overall evaluation whether reimbursement are sufficient to cover the care for the patient should therefore be conducted over a longer period and over multiple patients.

In the table below a summary is given concerning the range of hours associated with the packages, as well as the reimbursements. The range has a minimum and a maximum amount of hours in which the care should be provided. However, in order to be able to analyze whether the reimbursement is sufficient, an average of the reimbursed hours per package is necessary. In this study the average of the Dutch Health Care Authority (NZA) is used.

AWBZ package	Min. hours	Max. hours	NZA average (hours)	Reimbursement NZa maximum	Reimbursement Havenzicht
1VV	3	5	4,05	€ 58,55	€ 57,96
2VV	5,5	7,5	6,66	€ 74,55	€ 74,02
3VV	9,5	11,5	9,05	€ 90,49	€ 89,59
4VV	11,0	13,5	11,03	€ 103,27	€ 102,24
5VV	16,5	20,0	16,77	€ 141,51	NA
6VV	16,5	20,0	16,83	€ 141,55	€ 140, 13
7VV	20,0	24,5	20,62	€ 166,62	€ 164,95
8VV	24,5	29,5	25,14	€ 194,20	NA
9VV	18,0	22,0	16,23	€ 137,76	€ 136,38
10VV	26,5	32,5	27,81	€ 212,42	€ 210, 30
1GGZ	7,5	9,5	7,69	€ 56,93	NA
2GGZ	12,0	14,5	12,11	€ 91,81	€ 90,89
3GGZ	13,5	16,5	13,83	€ 101,54	€ 100,52
4GGZ	16,0	19,5	16,69	€ 122,29	€ 121,07
5GGZ	17,0	21,0	18,23	€ 133,35	€ 132,02
6GGZ	22,5	27,5	22,99	€ 168,05	NA

Table 1, Overview hours and reimbursements AWBZ packages. Source: NZa, 2012

In the appendix (1) a more extended summary is given concerning the health care packages. The exact description however can be found on the website of the NZa (www.nza.nl).

The reimbursement shown on the far right in the table above is the reimbursement per day specifically for Havenzicht. The NZa determines the maximum reimbursements per package. And the actual reimbursement has to be negotiated between the care organization and the Care Administration Office (Dutch: Zorgkantoor).

Some packages are not applicable for Havenzicht. Either because the problems associated with the target group are too severe to be covered by the package (1GGZ) or because Havenzicht can't meet the requirements to provide the particular care associated with the package (5VV, 8VV, 6GGZ).

Care Administration Office

The Care Administration Office regulates the provision of health care to the insured. They are responsible for the execution of the AWBZ for a certain region and purchase care for their clients. The actual care provision is conducted by the health care organizations that the Care Administration Office contracted. When the care in the care intensity package is insufficient, the Care Administration Office should determine whether extra care is necessary on top of the indicated care intensity package (NZa, 2011). Several fees have been developed concerning specific conditions that require extra hours of care on top of the package (such as CVA and Huntington disease). When such a condition is diagnosed, the Care Administration Office reimburses an additional amount on top of the assigned packages.

Additional reimbursements

Next to the reimbursements shown in the table above, which represent the largest part of the reimbursement a health care organization such as Havenzicht receives, other reimbursements are provided within the AWBZ as well. Health care organizations also receive a reimbursement for their capital costs and a reimbursement for day activities when relevant. Havenzicht receives in addition to these reimbursements a subsidy from the municipality of Rotterdam.

Role Care Insurance Board

The rules and regulations discussed above are related to health care for Dutch residents. However, not all the homeless persons are Dutch residents. There are two other groups as well, the illegal immigrants from outside of Europe and the legal European immigrants. The Care Insurance Board (Dutch: College Voor Zorgverzekeringen, CVZ) is responsible for the financial reimbursement concerning the provision of necessary medical care to the illegal immigrants when they cannot pay for this themselves. This task is recorded in the Health

Insurance Act, article 122a. The fund for illegal immigrant was established because they can't get a medical insurance as a result of their legal status.

The compensation is meant for uncollectible costs for medical necessary care provided to illegal immigrants, immigrants that submitted a residence permit or immigrants that have lodged an objection or appeal a negative decision concerning an application for a residence permit. The compensation is not meant for legal European immigrants.

Additionally, the Care Insurance Board is an advisory- and implementing institution concerning the Health Insurance Act and the Exceptional Medical Expenses Act. Although the Ministry of Health is responsible for the changes concerning the content of the care intensity packages, the Care Insurance Board (CVZ) has an important role in managing the care intensity packages. The CVZ focuses on whether the content of the care intensity packages is appropriate concerning the nature and the scope of the care (NZa, 2011). The Care Insurance Board (CVZ) maintains the accessibility, affordability and quality of the care intensity packages. They make sure that these are balanced in order to realize social acceptance for the package designs. An important task since the care intensity packages are the legal entitlements concerning intramural care (CVZ, 2009).

Role Ministry of Health

In the paragraph above ('Role Care Insurance Board') it was already mentioned that the Ministry of Health is responsible for the changes concerning the content of the care intensity packages. This is not their only responsibility concerning care intensity packages. The Ministry of Health is responsible for the overall AWBZ policy, the legislation and determines the financial framework as well. Additionally, the Ministry of Health is responsible for the execution of statutory duties by the Dutch Health Care Authority (Nza, 2011).

Role NZa

The Dutch Health Care Authority (NZa) has been addressed a number of times in the discussion of the health care system above. The overall task of the NZa is to realize well performing health markets and to monitor these markets (NZa, 2011).

The NZa has the responsibility to determine the policy guidelines as well as the reimbursements. The activities concerning the NZa are shown in the Health Market Organization Law (In Dutch: Wet marktordening gezondheidszorg, Wmg). The Ministry of Health determines the broad lines of the policy and the NZa in her turn carries the predetermined policy out concerning the financing of health care (NZa, 2011). In the Health Market Organization Law it is described which responsibilities are for the NZa and which are

for the Ministry of Health. Although the NZa should in principle perform their task autonomous, the Ministry of Health can influence the execution of their policy (Art. 7 Wmg). During the monitoring of the performance of the health care markets, the NZa actively collects signs of problems or possible improvements of the system. When it is decided which problems will be taken care of, the NZa decides how these problems should be solved. The NZa implements the changes as well (NZa, 2011).

2.3.3 AWBZ and homeless persons

The possible effects on the accessibility of health care facilities for homeless persons in reality of the rules and regulations of the Dutch health care system discussed above, are introduced in this paragraph.

In order to receive health care described in the Exceptional Medical Expenses Act, an indication from the Care Assessment Centre (CIZ) is necessary. For intramural care the indication concerns a care intensity package. These packages are divided in somatic health problems, psychological health problems and care concerning handicaps. Since homeless persons have multiple health problems while the care packages are divided into these three categories, the indications might not always match their health care demand. Because only one care intensity package can be assigned per person, there will be no financial coverage concerning health problems in another area despite an objective medical need.

Another problem concerns a shortcoming in the assessment conducted by the Care Assessment Centre. When assessing which care intensity package matches with someone's profile, psychosocial problems are not sufficiently taken into account. This is however an essential element that is often at the base of the problems of homeless persons.

Homelessness is namely often a result of the poor ability of a persons to take care of themselves in different life domains such as inter alia income and housing. When someone is homeless, the tough life on the street and the limited degree to which someone is able to take care of himself will influence the health. They will often develop different (health) problems. Since many health problems are interrelated, the problems intensify each other and will additionally frustrate the care process.

In general, homelessness is not taken into account sufficiently in the Exceptional Medical Expenses Act. The contemporary governmental policy in the Netherlands has made the problem homelessness a local problem that should be handled by the municipality.

Homelessness is included in the Social Support Act (in Dutch: Wet Maatschappelijke Ondersteuning, WMO) that is managed by municipalities. Since the AWBZ and the WMO are not complementary, the factor homelessness is insufficiently taken into account concerning

intramural care which is covered by the Exceptional Medical Expenses Act. This might influence the sufficiency of the health care system concerning care for homeless persons.

The effect of the rules and regulations of the Dutch health care system is further analyzed by focusing on the low profile nursing ward of Havenzicht. After analyzing what care is provided in Havenzicht as well as the reimbursement received for this care, it will be possible to conclude on the sufficiency of the obtained reimbursements.

2.4. Developments in the Dutch health care system

The health care policy of the Dutch government is subject to change. In this section the most recent developments will be discussed that affect the health care accessibility for homeless persons.

Policy developments in health care

The Dutch parliament has been dissatisfied for a number of years concerning the functioning of the Exceptional Medical Expenses Act (Schut & Van de Ven, 2010). There are insufficient incentives to create an effective and efficient provision of AWBZ care. According to the Social Economic Council (in Dutch: Sociaal Economische Raad) there is among other things an inconsistent reimbursement method, the care functions are too globally described, and the Care Administration Offices haven't got incentives to operate efficiently (Sociaal Economische Raad, 2008). This dissatisfaction has resulted in the austerity of the care described in the AWBZ. In general it can be considered that every reduction in care that is reimbursed by the AWBZ and the basic care package affects homeless persons, since they haven't got the means to receive the care in another way.

Budget agreement 2013

On top of the trend concerning the austerity of the AWBZ and competition, the government has announced drastic government cuts. As a result of the financial crisis, new European objectives are developed to which every European country should comply. The Dutch government had to intervene in order to prevent that the federal budget deficit increases too much (Rijksoverheid, 2012 (3)). Therefore the Dutch government had to realize a new budget agreement for 2013 (in Dutch: Lente akkoord). In this agreement several changes are shown that will affect the health care system. These changes and other developments that affect the availability of health care for homeless persons are discussed below.

An important development is the increase of the own contribution for the usage of health care. The own contribution is the part of the medical expenses from the basic care package that someone has to pay for themselves. The Dutch government has decided in the new budget agreement that the own contribution concerning the basic care package will be increased to €350. For AWBZ care there is an own contribution as well. The own contribution in 2012 had a maximum of € 2136,40, and a minimum of €148,20. More specifically, in the first six months of the admission a low own contribution (ranging from €148,20 to €778,60) is charged dependent on one's income. After six months a higher own contribution is charged of maximal €2136,40. A substantial amount of money that homeless persons in general don't have. An increase of this amount will reduce the accessibility of care for homeless persons even more since the homeless persons in general have little financial means, and set

different priorities with the little financial means they have.

Another important problem is the fact that homeless persons are often care avoiders. If an own contribution is charged, this will create an extra threshold to receive care. This may result in them not using any health care at all. This is an unwanted situation for the person himself and for society as a whole due to social problems.

Own contributions are not limited to somatic health problems. Since 2012, there is an own contribution for mental health care as well. Although it is stated that this contribution will be reduced, the existence of a contribution for this type of care is problematic. A recent study concluded that patients with substantive psychiatric problems and little income, avoid care as a result of the own contribution (Koopmans & Verhaak, 2012). This conclusion can be extrapolated concerning homeless persons.

Execution AWBZ by health insurers

Another important development is the change concerning the execution of the AWBZ from Care Administration Offices to health care insurers. This change should improve the care purchase by health insurers. The purchased care should be more cohesive concerning the care content because in the current situation the purchase of care is separated between the care and the cure section (Rijksoverheid (4), 2012).

The execution of the AWBZ by a for-profit health insurer might however have undesired effects for homeless persons. In general, patients who need AWBZ care are predictable losses for health insurers (Schut & Van de Ven, 2010). The health insurers have no financial interest in purchasing good quality AWBZ care, as a result of an imperfect community risk rating. Mainly because if insurers offer good quality AWBZ care, they will attract persons who are considered a bad risks because they give predictable financial losses. There are in the contemporary system no other stimuli for the health insurers to buy good quality AWBZ care (Schut & Van de Ven, 2010).

The arguments above apply to homeless persons as well. They will give predictable losses as a result of their poor health and challenging (health) problems. Additionally, homeless persons form a small group in society, to which health insurers might give low priority. The argument that patients will have more influence concerning their health care provision does not apply to homeless persons. They are in general not able to stand up for themselves and pressure health insurers to purchase good quality care. On the contrary, homeless persons are known to be persistent care avoiders. Overall it can be considered that the execution of the AWBZ by health insurers will influence the availability of care for homeless persons negatively.

Separation of housing and care

Another future development is the separation of housing and care. This development implies that patients have to pay for their housing cost themselves (Rijksoverheid (4), 2012). When you take into account that a large part of the homeless persons are known to avoid care, the payments for their stay in a health care facility will create an extra threshold for them to enter the health care facility. Homeless persons, especially when they are addicted, have in general different financial priorities. The current proposal does mention that when someone can't pay for the housing themselves, they are entitled to rent benefits. Most homeless however, have large debts and will not be taken into consideration concerning housing benefits. If the separation between housing and care will apply to homeless persons, the financial threshold will reduce their accessibility to health care.

Extramuralisation care intensity packages

The development discussed above concerning the separation between housing and care is shown in the reduction of the care intensity packages. In the care purchase policy 2013 of the Care Administration Offices (Achmea, 2012), it is shown that the care intensity packages concerning nursing and care (VV) and mental health (GGZ) will be reduced. Persons with the care intensity packages 1,2,3 and 4 will in the future not be able to receive their care in an intramural setting. The care concerning the packages 1,2,3 and 4 will instead be provided extramural in the patient's house. Obviously, homeless patients haven't got a house now and will not have one in the near future. Most homeless patients are not capable of taking care of themselves and will as a result of their financial debts not be taken into consideration for housing benefits.

Only when the medical problems require an intramural admission someone with one of the concerning care intensity packages can be admitted to an intramural setting. This indirectly shows that the psychosocial status as well as the behavioural problems of a patient will not be taken into account, while homeless persons have a complex mix of problems, of which the somatic health problem is just one.

Additionally, the execution of part of the care should change from professionals to informal carers. Homeless persons however, in general haven't got a social environment that they can use. As a result of the extramuralisation of care intensity packages and the larger emphasis on informal carers, the availability of health care for homeless persons will drastically be reduced.

3. Methods

This study analyzes how well the Dutch health care system is able to foresee in health care for homeless persons. Because financial reimbursement is an important precondition for homeless persons, this study analyzes the financial coverage concerning health care for homeless persons in a nursing ward in Rotterdam. The boundaries shown in this specific case tell something about the boundaries of the Dutch health care system as a whole concerning very low social economic groups and especially concerning homeless persons.

3.1 Methods concerning analysis of Havenzicht

The difference between the care that is provided by Havenzicht and the care that is actually reimbursed will be studied in this thesis using a case study. After the analysis concerning the financial streams of Havenzicht, a more societal perspective will be adopted to analyze the extent to which homeless persons can receive necessary health care. Because homeless persons have the lowest social economic status in the Netherlands, this will give insight in how well the Dutch health care system as a whole is able to foresee in necessary health care. Especially considering the fact that homeless persons have no financial means to receive health care in another way. They are dependent on what health care Havenzicht (or similar organizations) can provide. Havenzicht in her turn is dependent on the rules and regulations of the Dutch health care system that determine what reimbursements can be obtained.

3.1.1 Analysis of provided care

Although the specific health status is an important determinant which influences the amount of care needed, this is not included in this study. This study uses a different approach to conclude whether reimbursements are sufficient. By looking at the hours needed by the health care professionals in the care process for one patient, compared to the hours that are reimbursed by the assigned AWBZ package, we can conclude whether the package was sufficient to cover the cost of the care per person. This analysis is done for every patient during one year, in order to conclude whether the combined reimbursements for all the patients were enough to cover cost for the combined hours of care provided in that same year. Next to the analysis of the hours needed by the health care professionals to provide the necessary care, an analysis is made concerning the salaried hours in 2011 as well. Both methods are discussed below.

Analysis nursing plan

The analysis of the nursing plan provides insight in what activities are done by the nursing personnel per patient during their stay. In the nursing plan the different activities on the nursing ward are written down per type of action per patient per week. The same terms are

used in the content description of AWBZ packages. Both differentiate actions in nursing activities, personal care and guidance. The care that is delivered to patients can always be found in the timesheet for that patient, even when a patient for some reason hasn't got an indication and therefore doesn't get an AWBZ reimbursement. The nursing plan is thus independent of the reimbursement. By analyzing what is written on the nursing plan, the amount of hours concerning the activities can be calculated per patient during his stay. This amount can be linked to the patient's indication. Because the indication reimburses a certain amount of hours it will be able to conclude whether the indication was sufficient to foresee in the hours needed per patient. In order to determine whether the overall AWBZ reimbursement was sufficient to foresee in the hours of care needed for the patients in 2011, the total reimbursement received can be compared to the total amount of hours used to provide the necessary care in 2011. Additionally, because the data are gathered on patient level, analysis can be made concerning patient characteristics that determine the use of (extra) care as well.

The different activities recorded in the nursing plan are shown in the appendix (2). The management of Havenzicht attached a standard time to every activity. These times are the averages needed per patient.

Some of the activities that are mentioned in the nursing plan have a larger amount of time attached to it than the Ministry of Health mentions in their policy. These activities take more time as a result of the complex interrelated (health) problems of the target group.

In order to analyze the right amount of activities per patient per week, the exact admission dates as well as dismissal dates are used. Because the nursing plan is a timesheet per week, the mentioned activities are calculated per week per patient. The patients however, seldom stay exactly seven days. In order to calculate the right amount of time per patient, the day total per patient is calculated by ratio. In order to get the right amount of hours, the amount per day is multiplied with the number of days the patient stayed in Havenzicht per week. In some cases it was known beforehand that a person wouldn't stay a full week, the activities for these patients were in these cases already written down in accordance with their stay.

The total amount of hours provided in 2011 were calculated by adding up the hours mentioned in the nursing plan per patient in 2011. The actual provided care will be compared to the reimbursed hours in 2011. The reimbursed hours per package are mentioned in the guidelines of the Dutch Healthcare Authority (NZa). Every package is equipped with a range, therefore the provided amount of hours should be compared to the average of the range. Because in this study the provided care is analyzed over a relatively large group of patients

over the period of a year, it is justified to use the average of the packages to compare with the amount of provided care. The averages used by the NZa are shown in the appendix (1).

Some activities are not mentioned in the nursing plan because some activities are continuously done concerning every patient, independent of their indication. This study however analysis the total amount of time needed per patient, regardless of the type indication or the type of activity. When homeless persons become patients, they need additional attention and activities that are not necessary when dealing with 'normal patients'. The circumstances simply require a different approach and different activities. In this study it is assumed that activities that are not mentioned in the nursing plan are part of the care process as well and cannot be seen otherwise. In order to realize a good insight in these additional activities as well as the average time attached to them, three nurses, two shelter attendants, one care coordinator and the manager of Havenzicht were interviewed. The combined amount of the average time that the different additional activities represent is 4 hours. The analysis of these activities and their associated time is attached in the appendix (3).

Analysis salaried hours

The second method that is used to analyze the provided hours in 2011 entails an analysis of the salaried hours. This analysis is used to check whether the total amount of hours calculated using the nursing plan could in theory be provided to the patients. The paid hours per employee, adjusted to the net productive hours and the percentage of time they worked for the nursing ward, are the hours that were used to provide care to the patients in Havenzicht. The calculation of the net productive hours is included in the appendix.

In consultation with the manager of Havenzicht all the personnel that worked at the nursing ward was identified as well as the percentage of the salaried time they worked in service of the nursing ward. These hours can be compared to the hours reimbursed by the combined time attached to the indications.

In order to express the hours calculated with both methods in monetary terms, the cost price per hour was calculated. The overall available net productive hours are divided by the total amount of cost which results in an overall cost price per hour. As with most cost calculations, the allocation of a few cost for the used calculation in this study are arbitrary. The assumptions made and methods used in the calculations are mentioned as well as possible and the allocation of costs was done in consultation with the manager of Havenzicht, two financial consultants and the financial controller of Havenzicht.

Because the hours of care are calculated using two different methods as mentioned above, a more complete answer can be given concerning the question whether the reimbursements are sufficient to cover the hours provided to the patients in Havenzicht. Especially because the two methods approach the calculation of the provided hours from different angles.

3.1.2 Patient Characteristics

The patient characteristics are an important aspect that explains why health care provision to homeless persons is challenging. This study analyzes the care provision and financial reimbursement on patient level in order to analyze in what way the provision of health care to homeless people differs from regular health care provision. As a consequence of this approach, the time scope for the analysis was limited to one year, namely 2011.

Characteristics of the patients in Havenzicht are analyzed in order to conclude which patient characteristics resulted in the use of extra hours of care on top of their assigned care intensity package. These characteristics and their influence on the time needed to provide care, were found by analysis of patient documents in combination with interviews with the nursing personnel.

Document analysis

The document analysis was done by analyzing the digital dossier of every patient, which is called Regas. Regas is a software program that supports the primary processes in the organization and enables different disciplines to work in one digital treatment plan. Regas provides an overview in which all the information can be found that is related to a patient. For the purpose of this study, every relevant patient dossier was analyzed concerning the specific admission and dismissal dates, the birth date, gender, substance use, the assigned AWBZ package, their ethnic background and finally concerning the applicant of the AWBZ package.

Interviews

Three nurses, one care coordinator, three shelter attendants, one general practitioner who works as a street-doctor for Havenzicht and one forensic psychiatrist were interviewed in order to better understand on which points the patients in Havenzicht differ from the regular patients that stay at a normal nursing ward. These interviews were used to describe the health of homeless persons in chapter 2.1 'Homeless persons and health'. Additionally, the interviews were used to identify what activities are carried out by the nursing personnel during a patient's stay. The time per activity was quantified in consultation with the nurses as well. Below the different patient characteristics are discussed. While the characteristics 'gender' and 'birth date' are clear, the other characteristics need a little more explanation.

AWBZ applicant

The applicant of the care packages might be an explanatory factor why the care packages are insufficient. If a patient already had a GGZ package this might explain why the reimbursement is insufficient when they enter the care department. Mainly because they enter the nursing ward because they have a somatic health care problem which GGZ packages are not designed for. In order to analyze the effect of the applicant on the sufficiency of the reimbursement, the different applicants per patient were analyzed and recorded.

Ethnic background

Although the search for this characteristic was done based on information recorded in Regas, the actual determining of the ethnic background was done according to the method used by the Dutch Central Bureau of Statistics .

The ethnic background of the patients that visited Havenzicht in 2011 was determined by analysing the place of birth of the patients as well as their parents. The non-western countries were prioritized over other western countries when the patients themselves or their parents were born in different countries. When both parents were born abroad, the birth place of the mother had priority over the father's unless only the father is born in a non-western country.

Not all the information required to determine the ethnicity was found in the database of the CVD. Sometimes the places of birth concerning the parents were not registered. When the information was there only concerning one of the parents, this information was used. If the place of birth of both the parents was unknown, the ethnicity was determined by just looking at the patient's own place of birth. For some patients no information at all was found concerning their place of birth or nationality. The ethnicity of these persons was determined using the employees of Havenzicht who know the patients personally.

The different ethnic backgrounds can be divided into western and non-western countries. This classification is again based on the classification used by the Dutch Central Bureau of Statistics (Nicolaas, 2009). According to their division the Western countries are those in Europe, northern America, Oceania or Indonesia and Japan. Non-western countries are those in Africa, Latin America, Asia and Turkey. The Dutch Antilles were included in the non-western countries as well.

Substance use

Regas was used to analyse substance abuse by patients as well. Because most patients use one or more substances, this characteristic is not recorded consequently. Sometimes it is not

registered at all. In order to find out whether a patient is addicted to a substance the interviews conducted by the patient's admission were analysed. Additionally, the patient review documentation written by the nurses was analysed. If something was mentioned concerning substance abuse, it was concluded that the patient had an addiction. This analysing method was done with the approval of the head of the care administration department of the CVD.

3.1.3 Analysis of reimbursed care

Next to the care that is delivered, the different reimbursements are analyzed per patient as well. The analyses of reimbursements will be divided in two parts. First the actual reimbursements per patient will be analyzed. By comparing the patients admission and dismissal dates to the start and end dates of the AWBZ packages, an analysis can be made concerning the amount of days the patient had a certain AWBZ package. Every AWBZ package has a reimbursement attached to it. The total number of days in 2011 that patients had an AWBZ package times the attached reimbursement gives the total amount of reimbursement Havenzicht received in 2011 concerning the AWBZ.

The calculated amount of reimbursement in 2011 is checked using the actual received reimbursement that is recorded in the annual figures shown in the accountant's report.

It is important to note that the reimbursements are not limited by those from the AWBZ indications. Every financial stream that is meant for the nursing ward or a particular patient is registered. Other possible ways to receive reimbursements are the national Care Insurance Board (CVZ) or the Municipal Health Services (GGD) and the Municipality of Rotterdam in general. By interviewing the financial controller as well as the head of the care administration department of Havenzicht these other possible sources of reimbursement were uncovered.

Next, it will be analyzed what reimbursements Havenzicht should have received according to the care they actually provided. By subtracting the total amount of reimbursed hours by the total amount of produced hours, the total hours without reimbursement are shown. These hours can be multiplied with the cost price per hour of provided care to calculate the financial gap that Havenzicht should have received to cover the cost of the provided care.

Concluding remark

By analyzing per patient what care is provided, as well as analyzing the reimbursement that was given during their stay, insight is gained in the sufficiency of the financial coverage for these patients. Because different characteristics of the patients will be registered as well, it will be possible to analyze what characteristics of a homeless persons make that the reimbursement is (in)sufficient. For ethical reasons, the persons in this study are anonymous.

3.2 Methods concerning health care system and policy (developments)

In order to analyze the Dutch health care system, its rules and regulations as well as the social (health) care policy were analyzed. Documents were analyzed, mainly from the Dutch government concerning relevant acts, their explanations and relevant policy.

Additionally, relevant literature was analyzed in Dutch as well as English. Mainly literature of the past few years (from 2006 on) is analyzed. This because there was a major health care reform in 2006 which changed the complete health care system in the Netherlands. The literature was searched in databases such as Pubmed and Web of Science.

In order to obtain a good understanding of the content and outcomes of the rules, regulations and policy, face to face interviews were conducted with stakeholders that influence the health care provision concerning homeless persons in the Netherlands and Rotterdam specifically. An account manager of the regional Care Administration Office (zorgkantoor Achmea) was interviewed, a unit manager Care of the Dutch Health care authority (NZa), an account manager of the Care Assessment Centre (CIZ) and finally representative of the Health Service of the municipality of Rotterdam was interviewed. Respondent validation was used in order to reduce bias.

By using the above mentioned different methods a rich understanding is realized concerning health care provision for homeless persons. Good insight is obtained concerning the contemporary health care policy and concerning the effects of policy developments for health care provision to homeless persons.

4. Data and Analysis

In this chapter a description is given of the data gathered for this study as well as the characteristics of the homeless persons who stayed on the nursing ward of Havenzicht in 2011. Additionally, the analyses conducted are shown.

4.1 Data description

In 2011, a total of 85 patients were admitted to the nursing ward of Havenzicht. Seven patients were admitted twice, which makes the total amount of admissions 92. The gender distribution in 2011 was 7 females and 76 males. The other relevant characteristics of the patients are discussed below.

Length of stay

In total these 85 patients stayed 6818 days on the care department. The average length of stay per admission was 74,1 days. Three patients stayed the whole year.

Although there were 6818 patient days recorded, not every patient day was reimbursed for. A total of 278 patient days were not reimbursed at all. There are several reasons why there was a lack of reimbursement for these days. Sometimes the package final date past, while nursing personnel in their professional opinion, could not stop the care for these patient. In other cases the application by Havenzicht was filed a day later, which results in one day without reimbursement. In other cases patients did not get an indication because they by circumstances were not entitled to AWBZ care or didn't have an insurance at all. This is not the case with illegal immigrants since they are reimbursed by the CVZ. Additionally, the CVD ones did not receive a reimbursement because the patient was signed up at a different health care organization. Because the patient past away, Havenzicht could not retroactively receive the reimbursement for this patient.

Although 278 days were not reimbursed for, it also occurred 112 times that a patient was not present at the nursing ward while that day was reimbursed for. Additionally, eight patients were admitted in total 122 days to the hospital during their stay in Havenzicht. Because it concerned a temporary admission, the nursing ward received despite their absence from the department, the normal reimbursement for these patients. The number of days without reimbursement has to be reduced with these days that patients were not present at the nursing ward (234 days). On balance, 44 days were not reimbursed for although care was given to patients during these days.

Age

An important characteristic of the patient population is their age. Over 92 different admissions the average age was 51,1 years (SD=11,5). The oldest person was at his

admission 83 and the youngest was 24. The spread concerning age over 92 admissions was the following:

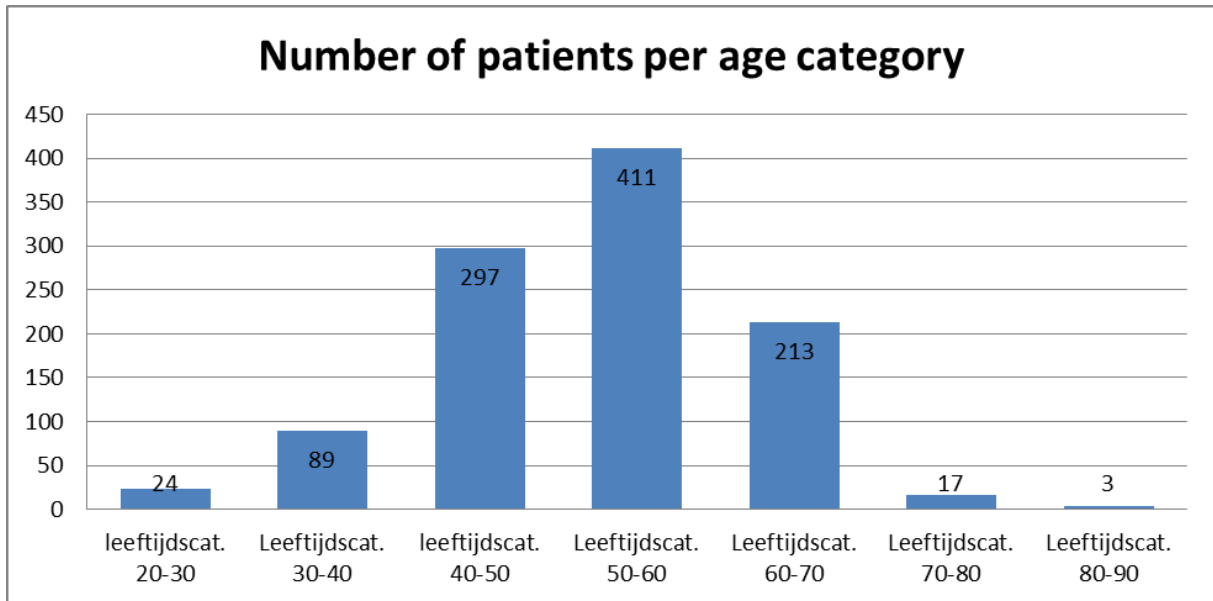


Figure 1: Number of patients by age category

Ethnic background

The 85 patients who stayed in the nursing ward had 16 different ethnic backgrounds. The largest group was Dutch, followed by Surinamese (17) and Antilleans (6). The other ethnic groups had five persons or less. Three patients were illegal immigrants from Somalia (1) and Suriname (2). In the figure below the different ethnic backgrounds and the number of patients per background is shown.

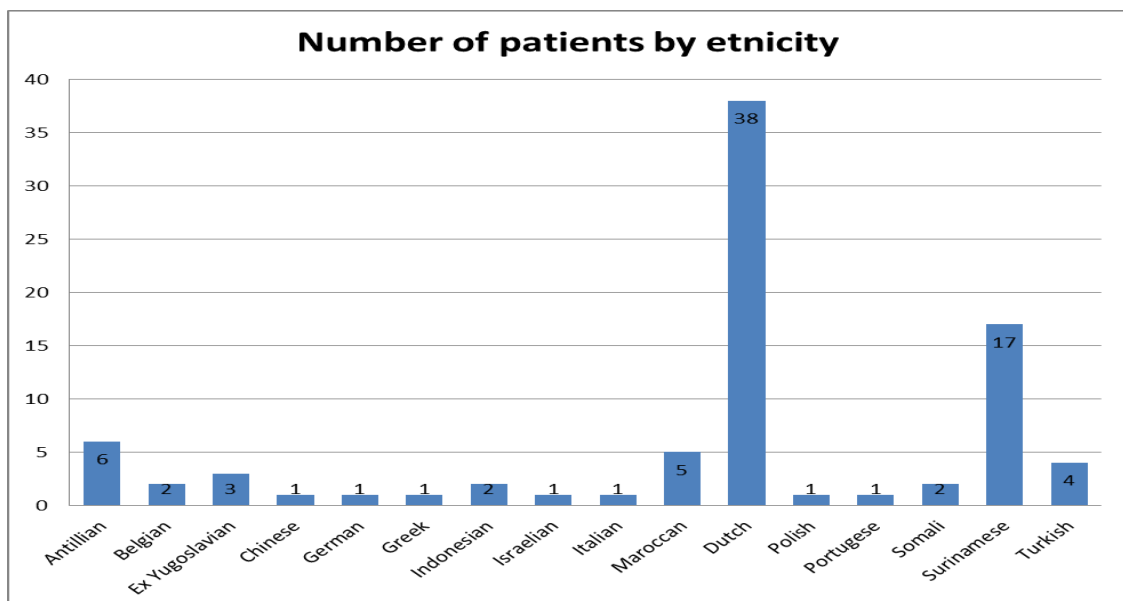


Figure 2: Number of patients by ethnicity

The ethnic backgrounds can be divided into either western and non-western countries, which results in the following table:

Origin	Number of patients
Western countries	49
Non-western	36
<i>Total</i>	<i>85</i>

Table 2: Western- Non-Western

Substance use

Another important characteristic is the substance use of the patient population. The substance use was divided into four categories, namely alcohol abuse, drug abuse, a combination of alcohol and drug abuse and finally no abuse.

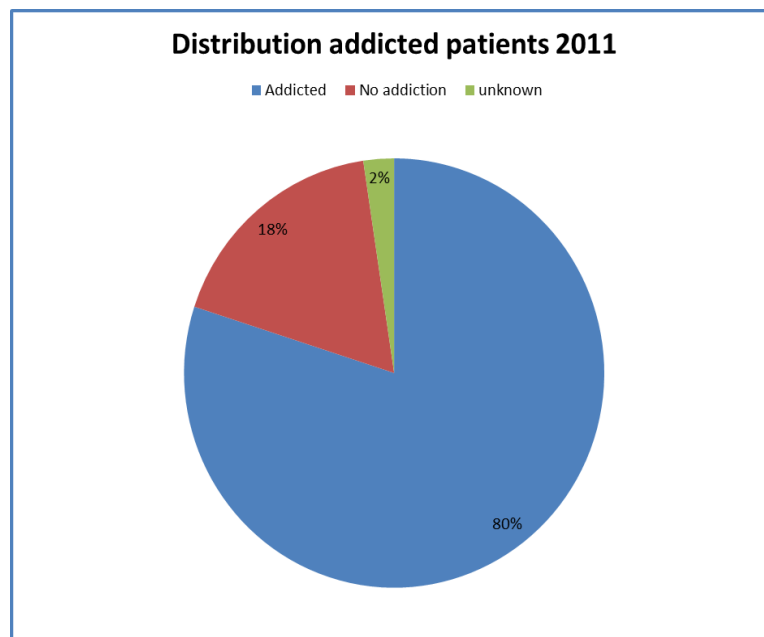


Figure 3: Distribution addicted patients 2011

The pie chart above shows the distribution between abuse and no abuse. Overall, 80 percent of the patients were addicted to one or more substances. For two percent of the patients it was unknown whether they were addicted. Below it is shown how many patients there were per category.

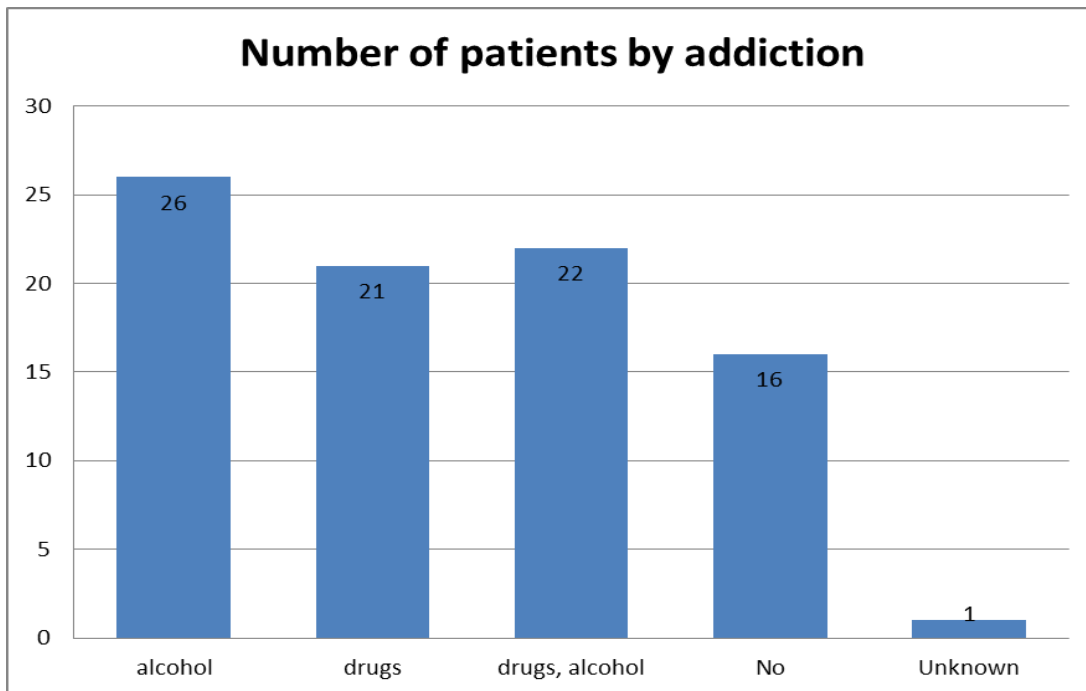


Figure 4: Number of patients by addiction

AWBZ packages

Every patient received a specific indication according to their health status. In 2011 there were both GGZ and VV packages. The division over the patients is shown in the pie chart below.

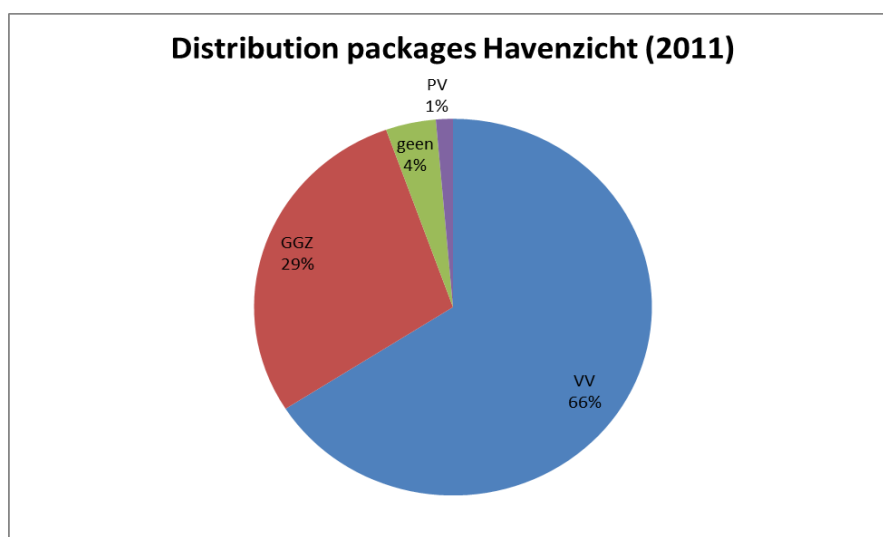


Figure 5: Distribution packages Havenzicht (2011)

The pie chart shows that one percent of the patients just had an indication for personal hygiene. Four percent of the patient population did not have an indication at all.

The applicant of the AWBZ package

The different indications that were present at Havenzicht had different applicants. Sometimes

a patient already has an indication from another healthcare provider when he enters Havenzicht. This might be another nursing ward or a hospital. Some patients have an indication for a longer period that Havenzicht just has to activate. As mentioned before, some patients haven't got an indication at all. Because only the admissions are taken into account, there is only one person that did not receive an indication at all. The different applicants in 2011 are shown in the figure underneath.

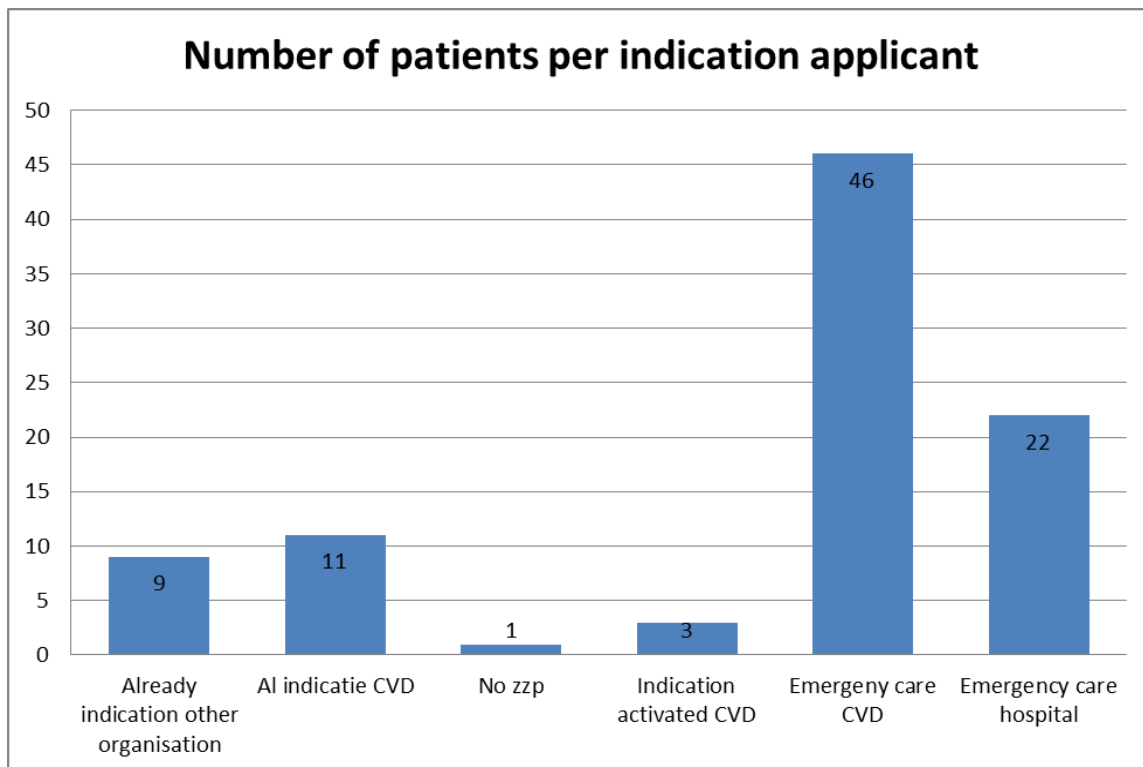


Figure 6: Indication applicant

It is important to know as well how many days patients stayed by package, in order to be able to analyze the financial reimbursement for Havenzicht. The figure (7) below shows that most patient days in Havenzicht had the 6VV indication. The second most days were 4GGZ packages and the least used package was the largest package, namely 10VV.

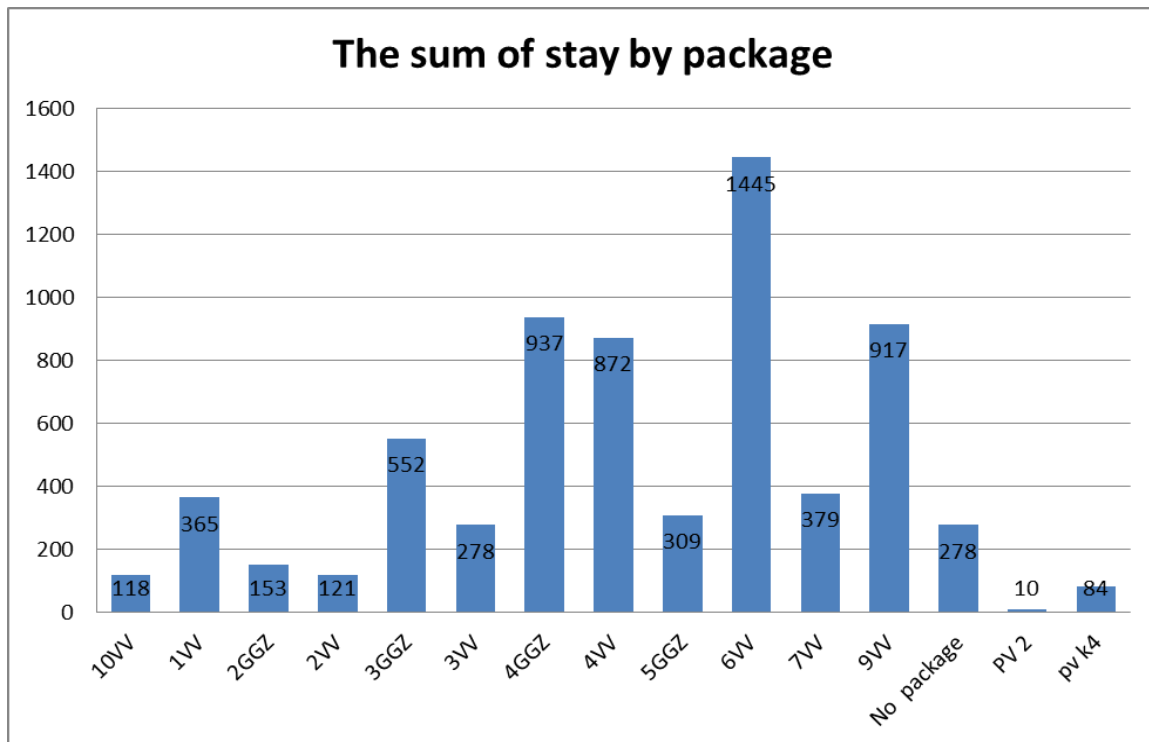


Figure 7: The sum of stay by package

Financial reimbursement

The above mentioned length of stay per package can be used to calculate the financial reimbursements per package in 2011. The different packages resulted in the following reimbursements in 2011.

Labels	Sum of reimbursements	Sum of stay
10VV	€ 24.815,40	118
1VV	€ 21.155,40	365
2GGZ	€ 13.906,17	153
2VV	€ 8.956,42	121
3GGZ	€ 55.487,04	552
3VV	€ 24.906,02	278
4GGZ	€ 113.442,59	937
4VV	€ 89.153,28	872
5GGZ	€ 40.794,18	309
6VV	€ 202.945,41	1445
7VV	€ 64.571,35	379
9VV	€ 125.060,46	917
No	€ 0,00	278
PV 2	€ 243,03	10
PV k4	€ 5.182,06	84
Total	€ 790.618,80	6818

Figure 8: Total reimbursements by package

As the table above shows, the total reimbursement for 6818 days was 790.618,80 euro in 2011. Although the largest component is the reimbursement received per indications times the length of stay per package, the overall AWBZ reimbursement entails several other components. Havenzicht also received a reimbursement for day activities for some GGZ packages (€36.003,06) as well as an additional reimbursement for the cost of capital for the day activities (€12.288,00). Havenzicht is also reimbursed for the capital cost of every bed in their department which resulted in a total of 190.521,00 euro.

Next to the AWBZ related reimbursements, there was a significant amount of 379.171,00 euro subsidy by the municipality of Rotterdam. The total amount of reimbursement was therefore 1.408.601,86 euro.

4.2 Analysis of provided care

The analysis of provided care is based on the nursing plan. Because some activities are independent of the patients and his indication, not every activity was mentioned in the nursing plan. In order to calculate the total amount of hours provided in 2011, the associated time with the activities written down in the nursing plan is combined with the time associated with the extra activities that were needed independent of the indication. In total 18.753,12 hours of health care were invested in 85 patients. As mentioned before, these patients stayed 6583 days in the nursing ward. This results in an average of 2,85 hours of care per patient per day.

After identifying the total amount of reimbursed hours available (see appendix 4), it was compared to the overall provided care during the stay of a patient. The overall amount of care needed on top of the care package's reimbursed hours was 4.989,38 hours. A significant amount (26,6 %) of the provided hours were thus not reimbursed for.

When the patient's indication is compared to the care provided during his stay, one is able to conclude whether the reimbursed amount of hours associated with the indication was sufficient. In 2011, 91% of the packages were inadequate.

When we analyse the different packages to determine which packages are inadequate, as well as to what extent they were inadequate we get the figure shown below. In this figure it is shown that patients who had a GGZ 4 package needed the most care on top of the associated reimbursed hours for the concerning package. The total extra hours needed concerning 4GGZ packages was 1.213,56 hours. The package with the second most use of extra hours was the 6VV package with 782,1 hours.

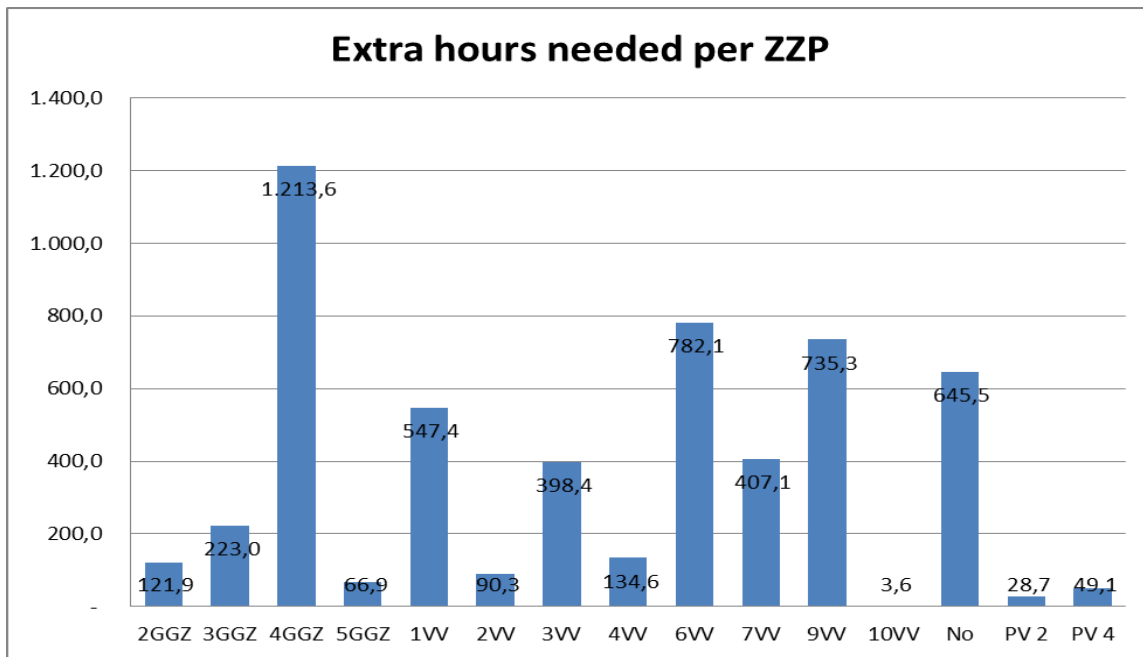


Figure 9: Extra hours needed per zpp

These extra hours of care provided to the patient were not reimbursed by the AWBZ care packages. In the next paragraph the effect of the different patient characteristics on the extra use of health care are analysed. In other words, it is analysed what patient characteristics explain why the health care package was insufficient.

4.3 Analysis of health care use per patient characteristic

In this paragraph the effect of patient characteristics age, gender, addiction, package applicant and ethnic background on health care use are analysed. The effect of the patient characteristics is analysed by looking at the extra hours of care that were needed in the care process on top of the assigned AWBZ package, concerning the overall stay of the patient.

Age

In order to analyse the effect of age on extra health care use, the patients were divided in age categories of 10 years. In order to correct for the number of persons per age category, the overall extra time per category was divided by the number of persons in the concerning category. This results in an average extra health care use on top of their AWBZ package per age category per day. In the figure (10) below, these averages per category are shown.

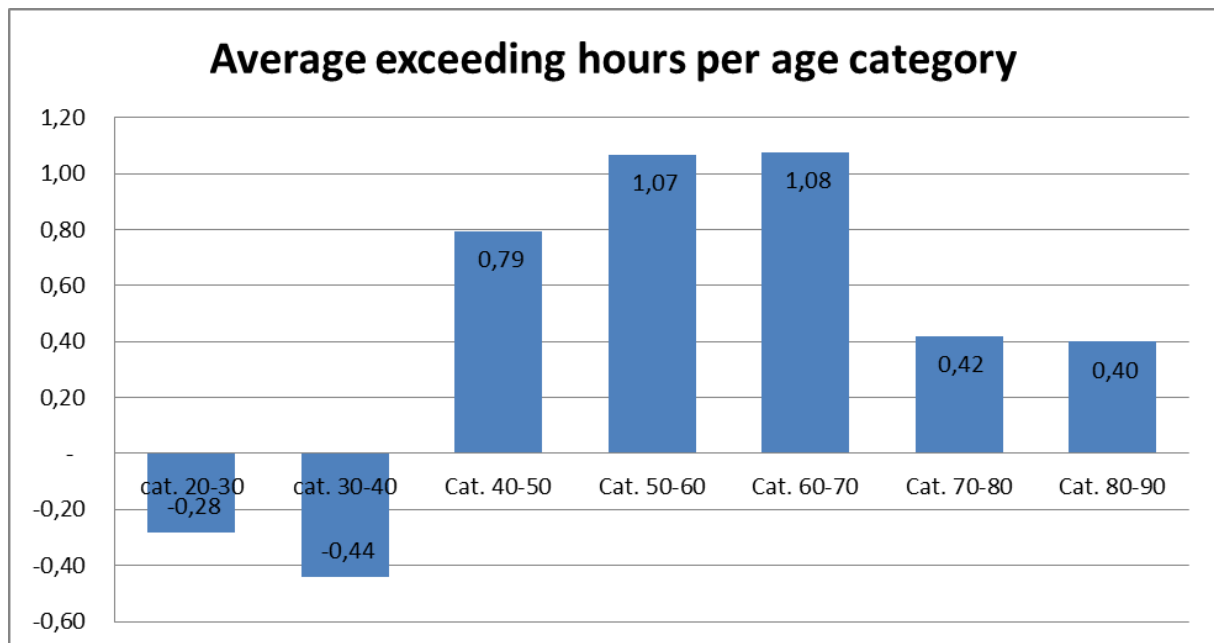


Figure 10: Average exceeding hours per age group

This graph chart shows that the two age categories that on average need the most extra health care per patient per day on top of their AWBZ package are the age categories 50-60 and 60-70. The Kruskal-Wallis test was used to examine whether the differences as shown in the figure (12) below are statistically significant. On the basis of this test we can conclude that there are differences between the seven age categories (Chi-square=160,54, df=5, p-value<0.0001).

Gender

Another patient characteristic that might explain the extra hours needed per patient on top of their AWBZ package is gender.

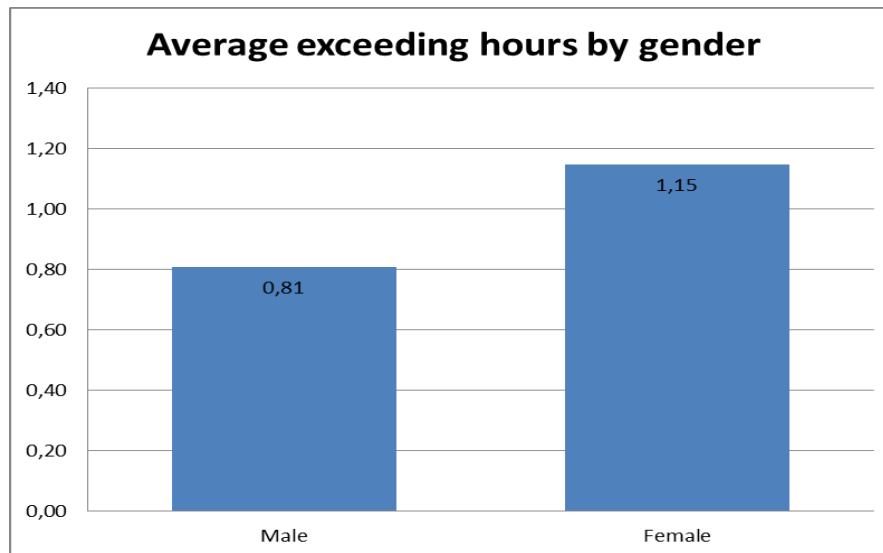


Figure 11: Average exceeding hours per gender

The overall usage of extra hours concerning men was 5.014,77. Females needed less extra hours in total (432.55 hours). The figure (11) above shows that females need on average 1,15 hours per day per patient more than the AWBZ package reimburses. The males need 0.81 hours per patient per day more. However, the Mann-Whitney test showed that the differences between males and females was not significant (Wilcoxon $W=519366.5$, $P\text{-value}=0,06$).

Addiction

As argued in the paragraph above concerning the patient characteristics, the addiction and the behavioural problems associated with an addiction frustrate the care process. In this sub paragraph the effect of addiction on extra health care use is analysed. The total number of patient days per addiction category is compared with the total number of extra hours needed per patient. The Kruskal-Wallis test was used to examine whether the differences as shown in the figure (12) below are statistically significant. On the basis of this test we can conclude that there are differences between the four categories (Chi-square=65.4, $df=4$, $p\text{-value}<0.0001$).

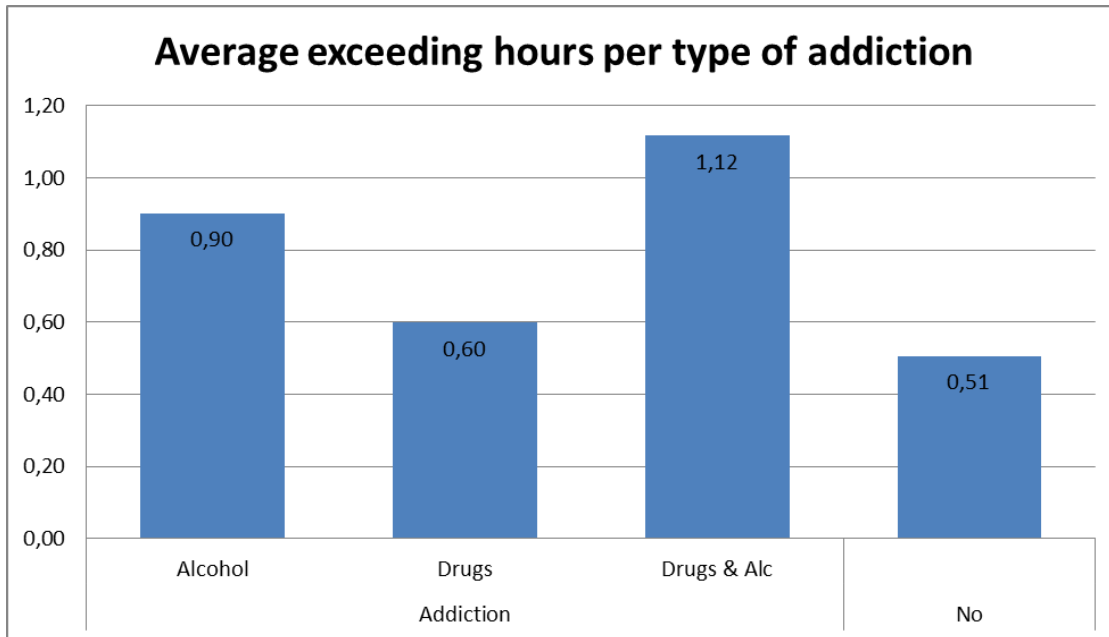


Figure 12: Average exceeding hours per type of addiction

Package applicant

Another explanatory factor is the applicant of the AWBZ package. The applicant could influence the kind of package given to the patient. The different applicants and their effect on extra health care use are shown in the figure (13) below. From a number of packages it was unknown who were the applicants. The Kruskal-Wallis test was used to examine whether the differences as shown in the figure (13) below are statistically significant. On the basis of this test we can conclude that there are differences between the five categories (Chi-square=36.421, df=5, p-value<0,0001).

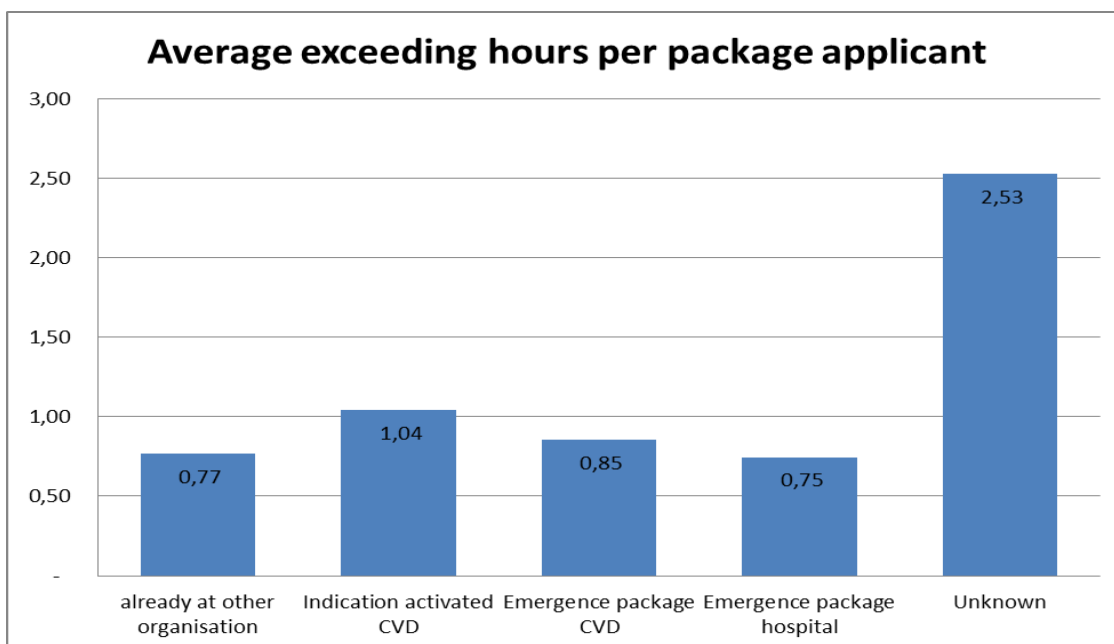


Figure 13: Average exceeding hours per package applicant

It was also analysed if there was a difference in effect when the patient already had an indication at the CVD. As argued in the introduction, the CVD is mainly a mental health care institution. As a result the main packages of the persons who already had an indication in another CVD shelter were GGZ indications. The persons that were already treated by the CVD were grouped and compared to the persons who had a different applicant. The Mann-Whitney test showed that the differences shown in the bar-graph are significant (Wilcoxon $W=68810.5$, $P=0,002$).

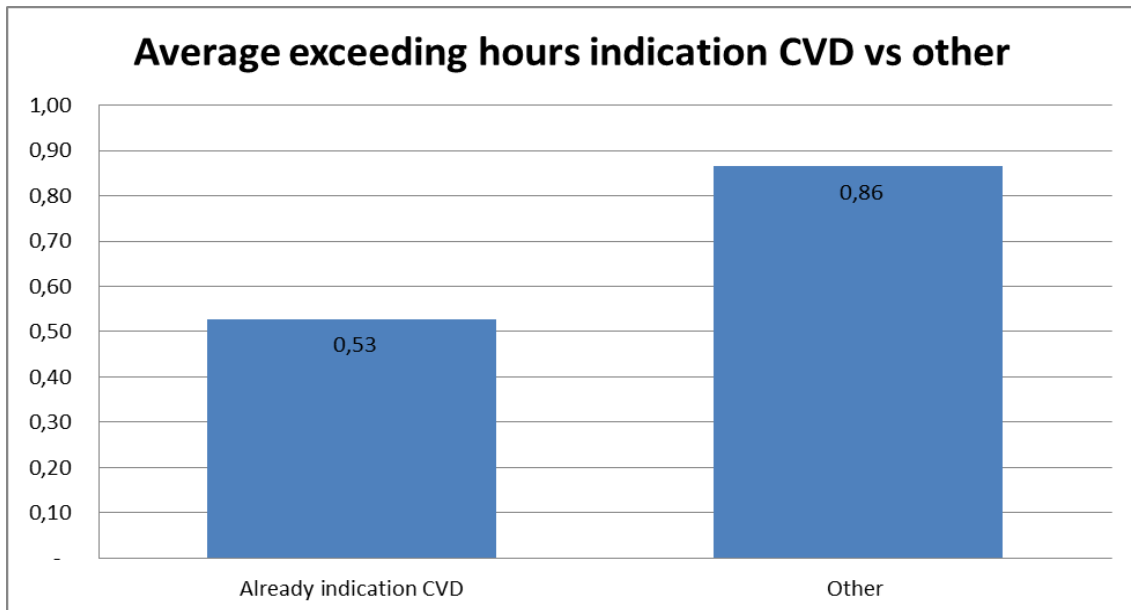


Figure 14: Average exceeding hours indication CVD vs other

Ethnic background

The ethnic background is known to explain social economic differences in society. It might explain the extra use of health care on top of their indication as well. The effect of the ethnic backgrounds is shown in the figure below.

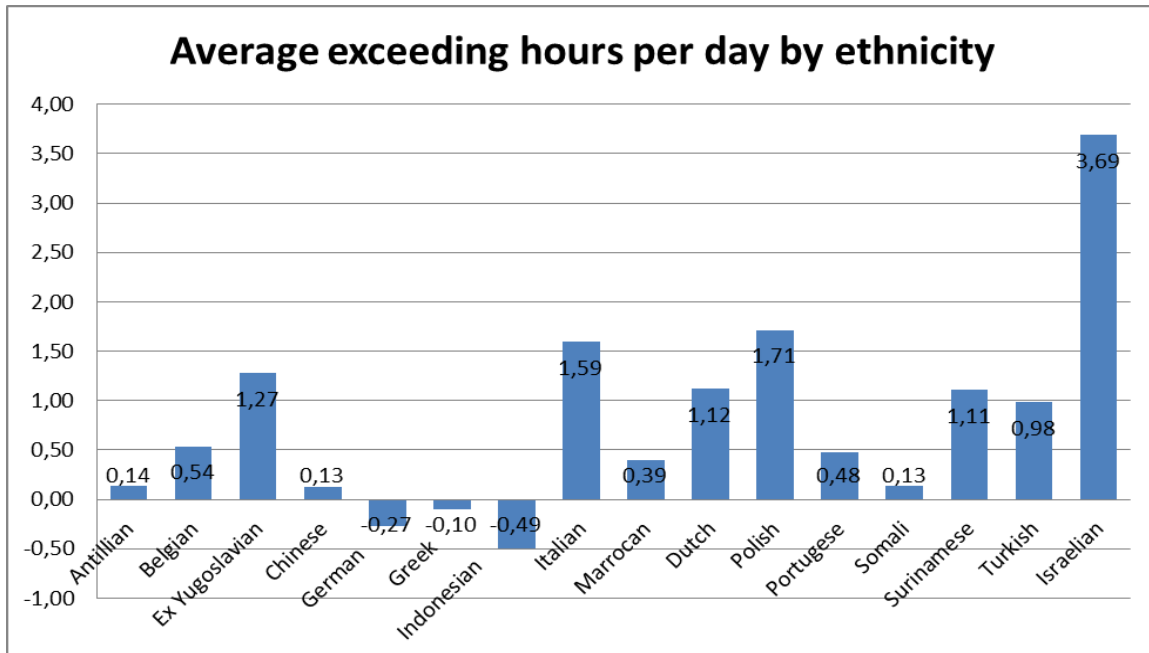


Figure 15: Average exceeding hours per day by ethnicity

Because a relatively small number of patients was analysed, it is difficult to analyse the effect of ethnic background. Although it seems that Israeliian patients need more hours per patient per day, there was only one Israeliian patient admitted in 2011 who didn't have an indication for 29 days. This influences the match between provided and reimbursed care significantly. In an attempt to overcome this problem, the ethnic backgrounds were grouped in Dutch, western and non-western patients. The result of this analyses is shown in the figure below. The Kruskal-Wallis test was used to examine whether the differences as shown in the figure (16) below are statistically significant. On the basis of this test we can conclude that there are differences between the three categories (Chi-square=70.32, df=2, $p < 0,0001$).

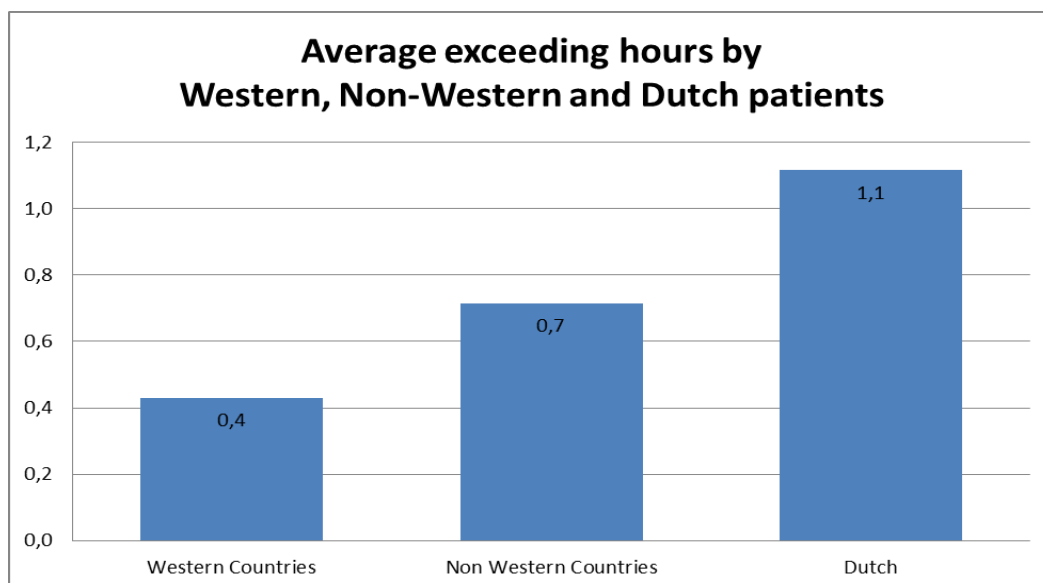


Figure 16: Average exceeding hours by western, non-western and Dutch patients

4.4 Analysis of reimbursement vs. production

In order to analyze whether the reimbursements that Havenzicht receives are sufficient to cover the cost concerned with the exploitation of the nursing ward, the amount of provided hours has to be determined. This was calculated using two different methods. The first is based on the salaried hours and the second is based on the nursing plan. First however, the overall cost of the nursing ward are calculated.

Cost

The cost concerned with the nursing ward can be divided into several categories. In the table below the different categories with their costs are shown for 2011.

Category	Costs
Personnel cost	€ 923.134,12
Housing costs	€ 200.930,40
Organisational costs	€ 36.072,29
Care costs	€ 114.590,48
Overhead	€ 203.956,37
Total	€ 1.478.683,66

Table 3: Overview cost Havenzicht per category

Personnel costs

As the table above shows, the largest category cost are the personnel cost. A total of 14 nurses were employed by Havenzicht in 2011, with a combined full time equivalent total of 10.1. Overall in 2011, 14.307,50 hours were worked by nurses. The net hours available per year per employee after deduction of inter alia holidays and the average absenteeism, are estimated to be 1412 hours. The calculation of the net productive hours is included in appendix 5. The cost of a full time equivalent were:

$$571.621,90 \text{ (total cost nurses in 2011)} / 10,1 \text{ fte} = € 56.413,08 \text{ per fte}$$

Next to the nursing personnel, there are a few other employees that work part of their time in the service of the nursing ward. These are the indirect personnel cost. In the appendix (6) an overview is given concerning the different functions as well as the average percentage of time that they spent for the nursing ward according to the manager of Havenzicht.

The total personnel cost are the nursing personnel cost and the indirect personnel cost (€301.771,32) combined, which is 923.134,12 euro.

Housing costs

The housing costs are allocated between the night shelter and the nursing ward based on the time used per department. The night shelter is open from 16:00 to 8:00, which is in total 16 hours or 66,66% of the time per day. The nursing ward on the other hand is open 24 hours a day, or 100% of the time. Because the surface of both departments is equal, the total cost (€ 334.884,00) are allocated by usage of the building per day. This results in the following table.

	Usage	Housing costs
Night Shelter	2/3 day	€ 133.953,60
Nursing ward	3/3 day	€ 200.930,40

Table 4: Division housing cost

Organisational costs

The biggest share of organisational costs are related to the computers used by Havenzicht (€18.000). Other cost concern inter alia office supplies, telephone costs, subscriptions, the accountant verification, bank charges and the sector specific and employer expenses. In total the organisational costs are 36.072,29 euro.

Care costs

Next to the personnel costs, a few other cost are made when providing care to patients. The cost for nutrition are 73.657,03 euro, the cost concerning laundry 24.760,45 euro.

Additionally other cost are made concerning toiletries, patient transport costs, pharmaceuticals, not insurable care and finally costs concerning the general practitioner (€16.173,00). The total amount of care costs is 114.590,48 euro.

Overhead

The final cost category is the overhead costs. The overhead costs for Havenzicht are allocated using the allocation percentage adopted in the CVD policy, which is 16% of the total costs.

Cost per fte

Considering the above, several cost calculations can be conducted. The cost per fte of nursing personnel and shelter attendants can be obtained by dividing the overall cost of nurses by the amount of fte's available. This however, does not take into account the other

costs (overhead, housing, organizational- and care costs and the cost of other personnel). In order to include these a loading fee (2.29) is calculated by dividing the total cost to the costs associated with nursing personnel. The all in cost per fte are:

$$€56.532,39 \text{ (cost per fte)} \times 2,29 \text{ (expense loading amount)} = €129.984,50 \text{ all in cost per fte}$$

Cost per hour

In order to get the cost per hour the all in cost price per fte has to be divided by the net productive hours per fte, which results in €92,06 per hour.

Overview costs versus reimbursements

The above calculated costs can be compared to the overall reimbursements.

Reimbursement type		Costs	
AWBZ	€ 1.029.430,86	Nursing ward	€ 1.478.683,66
Subsidy municipality	€ 379.171,00		
Total	€ 1.408.601,86		€ 1.478.683,66

Table 5: Reimbursement versus cost

Because the cost are higher than the reimbursements, a shortage is shown of 67.850,18 euro.

Method salaried hours

The combined fte's of all the nursing and the shelter attendants that worked in the service of Havenzicht was 11,89 fte. This result in 16.788,68 net productive hours in 2011. When the net productive hours are compared to the reimbursed amount of hours, 3024,94 hours are identified that were not reimbursed. Using the cost per hour that was calculated above, this would result in a shortage of 278.475,98 euro.

Results nursing plan

Because in total 18.753,12 hours were provided against a cost price per hour of 92,06 euro, the total cost in 2011 were €1.726.412,62. Since the overall reimbursement stays the same, a financial gap is shown of 317.810,76 euro.

5. Discussion

In this paper it is studied whether the Dutch health care system is sufficient to foresee in medical necessary health care for homeless persons. Although the overall accessibility of health care is divided into several forms of accessibility, this study focuses on financial accessibility of health care for homeless persons. The assumption is that when the financial reimbursement for health care concerning homeless persons is sufficient, the health care will be available and accessible for homeless persons. When there is no (sufficient) financial reimbursement, the health care won't be accessible for homeless persons as a result of their financial problems.

The analyses conducted in this study are based on the homeless shelter Havenzicht in the municipality of Rotterdam which provides intramural health care to homeless persons in their nursing ward. An important characteristic of Havenzicht is that there is a very low threshold to enter the nursing ward. Havenzicht has no access restrictions concerning the persons that show up at Havenzicht and the care process is often started before it is clear how Havenzicht will be reimbursed.

Homeless persons have despite their substantially higher rates of illness often difficulties accessing effective health services (Turnbull et al, 2007). A significant group of the ill homeless persons are dependent on the care provided by institutions like Havenzicht since they don't fit in the regular health care settings as a result of their multiple (health) problems (Seiler & Moss, 2012 & Riley et al, 2003 & Moore et al, 2011). Additionally, they are known to avoid care (Ogden et al, 2011 & Flick et al, 2007). By focusing on the care provided in the nursing ward of Havenzicht we can explore the limitations that emerge in practice when treating one of the most vulnerable groups of the society. Many of these limitations are shown when the provided and reimbursed care for homeless persons are analyzed. The study design (case study) had the advantage that a depth investigation on patient level was possible. A depth investigation is required when analyzing whether the reimbursement is sufficient to cover the cost of providing medical necessary health care for homeless persons in practice, as well as to analyze what causes the reimbursement to be insufficient. Using a case study, the limitations concerning the provision of health care to homeless persons in practice are shown and the specific causes of these limitations can be explored. Although it is difficult to establish causal relationships and to draw conclusions concerning the sufficiency of financial coverage in the whole Dutch health care system by studying the care provided by only one institution, a case study does provide a good insight in the (financial) limitations experienced as well as its causes when providing health care to homeless persons.

Analysis provided care

The care that is provided by Havenzicht in 2011 was analyzed retrospectively on patient level, by analyzing the weekly nursing plans. Because there are standard activities as well that take place independent of the patient's indication, the nursing personnel was interviewed in addition to the analysis of the nursing plans. In this way all provided care could be identified. The provided care was compared to the indication of the concerning patient in order to determine whether the package was sufficient. This method however has several weaknesses and shortfalls. Firstly, it is difficult to determine what care is provided in the past. The time attached to the activities could either be too much, or the activities recorded in the plan didn't take place at all. Secondly, the amount of time associated with the activities that were identified using interviews could be estimated falsely. It is also possible that not all activities are identified.

However, the nursing plans were drafted before it was known that these plans were going to be used in this study. They were originally drafted to have a weekly overview of activities. Additionally, the attached times to the activities in the nursing plan are checked with the standard time per activity determined by the Ministry of Health. For the activities concerning taking temperature, blood pressure, heart-beat and saturation a correction was made in consultation with the care coordinator and the manager of Havenzicht. The attached time recorded in the nursing plan was more than it in reality takes up and was therefore reduced to the actual amount of time identified in consultation with the nurses.

Analysis reimbursement versus production

Despite the assumptions and weaknesses of this study, a good insight was gained concerning the question whether the financial reimbursements is sufficient to foresee in necessary health care for homeless persons. After dividing the cost between the nursing ward and the night shelter using different keys (chapter 4), the overall cost concerning the nursing ward were analyzed. When we compare the overall cost (€ 1.478.683,66) with the overall reimbursement (€ 1.408.601,86) a shortage is shown of € 67.850,18 in 2011. This difference is in the current budget of Havenzicht hidden since some cost of the nursing ward are placed under the night shelter. This difference is however based on the comparison of the cost and the current standard reimbursement, while this study analyses the overall provided hours of care in order to be able to conclude on the sufficiency of the current reimbursement system.

The overall financial gap was further analysed using the nursing plan. Overall, a total of 18.753,12 hours were provided in the nursing ward. Using the cost price per hour of provided

care, this results in a financial gap of € 317.810,76 compared to the reimbursed amount in 2011.

The analysis of the salary administration was subsequently used to check whether the hours identified using the nursing plan are a realistic amount. The analysis of the salary administration also showed that a significant amount of hours are not reimbursed for. A total of 3024,94 hours are identified, which results in a financial gap of 278.475,98 euro. Although this concerns a different approach than the nursing plan, both methods show a similar amount of hours without reimbursement. Therefore, the assumption that the recorded hours in the nursing plan are consistent with reality is legitimate.

The nursing plan thus identifies a larger financial gap than the method using the salary administration. This difference is explained by the different amount of full time equivalent that is at the base of the methods. While the salary administration identified 11,89 fte that worked in the service of the nursing ward, the overall cost of the nursing ward assumed 11,38 fte. The difference of 0,51 fte explains the difference between the financial gap calculated using the salary method and the nursing plan. However, it does not explain the difference concerning the financial gap (€ 67.850,18) that was identified by comparing the overall cost to the overall reimbursement.

This financial gap can be explained by the larger amount of hours that is identified using the nursing plan. Because the nursing plan activities are independent of the indications, every provided hour is identified. Although many (health) problems are interrelated and cannot be seen separately, one could argue that some of the performed activities are not really nursing activities. The nursing personnel however has a good window of opportunity to help homeless patients on multiple levels as a result of the close relationship they develop with the patients. The study of Wallsten (1992) recognizes that nurses are in a key position to '...assess the needs [of homeless persons], match them to services, start them on the road to recovery, and become their advocates'. Because the different problems of homeless persons are interrelated, and most somatic health care problems are a result of their lifestyle, behaviour and their ability to take care of themselves, you have to address problems on other grounds than the somatic ground as well in order to improve their somatic problems in the short and the long term.

The hours of care provided when there wasn't an indication (yet) are taken into account using the nursing plan, as well as extra hours provided on top of the available hours concerning the indication. Although the provision of these hours results in cost, they are not reimbursed. Since the overall reimbursement stays the same, the difference between reimbursed hours and provided hours will increase resulting in a larger financial gap.

Although the total amount of provided hours should in principle not be more than the available net productive hours concerning nursing personnel and shelter attendants, a difference of 1964,44 hours was identified using the nursing plan. Most of these extra hours can be explained by the work of the night shelter personnel. They take up part of the supporting tasks, as well as the monitoring and correction of patients. In an interview with a night shelter attendant, it became clear that the personnel of the night shelter spends an estimated average of 5 hours per day to assist patients from the nursing ward on multiple areas. The night shelter personnel thus takes on work which is not included in the salary based calculation of the total amount of net productive hours in 2011.

Another explanation concerns the assumptions associated with the amount of net productive hours. The calculation of net productive hours assumes a certain sick leave, a certain amount of training hours a year and implicitly, a certain work ethic. This might be different for the employees at the nursing ward. The difficult situation that the homeless persons are in and the bond that the employees have with these persons might explain why they produce more productive hours compared to other CVD employees. The type of work requires people that are very motivated to help these homeless persons, even if this is more than the patient is reimbursed for. This might result in an investment of extra hours by the employees, which is confirmed in the interviews with the nursing personnel.

Considering the above the identified hours using the nursing plan can be considered to be a realistic amount. The difference between the reimbursed amount and the provided amount of hours thus results in a financial gap of 317.810,76 euro. However, the overall reimbursements Havenzicht received also entails a significant subsidy from the municipality of Rotterdam. Since this subsidy is not part of the health care system and this study analyses the sufficiency of the Dutch health care system, this subsidy should not be taken into account. The actual financial gap is therefore 696.981,76 euro. A significant amount is thus not reimbursed for by the AWBZ packages.

The municipality of Rotterdam acknowledges the problems associated with providing health care to homeless persons as well as the limited financial reimbursement that can be obtained. Because the municipality finds the low profile nursing ward an important facility in the region, they finance part of the difference between the reimbursement that Havenzicht is able to obtain and their costs. The only precondition the municipality sets is an occupation degree of 95% (personal communication Rotterdam municipality health service, 2012). However, when the municipality in the future sets different priorities, the future of the nursing ward is uncertain considering the limited contemporary health care reimbursements.

In order to express the amount of hours not reimbursed by the health care system in monetary terms, the cost price per hour of provided care was used. The cost price per hour enables us to calculate what reimbursement Havenzicht should have received in order to cover the cost for running their nursing ward. Because the shelter attendants contribute significantly to the care process of the patients in Havenzicht, their contribution is included in the calculation of the cost price (€ 92,06) per hour of care.

As a result of the limited financial means that Havenzicht receives, there are no cost centers included in the calculation of the cost that are not strictly necessary. The fact that Havenzicht has a significant financial gap despite their low costs, strengthens the conclusion that the financial reimbursement is insufficient.

As a result of the fact that the calculation of the cost price per hour didn't take into account that the night shelter personnel takes up part of the activities in the nursing ward, the actual cost price per hour is likely to be a little reduced. The salaries of the night shelter personnel are less than the nursing personnel. However, since they contribute a relative small amount of hours, the reduction will be small and will not influence the financial gap significantly.

The final note concerning the financial gap concerns the reimbursement for internal admissions. When someone who stays at one of the other shelters of the CVD has to be admitted temporarily to the nursing ward, the patient occupies two beds while the CVD is reimbursed only once. When the patient would be admitted to a different health care provider, the CVD would be reimbursed to reserve the patient's place in the concerning shelter. As a result of the problems associated with homeless persons, it is however often not possible to go to another health care provider. The overall financial gap for the CVD is thus increased by internal admissions.

Extra hours explained

In order to identify why extra hours of care are necessary on top of the reimbursed amount, the hours of care are analysed on patient level. It is assumed that the assigned care intensity package is conform the somatic health condition. This means that extra hours of care are explained by the characteristics of the homeless persons other than his health status.

Although the small number of patients analysed in this study makes it difficult to conclude whether the characteristics have a significant effect, and the days without reimbursement distort the picture concerning the adequacy of the packages a little, the analyses does provide a good insight in what characteristics are important explanatory factors.

The analyses of the extra health care use by age category showed that homeless persons between the ages 20 and 40 actually need less health care than their AWBZ package offers.

And between the ages 40 and 70, significantly more care is needed than the care package reimburses. This is conform the study of Whang (2000) in which it was identified that homeless persons have many more health problems at earlier ages compared to others. Although you may expect that the highest age categories will need the most extra health care on top of their package, this is not the case. This can be explained by the kind of packages that patients in the high age category have. Eight of the 18 persons in the two highest age categories (70-90 years) have the largest VV package (10VV). This packages reimburses by far the most hours of care. Additionally, it was identified that the 10VV package doesn't need a lot of extra hours on top of the reimbursed amount. Thus, the packages in the highest age categories are more adequate concerning the health care demand.

Gender seemed to have an effect on health care use as well. Females seem to need more health care than males, 1,15 versus 0,81 extra hours per day on top of their assigned package. However, this difference was not significant (Wilcoxon $W=519366.5$, $P\text{-value}=0,06$).

A characteristic that has a large impact on health care use is substance abuse. Patients with an addiction of alcohol and drugs at the same time, needed on average the most extra health care on top of their health care package (1,12 extra hours per day). Alcohol had the second largest effect (0,90 extra hours per day). The Kruskal-Wallis test was used to conclude that there is a difference between the four categories (Chi-square=65.4, $df=4$, $p\text{-value}<0.0001$). The identified effect of alcohol on health care use is larger than the effect of drugs (0,60 extra hours per day). This is conform the expectations of the nursing personnel. Alcoholic patients always cause problems when they use alcohol, while patients who are addicted to drugs only occasionally cause problems. Patients that are high on drugs often withdraw, while alcohol users create a fuss (Personal communication nurse, 2012).

The package applicant influences the health care use as well. The Kruskal-Wallis test was used to conclude that there is a difference between the five categories (Chi-square=36.421, $df=5$, $p\text{-value}<0,0001$). When the indication was activated by the CVD it needed the highest additional hours per patient day (1,04 extra hours per day). Some homeless persons turn up at health care facilities on a regular base and have an indication for a longer period. Every time these patients are dismissed from the nursing ward (or when they left themselves), they go back to the street and continue their bad lifestyle. Their health situation improved temporarily, but problems in other areas such as their addiction or financial problems are not taken care for. Since these patients turn up regularly, the CIZ has given them an indication for a long period which can be activated when the patient turns up at a health care facility. The patients with such a long term indication are often patients with a very poor health and

many other severe problems.

The second type that had the most effect on extra use of health care was the emergency indication requested by the CVD (0,85 extra hours per day). When an emergency indication is requested, only little is known concerning the (health) problems of the patient. As a result of the lack of information concerning the patient, the match with the indication is less adequate. Although the indication is already applied for and the care process is started, the complete scope of the problems will only show itself after some time. Naturally, a lot of time has to be invested when the patient enters the nursing ward in order to find out what the scope of problems is.

When the indications were requested by other health care facilities, they were most likely more adequate since less extra hours of care were necessary on top of their assigned package. The indications might be a better match because the other health care facility already knew the patient and his (health) problems.

Although you would expect that the patient who already had an indication would need more extra hours of care as a result of their GGZ package which is not designed for a nursing ward, this seems not the case (0,53 extra hours per day). The Mann-Whitney test showed that there is a significant difference (Wilcoxon $W=68810.5$, $P=0,002$). This difference can be explained by the fact that the patient is already known at the CVD. Since their rituals, behavioural problems, as well as their health problems are better known, the nursing personnel can take care of these patients more effectively. Additionally, the personnel of other CVD departments will timely intervene when the health of one of their patients deteriorates. When these patients are referred to the nursing ward of Havenzicht, the health problems might not yet be developed into a combination of severe somatic health problems.

The final characteristic that was analysed concerned ethnic background. It is difficult to conclude on the effect of the ethnic background since the number of patients per background is very small. In order to overcome this problem, the ethnic backgrounds were combined to Dutch, western and non-western countries. On the basis of the Kruskal-Wallis test we can conclude that there are differences between the three categories (Chi-square=70.32, $df=2$, $p<0,0001$). Against the expectations, the analysis identified that Dutch patients seem to need more extra hours of care on top of their indication. Patients with a non-western ethnic background seem to need more extra hours than western patients when Dutch patients are not included.

Although the above mentioned characteristics influence the amount of time needed to provide care, there is no single characteristic or (health) problem that explains why homeless patients need relatively more hours of care. On the contrary, the extra time necessary is

explained by the complex interrelated (health) problems that are associated with homeless persons (Van Laere et al, 2009 & Wood, 1992). Since an integral care package which takes the combination of severe somatic and psychological problems into account is not available, the health care packages and their associated reimbursements don't fit properly.

Concluding remarks

Overall it can be concluded that the contemporary health care system doesn't take into account a complex mix of problems such as associated with homeless persons. This was shown in several other studies as well. In the study of Seiler & Moss (2012) it was stated that mainstream providers of care may not be prepared for the provision of health care to homeless persons. 'Changes have to be made in the current health care system in order to meet the unique needs of [homeless persons]' (Seiler & Moss, 2012). Another study emphasized an integral policy approach concerning health care for homeless persons in order to effectively address their multiple problems (Riley et al, 2003). Moore et al (2011) identified the 'complex and diverse nature of health concerns in homeless persons' and states that homeless persons are hindered in their health care use by 'barriers directly related to the organization of care' (Moore et al, 2011).

The division in the current Dutch health care reimbursement policy between psychological and somatic health care problems makes that the system is not sufficient when there is a combination of multiple (health) problems. Although the overall system is made relatively flexible since a range of hours is used in which the health care for a certain type of patient should be provided as well as a patient profile, the system has a few shortfalls. It doesn't take the full scope of problems of a person into account although different problems are often interrelated. Especially psychosocial problems are insufficiently taken into account, although they can have a major impact on health. Additionally, psychosocial problems are the reason some patients have to be treated intramural for a health problem for which other persons are treated at home. Because homeless persons are not capable of taking care of themselves, they will have to be treated intramural in order to provide necessary medical care such as defined by the Dutch commission Klazinga. This commission defined necessary medical care as 'responsible and appropriate health care that is effective and efficient, is patient oriented and suits the actual needs of the patient' (Pharos, 2007). The current rules and regulations don't create the right conditions in order to be able to provide necessary care to homeless persons.

Additionally, the system doesn't take into account the possibility that care is provided mainly to challenging patients. The system provides the option to divide hours between patients in order to absorb the extra hours used concerning challenging patients. However, when there

are only challenging patients such as in Havenzicht, that is not an option. The current rules and regulations don't offer the possibility to receive extra reimbursements concerning these challenging patients. The system also doesn't take into account that patients are only admitted intramural for a short period in which they need intensive care and support. As soon as some patients are better, they will leave the nursing ward. Therefore there is no longer period in which the peak in care provision can be absorbed by the range of hours of the care package. The care avoiding patients that will leave the care department as soon as possible are thus not taken into account by the reimbursement system.

Considering the above, as well as the financial gap identified (€ 696.981,76) it can be concluded that the financial reimbursement in the contemporary health care system is insufficient to foresee in the medical necessary health care for the challenging homeless persons. Without the extra reimbursement by the municipality of Rotterdam, Havenzicht would not be able to run the nursing ward.

The complex interrelated problems of homeless persons that are identified in this study, require a different filling in of the health care system, especially concerning financial reimbursement. The current rules and regulations don't take the possibility of a complex mix of problems such as associated with homeless persons sufficiently into account .

Although the overall intention of the Dutch health care system is to provide good health care for everyone ((Grondwet voor het Koninkrijk der Nederlanden, 1983), the effects of the rules and regulations make providing of good health care difficult. According to the international and domestic law concerning health and health care the government must provide timely and appropriate health care for homeless persons which is of the same quality as for others in society (UN CESR, 2000). The financial gap identified in this case study concerning reimbursement of health care to homeless persons however, makes the provision of good quality health care difficult. The insufficient reimbursement might influence the quality, the availability and the accessibility of health care for this vulnerable group. The financial reimbursement is namely an important precondition concerning accessible and available health care for homeless persons since they have no financial means or options to receive care in another way. As a result of the financial gap shown in Havenzicht (€ 696.981,76), less personnel is employed in the nursing ward than actually necessary considering the challenging patients. At the very least, this will influence the quality of the care. It is also likely that the availability of health care adjusted to the challenges of homeless persons is limited since the reimbursement for this target group is insufficient to cover the cost associated with providing this care. Although organizations such as Havenzicht are identified to result in a reduction of societal costs (Cebeon, 2007), the contemporary health care policy doesn't encourage provision of care to this target group. As a result there are not many low profile

nursing wards, who don't have restrictions concerning access next to Havenzicht. This is a shortcoming of the current health care system since homeless persons are identified with many interrelated health problems and at the same time are often not welcome in regular health care settings.

Unfortunately, the policy developments are not encouraging as well. The increase of the own contribution and the separating of housing and care will create an extra threshold to receive care which will result in a reduction of the accessibility of care. The accessibility of care for homeless persons will be reduced since they have little financial means, and set different priorities with these little financial means.

The announced extramuralisation of care packages and emphasis on informal carers will additionally decrease the availability of care. Some care packages will not be provided intramural any more. Instead, the care will be provided at home or at an assisted living accommodation. Most homeless patients are however not capable of taking care of themselves at all and will additionally as a result of their financial debts, not be taken into consideration for housing benefits. These developments will reduce the financial accessibility and it will be even harder for homeless persons to receive health care.

6. Conclusion & Advice

In this chapter the main question will be answered: *Is financial coverage in the contemporary health care system in the Netherlands sufficient to foresee in medical necessary health care for homeless persons and how will contemporary policy developments that impact homeless persons affect this?* Additionally, advice will be formulated concerning the national policy, as well as the local policy of the government concerning care for homeless persons.

6.1 Conclusion

In this study an analysis was conducted concerning the financial limitations of health care provision to homeless persons in the Netherlands, by analyzing the health care provision and reimbursement in a low profile nursing ward for homeless persons. Since homeless persons haven't got financial means themselves, the financial reimbursements provided in the health care system determine the financial accessibility of health care for them. The comparison of the identified provided hours of care and its associated costs with the standard health care reimbursement over the year 2011 in Havenzicht, shows a financial gap of 696.981,76 euro.

Although the intention of the overall health care system is providing quality health care to everyone without discrimination, the current rules and regulations of the system have a different outcome for homeless persons. Especially the division concerning health care reimbursement in somatic health problems, mental health problems and problems concerning handicaps makes that the reimbursement is not sufficient to cover the cost when a patient has multiple severe problems. This is problematic since the homeless persons admitted to the nursing ward of Havenzicht, are identified to have a complex mixture of interrelated problems concerning different areas. On top of their somatic and psychological problems, they are often addicted to one or multiple substances, are known to avoid care and have large financial problems. Additionally they have (developed) maladjusted behavior and behavioral problems in general. Because these problems are interrelated, they intensify each other, which makes it impossible to approach these problems separately. The combination of the problems associated with homeless persons therefore makes the regular health care settings and the current reimbursements unsuited for the care concerning homeless persons.

Additionally, the system doesn't take into account the possibility that care is provided mainly to challenging patients. The system also doesn't take into account that patients are only admitted intramural for a short period in which intensive care and support is needed. As soon as some patients are better, they will leave the nursing ward. If care is only provided to challenging patients for a short period, there is no possibility to absorb the peak in care

provision by the range of hours of the care package over a longer period or over multiple patients.

Based on the financial gap identified in the case study and the shortcomings of the health care policy that explain this gap, it can be concluded that the current financial coverage in the Dutch health care system is insufficient to foresee in medical necessary care for homeless persons in the intramural setting. Since the accessibility and availability of care for homeless persons is directly influenced by the financial coverage of care, it can be concluded that the outcome of the current health care policy is not in line with the international law concerning the right to appropriate health care.

The future developments within the health care sector, especially the extramuralisation of care intensity packages and the increase of the own contribution will decrease the sufficiency even more.

6.2 Advice Dutch government

In order to provide equal access to good quality health care for homeless persons, the rules and regulations concerning health care reimbursement should be improved. Not only are the homeless persons entitled to the same quality of health care as other citizens, an investment in health care concerning homeless persons is associated with a significant reduction in societal costs as well (Cebeon, 2007).

Overall, the health care policy should be better adjusted to the health care demand of homeless persons. The standard reimbursements for intramural care are not sufficient to foresee in the necessary care for homeless persons. Although you could argue that not all the problems associated with homeless persons should be incorporated in the reimbursement policy, the nursing personnel often has a window of opportunity to address these problems (Wallsten, 1992). Since the (health) problems of homeless persons are interrelated, more than just the somatic or psychological health problem should be addressed to affect health on the long term. Although it is a good thing when the local government supports the health care providers (financially) when dealing with homeless persons, this is not a long-term solution yet. The support given to Havenzicht is non-committal while Havenzicht could not operate without the subsidy of the municipality. Either the role of the local government should be formalized, or the current reimbursement should be increased when it concerns care for homeless persons. The latter option is more in line with the intention of the current reimbursement policy since the introduction of care intensity packages aimed to reimburse health care according to the intensity of care of the patient population instead of capacity.

The reimbursement can be adjusted by either developing a care intensity package that incorporates the multiple problems associated with homeless persons, or by giving an additional fee on top of the assigned indication. Since the latter solution doesn't require a change in the reimbursement system and similar fees are used in the current system for health conditions that are identified to require extra hours of care (such as CVA and Huntington disease) it is likely to be preferred by policymakers over the development of a new care intensity package. Moreover, there is in the current system a fee designed for patients which need an extreme intensity of care as a result of behavioral problems. Because this fee is currently only meant for the handicap care sector, it should be made possible for the other sectors as well in order for it to be available when dealing with homeless persons.

However, until the reimbursements have been adjusted to the extent that they cover the cost associated with providing care to the challenging group of homeless persons, the local

government should financially support the organizations that provide care to this target group.

Another policy improvement concerns the approach of homelessness in general. In the contemporary policy in the Netherlands the problem homelessness is a local problem that is included in the Social Support Act (WMO) and should be handled by the municipality. The local approach is also shown in the social care project of the four large municipalities in which the homeless person have to demonstrate they have economic ties with the region they apply for help. Homelessness is however more a national problem (Pearson & Linz, 2011). The local approach where financial means depend on the region and the priorities of the municipalities, might have undesired effects on the accessibility of health care for homeless persons. Although for acute medical care homeless persons can go to a hospital, not every region has sufficient non-acute care facilities that are adapted to the problems associated with homeless persons. The regional approach might therefore result in distressing cases in regions where the availability and accessibility of health care is poor concerning homeless persons.

Finally, the recent policy developments that are identified to decrease the accessibility of care should take into account the vulnerable group of homeless persons. Where possible, the homeless persons should be excluded from own contributions, the separation of housing and care as well as the extramuralisation of care in order to make sure the availability and accessibility of care is sufficient for them.

7. Literature

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Appendix 1: Description care intensity packages

VV Packages	Description	Functions	Hours per week (NZa average)
1 VV	Sheltered housing with some guiding, aimed at those who need psychosocial support	Support and Personal hygiene	4,05
2VV	Sheltered housing with support and nursing, aimed at those with somatic health problems	Support, personal hygiene and nursing	6,66
3VV	Sheltered housing with support and intensive degree of care, substantive somatic health problems and psychosocial support	Support, personal hygiene and nursing	9,05
4VV	Sheltered housing with intensive degree of support and care, psychogeriatric or somatic condition	Support, personal hygiene and nursing	11,03
5VV	Sheltered housing with intensive degree of dementia care, psychogeriatric condition	Support, personal hygiene and nursing	16,77
6VV	Sheltered housing with intensive degree of care and nursing, severe somatic health problems	Support, personal hygiene and nursing	16,83
7VV	Sheltered housing with high degree of intensive care with emphasis on support, somatic health or psycho geriatric condition	Support, personal hygiene and nursing	20,62
8VV	Sheltered housing with high degree of intensive care, aimed at severe somatic health conditions	Support, personal hygiene and nursing	25,14
9VV	Treatment aimed at recovery with care and nursing	Support, personal hygiene and nursing	16,23
10VV	Sheltered housing with intensive palliative terminal care, terminal patients	Support, personal hygiene and nursing	27,81

Table 6: Description VV packages, source: ZZP's sector VV, CIZ (2010)

GGZ packages	Description	Functions	Hours per week (NZa average)
1GGZ	Sheltered housing with support, meant for passive psychiatric problems	Support and personal hygiene	7,69
2GGZ	Structured sheltered housing with intensive support, continuous support is necessary	Support and personal hygiene	12,11
3GGZ	Sheltered housing with intensive support, meant for those with substantive psychiatric problems	Support and personal hygiene	13,83
4GGZ	Structured sheltered housing with intensive support and care, meant for those with an active complex psychiatric condition with behavioural problems	Support, personal hygiene and nursing	16,69

5GGZ	Sheltered housing with intensive support and regulation of behaviour, meant for complex psychiatric condition with severe behavioural problems	Support, personal hygiene and nursing	18,23
6GGZ	Sheltered housing with intensive support, intensive care and nursing, meant for persons with a complex psychiatric condition or handicap in combination with a somatic condition	Support, personal hygiene and nursing	22,99

Table 7: Description GGZ packages, source: ZP's sector GGZ, CIZ (2010)

Appendix 2: Activities recorded in the nursing plan, associated time included

Support/ Guidance	Personal Hygiene	Nursing activities
Support physiotherapist (10 min)	Medication (15 min)	Temp/ blood pressure / pulse/ saturation (20 min)
Telephone contact (15 min)	Supplementary feeding (5 min)	Taking pain score (5 min)
Wake system (180 min)	Tube feeding (5 min)	Pain management (10 min)
Pedicure (35-45 min)	Fentanyl bandage (5 min)	Blood sugar (15 min)
	Transfer bed/ toilet/ chair (10 min)	Wound management (15 min)
	Put on stockings (15 min)	Weighing (15 min)
	Care concerning general daily activities (10 min gem, amount differs per client)	Haemoglobin values (15 min)
	Lubricating cream (15 min)	Compressive bandaging (15 min)
	Guiding concerning puffs (10 min)	Bladder rinse (20 min)
	Decubitus control (15 minutes)	Injection vitamins (15 min)
		UC test (15 min)
		Foot control mycosis
		Groin and scrotum treatment (15 min)
		Removing Afgraves (15 min)

Table 8: Activities recorded in the nursing plan

Appendix 3: Analysis of activities in addition to the nursing plan

The characteristics associated with homeless persons make that the health care provision is challenging and time consuming. In this section an analysis is made of the different activities that are performed in the nursing ward apart from the basic nursing activities shown in the nursing plan such as taking temperature and cleaning wounds.

Trust, education and self-help

As argued above, many homeless persons have severe trust issues. In order to be able to help these persons, the nursing personnel has to win their trust. This trust is essential because these patients will otherwise not cooperate at all and will even leave the department. Every contact moment with the patient is used to win their trust. The nurses try to cooperate with the lifestyle and rituals of the patient in order to build their trust relationship. This requires a great investment of time and effort from the nurses.

During the contacts with the patients, the nurses not only grab the opportunity to build trust, they also advise and educate the patients concerning their behaviour and life style. They try to improve their understanding of the consequences of their behaviour and lifestyle, and try to improve their ability to take care of themselves. This is a continuous process that cannot be seen separate from the care process as a whole. Because the different problems homeless persons have are interrelated, and most somatic health care problems are a result of their lifestyle, behaviour and their ability to take care of themselves, you have to improve problems on other grounds than the somatic ground in order to improve their somatic problems in the short and the long term. This can be illustrated by the example of a diabetic who doesn't take his insulin and will develop serious somatic problems and who can even get in a coma. The somatic problems can be prevented or improved by motivating and educating the patient to take his insulin at the right time. Unfortunately, one education session is not enough for these patients. They need endless repetition before they can do it themselves without being motivated by others. Some homeless persons will even never be able to do it themselves. Naturally, this example applies to other medication and other processes as well. The education and motivation in order to improve the degree of self-help of the homeless patients is a major time consuming activity of the nurses in Havenzicht. Additionally, the nurses try to implement structure in the life of these patients. These activities combined are estimated by the nurses to take up an average of an **hour and a half** per patient per week.

In order to get a patient to shower or to take part in the normal day and night rhythm, the nurses have to negotiate with the patients. Wheeling and dealing is necessary to motivate

the patient to take for example his medication. This is a time consuming and frustrating effort. It is however necessary to be able to provide the health care to these patients because the patients cannot be forced to receive care. An odd situation occurs in which the nurses try to tempt the patient to cooperate in the care for the patient himself. As argued before, the patients are not welcome in other health care organisations. Havenzicht is in reality for many patients their only option. If the patients leaves Havenzicht, it is very difficult for him to get the necessary health care somewhere else. The nurses are aware of this and therefore will try to tempt them to accept the care. They will try to get the best result despite their lifestyle, rituals and behavioural problems. It is the only way to provide health care to this target group.

Reporting and transmission

Another time consuming activity is the reporting and transmission of the nurses. Every day the nurses record on the patients status, the social and medical appointments are recorded for every patient as well. Because there are three shifts a day, there are three transmission moments per day in which the patients are discussed with nurses of the next shift. Additionally, once a week there is a three hour meeting in which every patient is extensively discussed. If a patients has to be admitted to the hospital or placement in a different setting, there is an additional transmission from a Havenzicht nurse to a nurse from the new setting which takes up an average of two hours. On average, the reporting, discussing and transmissions take up an estimated **half an hour** per patient per week.

Attendance and continuation plan

Next to the documentation in the patient status, there is documentation in the form of an attendance plan as well. In this plan the targets for the concerning patient are written down, as well as the rules of the nursing ward. The purpose of this plan is to have an overview of what targets per person should be met during the admission. When a patient doesn't cooperate or violates a rule, the attendance plan is used to point this out to the patient.

Part of the attendance plan is the development of a continuation route for the patients. The patients often haven't got anything to go back to once they get better. The nurses and the shelter attendance try to find a place where the patients can either live with some degree of support or a place where they can live on their own. This is done in consultation with the patient. If a place is found where the patient can go after their dismissal from the nursing ward, the patient is often supported during the intake. The attendance plan is also discussed in the weekly meeting where everything concerning the patients is discussed. All relevant changes are processed during the night shift. The time concerning the development of the attendance plan, the development of the continuation route combined is on average **15 minutes** per patient per week.

Management of situations and monitoring

Another time consuming activity concerns the management of situations. The maladjusted behaviour sometimes leads to problems such as aggression towards other patients or personnel. All Havenzicht employees try to manage the interactions as well as possible to prevent an outburst. When despite their effort problems occur, the Havenzicht personnel will have to act. They have to hear out the persons who were involved in the situation and report on the event. Additionally, the personnel who were involved or who have intervened in the situation needs to be cared for by colleagues. This can be time consuming, but it is difficult to quantify this activity. Therefore no time amount is attached to this activity.

The management of situations is a continuously activity which can be put under the general category 'monitoring of the patient'. Monitoring is also important concerning the observation of possible health problems the patients might have. Because the patients have been on the street for a long period and the health problems where concealed by their addiction, many health problems surface when the patients are in a stable environment which Havenzicht provides. The patients themselves are not aware of the health problems they have and even if they do, they have trouble explaining what problems they experience. By monitoring the patients their health status can be assessed and the nurses can intervene where necessary.

Accompany of patients

The personnel of Havenzicht has to accompany the patients to the intramural doctor visit as well as extramural visits to health care providers or other organisations. It is necessary to accompany them for several reasons. In the first place the patients are not able to explain their (health) problem themselves. They are also not able to process the information that they receive or pass on the information to the nurses in Havenzicht. Another very important reason is that the patients have to be restrained as much as possible. Their maladjusted behaviour in for example the waiting room of a doctor will lead to the situation in which they are banned from the hospital before they have been seen by anyone.

Since they haven't got family or friends because they destroyed their social environment, someone from Havenzicht has to accompany them. This is mostly done by a shelter attendant who spends an average of 20 hours a week to accompany patients from Havenzicht during extramural visits. These are mostly visits to other health care organisations, but can be other organisations as well such as the municipality, the health insurance organisation, the integration office and other social welfare organisations. Since there are 20 patients in the nursing ward, it takes up an average of **one hour** per patient per week.

The intramural visits to the street doctor take up some time as well. These visits are accompanied by nursing personnel. The nurses prepare these visits, work them out, request relevant medication, make appointments with other health care professionals when relevant, make sure that the doctors policy is communicated and implemented correctly. Sometimes the patients doesn't have to be seen by the doctor, then the patient is only discussed between the nurse and the doctor. Intramural visits are less time consuming than extramural visits, on average it takes up **half an hour** per patient per week.

Patient finances

Another problem concerning homeless persons is their financial situation. Because finances are interrelated to the health status of the patients, it is important to improve their financial problems as much as possible. An important reason most patients are homeless is because of their financial problems. The patients often have huge debts and problems with their health insurance. Sometimes they haven't got an insurance at all. The shelter attendants and the nursing personnel try to help with these financial problems in order to break with the vicious circle and get the life of the patients back on track. One might argue that a financial problem is not something that should be addressed in a nursing ward. This financial problem is however strongly interrelated with their other problems. If the patient is healthy enough to be dismissed from the nursing ward, it would be a shame if this patient would have to go back to the street. On the street the same health problems or more severe problems will develop in no time. In order to break through the vicious circle, other problem areas have to be dealt with as well. This activity takes up an average of **15 minutes** per patient per week.

The description above concerns the additional activities that take place every week for every patient, independent of the indication. The combined amount of the average time that the different activities represent is 4 hours. This amount should be added up to the time recorded in the nursing plan. The argued amount of 4 hours is in the opinion of the Havenzicht care coordinator A. van der Gevel a conservative estimate.

Appendix 4: Total amount of hours reimbursed per package in Havenzicht in 2011

Indication		Days		Hours per day	=	Hours per package
1 VV		365	X	0,58	=	211,18
2VV		121	X	0,95	=	115,12
3VV		278	X	1,29	=	359,41
4VV		872	X	1,58	=	1.374,02
6VV		1445	X	2,40	=	3.474,19
7VV		379	X	2,95	=	1.116,43
9VV		917	X	2,32	=	2.126,13
10VV		118	X	3,97	=	468,80
2GGZ		153	X	1,73	=	264,69
3GGZ		552	X	1,98	=	1.090,59
4GGZ		937	X	2,38	=	2.234,08
5GGZ		309	X	2,60	=	804,72
PV2		10		0,56	=	5,57
PV4		84		1,41	=	118,80
Total hours						13.763,74

Table 9: Amount of hours Havenzicht was reimbursed per package in 2011

Appendix 5: Calculation net productive hours per fte

<u>Total gross hours based on:</u>	1.872
- 365 days per year	
- 52,14 weeks per year (365/7)	
- 260,7 working days (5*52,14)	
Public Holidays (8 * 7,2 uur)	58
Vacation days/ hours (according to the CAO)	170
Senior leave (average age 44 years)	20
<u>Number of working hours</u>	1.624
Sickness hours (6,5% absenteeism)	106
<u>Present/ working hours</u>	1.519
Number of indirect hours (7%)	106
<u>Number of productive hours</u>	1.412

Appendix 6: Overview concerning the different functions and their average percentage of time spent for the nursing ward

Employee	Nursing dpt.	Night shelter	Wage p. person	Cost nursing dept.
Wardens (2,2 fte)	100%	0%	€ 41.500,76	€ 91.301,67
Kitchen employee	85%	15%	€ 35.000,00	€ 29.750,00
Team leader	50%	50%	€ 73.894,00	€ 36.947,00
Work supervisor	65%	35%	€ 60.916,00	€ 39.595,40
Care coordinator	75%	25%	€ 58.110,00	€ 43.582,50
Care administration	100%	0%	€ 38.619,00	€ 38.619,00
Shelter attendant 1	43,75%	56,25%	€48.941,00	€ 16.313,67
Shelter attendant 2	86,2%	13,8%	€ 60.901,00	€ 55.402,99
Total				€ 301.771,32

Table 10: Overview functions and percentage time spent for the nursing ward

Appendix 7 : Persons interviewed

Function	Organisation	Name
Account manager care purchasing Achmea	Care Administration Office	C. Verdoold
Account manager CIZ	Care Assessment Centre	M. van den Haak
Care administration assistent	CVD	M. Bornet
Care coordinator	CVD	A. van der Gevel
Financial consultant	CVD	U. Gencer
Senior financial consultant	CVD	R. de Jong
Financial controller	CVD	J. Konneman
Forensic psychiatrist	Palier Rotterdam	M. Mol
Manager Havenzicht	CVD	Y. van Tilburg
Nurse	CVD	R. Verstraaten
Nurse	CVD	A. Bekker
Nurse	CVD	A. van der Gevel
Night shelter attendant	CVD	E. Christina
Representative Municipality Health Service Rotterdam	GGD	J. Weltevrede
Shelter Attendant	CVD	F. Willemse
Shelter Attendant	CVD	
Street Doctor/ General Practitioner		M. Slockers
Unit manager Care	Dutch Health care authority	M. van Baggum

Table 11: Persons interviewed