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# Improving homeless persons' utilisation of primary care: lessons to be learned from an outreach programme in The Netherlands

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Faced with rising homelessness, countries around the world are in need of innovative approaches to caring for those without shelter, who, more often than not, suffer from severe health problems. We conducted a case study of an innovative Dutch Primary Care for the Homeless (PCH) programme to gain insight into clients' demographic characteristics, health problems and service use, and to develop an explanation for its success in increasing the latter. Our analyses are based on a combination of quantitative and qualitative data. The results of the study suggest that the success of the PCH programme can be explained by the providers' pragmatism and will to adapt their mode of care provision to the behavioural patterns and needs of their homeless clients.

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## Introduction

In recent years, the problem of homelessness has increasingly captured public attention, as major cities and countries report a growing population of men, women and children lacking proper shelter. In the UK, 25 per cent of local authorities saw an increase in homelessness over the year 2008 (UK Local Government Association, 2008); in New York City, a record high of 39,000 homeless persons – among which 10,000 homeless families – were sleeping in shelters in October 2009 (Markee, 2009). More often than not, the needs of the homeless go beyond shelter and welfare benefits and include issues related to health. Research has shown that poor health is inextricably linked with homelessness and that multiple and complex medical problems, such as skin disorders, malnutrition and mental illness, represent the norm rather than the exception among the seriously disadvantaged (Bonin et al., 2004; Hwang, Tolomiczenko, Kouyoumdjina & Garner, 2005; Institute of Medicine, 1988; van der Poel, Krol, de Jong & Jansen, 2005; Trabert, 1997; Wright & Tompkins, 2006). The health issues associated with sleeping rough are further exacerbated not only by the homeless persons' inability and sometimes unwillingness to obtain the most basic health care services but also by the lack of resources, time and specific knowledge in mainstream primary care (Bonin et al., 2004; van Laere, 2008).

Outreach can be described as a treatment modality for engaging isolated and underserved populations in health care (Ng & McQuistion, 2004). Outreach programmes for homeless individuals have existed for over two decades, delivering medical care in non-traditional settings, including shelters, houses of worship, train stations, bus stops and the streets themselves (Dickey, 2000; Wright & Tompkins, 2006). The aims of these programmes are to improve homeless persons' access to basic human services and to advance their physical or mental health and social functioning (Ng & McQuistion, 2004). Programmes in general have focused on specific subpopulations of the homeless, such as mentally ill persons and substance abusers, for whom integration into mainstream primary care is assumed to be problematic (Bradford et al., 2005; Bybee, Mowbray & Cohen, 1994; Fisk, Rakfeldt &

McCormack, 2006; Rosenheck et al., 2002). Despite research efforts, it remains unclear which specific approach to outreach care for the homeless results in improved health care utilisation and outcomes; while some outreach programmes have yielded positive results, others have proven less successful (Commander, Sashidharan, Rana & Ratnayake, 2005; Lam & Rosenheck, 1999; Lehman et al., 1997).

In this article, we describe an innovative outreach care programme for the homeless that was introduced in Eindhoven, a city in the Southeast of The Netherlands, in October 2006. Within this Primary Care for the Homeless (PCH) programme, general practitioners (GPs) and nurse practitioners (NPs) provide primary care in an outreach and essentially free-of-charge fashion, bringing services to the homeless in shelters rather than waiting for them to come in. We depict the main demographic characteristics and health problems of the PCH programme's client population and describe their service use during a 3-month period. Moreover, based on interviews with participating primary care providers, shelter employees and clients, we provide insight into the main factors that might determine the success of this programme in improving homeless persons' access to care, their service use and – ultimately – their health. The article begins, however, with an explanation of the reality of being homeless in The Netherlands.

## Homelessness and health care in The Netherlands

The Netherlands is an advanced welfare state with a population of approximately 16.5 million inhabitants. The homeless population in the country is relatively small, when compared with other Western states: According to the latest estimations, there are between 30,000 and 40,000 homeless persons residing in The Netherlands (Dutch Salvation Army, 2008). Common causes of homelessness are financial debts, evictions and relational problems as well as addiction and mental health issues (van Laere, 2010). Relatively few homeless Dutch are literally 'roofless' and forced to sleep outdoors or in emergency refuge and night shelters for longer periods of time. Changing and unstable housing in semi-permanent hostels or boarding houses is more typical (Wolf & Nicholas, 2003). With regard to health status, chronic multi-morbidity is highly prevalent: many homeless individuals suffer from alcohol and/or drug addictions, mental health problems and physical conditions, such as skin disorders, pulmonary conditions and cardiovascular disease (van Laere, 2010; de Vries, Gans & Levi, 2009).

In recent years, reducing homelessness and improving the conditions of those without stable residence has become an important policy issue in The Netherlands. In 2006, the Social Relief Plan was developed with the aim of reducing homelessness and improving homeless persons' conditions. Following the Housing First method, for which a growing body of evidence exists (Tsemberis, Gulcur & Nakae, 2004; Tsemberis et al., 2003), one of the main targets of the plan was to provide housing and casework to the approximately 10,000 homeless people residing in the four major Dutch cities – that is, Amsterdam, The Hague, Rotterdam and Utrecht – by the year 2010 (Ministry of Health, Welfare and Sports, 2006). Policies such as the Social Relief Plan, which was extended to Eindhoven and other Dutch cities, have resulted in a reduction of homelessness in The Netherlands by nearly 50 per cent since 2003 (Dutch Salvation Army, 2008; Federation of Shelters, 2009; Heineke, Bosker & van Deth, 2007).

The dominant approach used in The Netherlands to support the homeless is a social support perspective. Although homeless persons are recognised as 'worrisome care avoiders', who consult primary care physicians (most notably GPs) two to four times less than domiciled persons on a yearly basis, medical involvement in homeless case management is not guaranteed, nor systematically provided (Bronsveld, 2004; van Laere, 2010). The homeless persons' tendency to postpone care utilisation – brought about by the obstacles they face in accessing mainstream primary care – is detrimental to their health and often results in preventable hospitalisation and use of emergency room medicine. Previous research in The Netherlands and elsewhere has shown that outreach care programmes, such as the PCH programme developed in Eindhoven, have the potential to improve homeless persons' service utilisation and health status (Bradford et al., 2005; Daiski, 2005; Erickson & Page, 1999; van der Poel et al., 2005).

## Methods

Between January and December 2008, we studied the PCH programme in Eindhoven, The Netherlands, to provide insight into this programme's client population and to explain the chosen approach to care provision and level of success. We applied the case study methodology as described by Yin (1994: 9), who states that the case study has a distinct advantage over other research strategies when 'a how or why question is being asked about a contemporary set of events over which the investigator has little or no control'.

As a main measure of success, we chose the intermediate outcome 'primary care utilisation', as the duration of the programme was considered too limited for visible improvements in health. Primary care utilisation was measured in terms of: (i) the number of registered patients since October 2006; and (ii) the number of consultations offered during the data collection period (i.e., from February to April 2008). Homeless persons

are registered as 'clients' of the PCH programme upon their first visit; solely patients who consulted the programme during the data collection period were included in our study ($N = 75$). Data on the demographics of this sample, patients' health problems and the level of service utilisation were retrieved from the PCH programme's electronic patient registry.

To explore the main determinants for success of the PCH programme in improving homeless persons' care utilisation, we conducted semi-structured interviews during the data collection period with representatives of the three main groups of actors involved, that is, the primary care providers responsible for care delivery, the employees of the various shelters where consultations are conducted and the homeless persons registered as clients. We interviewed all primary care providers ($N = 5$) participating in the PCH programme, as they – the initiators of the programme and the persons responsible for care delivery – were considered to have the most knowledge regarding the organisation, goals and structure of the programme. Shelter employees ($N = 5$) were selected as respondents if they were involved in the performance of consultations as well as in the overall organisation of the programme. Homeless persons were included as respondents if they had more than two visits with the PCH programme care providers during the data collection period, so as to ensure the inclusion of knowledgeable respondents. Interviews were conducted with 18 of the 33 homeless clients who fulfilled this selection criterion. Sound recordings as well as written transcripts were made of all interviews in order to increase the validity of the research.

As our 'uncontrolled study design' did not allow us to test causal relations (Fortwengel, 2004), we used the general analytic strategy of explanation building to gain insight into the factors that might determine the success of the PCH programme in improving homeless persons' care utilisation. Explanation building has been described by Yin (1994) as a form of pattern matching, which can be used for exploratory case study research as part of a hypothesis-generating process. To gain insight into potential determinants for success, we compared quantitative data describing homeless persons' patterns of service use (in terms of both registrations and consultations) with qualitative data on the pattern by which adaptations were made to the care model of the PCH programme over time. To increase the validity of our conclusions, we linked our findings back to the outcomes of previous empirical studies into the effects of different outreach care services for the homeless.

## Results

Since October 2006, the PCH programme provides outreach care services to the homeless population of Eindhoven. According to a quick scan conducted in 2007, this population consists of an estimated 805 roofless and 241 houseless persons (Intraval, 2008). Three GPs and two NPs perform six care consultations per week, with an average duration of 2 hours. Consultations are conducted at three locations in and around the city centre of Eindhoven: a night shelter providing residence to approximately 30 to 40 persons per night; a day shelter with approximately 80 to 100 daily residents suffering from addiction; and a welfare shelter providing round-the-clock care for six to eight severely ill persons for temporary periods of time. Except for the welfare shelter, which is visited solely by GPs due to the complex health problems of clients, both GPs and NPs visit each location on a weekly basis. Although care is essentially free of charge, patients are stimulated to obtain health insurance upon registration with the programme, which takes place during the first visit.

### Client population: demographics, health problems and service use

Since the start of the PCH programme in October 2006, approximately 210 homeless persons have been registered as clients. Together, these clients represent approximately 20 per cent of the homeless population of Eindhoven ($N = 1.046$). Figure 1 shows a graphic display of the growth of the PCH programme's client population between October 2006 and April 2008.

We measured the care utilisation of PCH programme clients between February and April 2008. During this 3-month period, 75 homeless individuals visited a consultation hour. Clients were predominantly male (85%), with an average age of 42 years. With regard to health problems, bone and joint infections (15%), dermatologic problems (11%) and mental health issues (10%) were most prevalent. As few demographic statistics

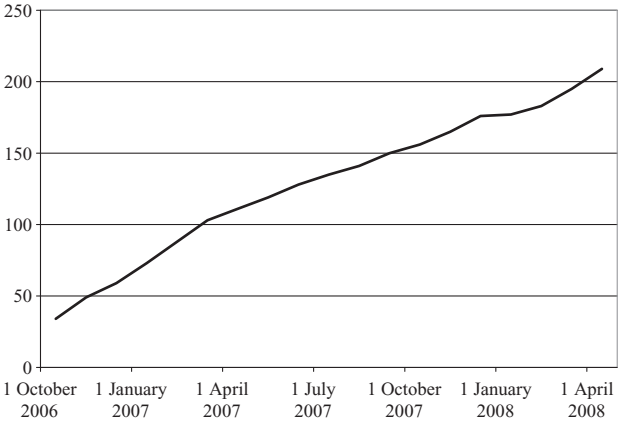


*Figure 1.* Growth of client population (in terms of number of registrations) between October 2006 and April 2008.

Table 1. Study sample compared with larger homeless populations in Eindhoven, Amsterdam and Rotterdam.

| | Male (%) | Age between 40 and 60 years (%) | Three most prevalent health problems (%) |
|---|---|---|---|
| PCH programme Eindhoven ($N = 75$) | 85 | 52 | Bone and joint infections (15)<br>Dermatologic problems (11)<br>Mental health problems (10) |
| Night shelter ($N = 408$) | 91 | 42 | |
| Day shelter ($N = 96$) | 83 | 59 | |
| Welfare hotel ($N = 48$) | 88 | 59 | |
| PCH programme Amsterdam ($N = 364$) | 84 | 45 | Dermatologic problems (26)<br>Pulmonary disorders (21)<br>Bone and joint infections (12) |
| PCH programme Rotterdam ($N = 250$) | 87 | 49 | Bone and joint infections (13)<br>Mental health problems (13)<br>Pulmonary disorders (12) |

PCH, Primary Care for the Homeless.

Table 2. Number of face-to-face consultations per client between February and April 2008 ($N = 75$).

| Face-to-face consultations ($M$) | Clients (%) |
|---|---|
| 0 | 8 |
| 1 | 48 |
| 2 | 13 |
| 3 | 10 |
| 4 | 5 |
| 5 | 3 |
| 6 | 7 |
| 7 | 3 |
| 8 | 0 |
| 9 | 3 |
| Total | 100 |

and even less data on health were available for the Eindhoven homeless population, we used data from shelters and similar outreach projects to determine the representativeness of our sample. In terms of age and gender, we compared our subjects with the larger groups of homeless who regularly visited the night shelter, day shelter or welfare hotel, that is, the three PCH programme locations. Table 1 shows that considerable differences in age or gender were not found. To compare the most common health conditions, we used data from two similar Dutch outreach care programmes in Amsterdam (van Laere & Buster, 2001) and Rotterdam (van der Poel et al., 2005). Table 1 shows that in all three cities, including Eindhoven, bone and joint infections were highly prevalent among the homeless. Other frequently presented conditions varied across cities between pulmonary disorders, dermatologic problems and mental health problems.

More than half of the 75 patients who visited the PCH programme during the data collection period (February to April 2008) were registered clients (58%), whereas 42 per cent were first-time visitors. Table 2 shows the number of face-to-face consultations per client between February and April 2008.

Forty-eight per cent of patients had one face-to-face consultation with a PCH care giver during the 3-month data collection period, 44 per cent had two or more face-to-face consultations and 8 per cent did not visit a care giver in person but, rather, was in contact via telephone to gain medical advice or a medication recipe. In total, the primary care providers of the PCH programme conducted 168 face-to-face consultations with patients at the various shelter locations (an average of 2.2 visits per client), conducted 14 telephone consultations and prescribed 60 medication recipes during the 3-month period from February to April 2008.

## Key determinants for success: the perspectives of service providers and clients

Based on the preceding quantitative data, the PCH programme can be considered successful in improving the care utilisation of homeless persons residing in Eindhoven, in terms of both registrations and consultations. Since the start of the programme, the client population has grown to approximately 210 persons, who – based on our analyses – appear to pay an average of 2.2 visits to a GP per 3 months. Previous research has shown that in lieu of outreach efforts, homeless Dutch persons visit general practice less than twice per year, whereas members of the mainstream population pay four to eight visits (Bronsveld, 2004). From the interviews, it appears that the explanation for the success of the PCH programme lies in providers' pragmatism and willingness to adapt to their target population. The homeless have specific characteristics – including transience, social isolation and an often inherent distrust of the medical profession – which make them uniquely different from housed patients and difficult to treat according to traditional, universalistic models of care (van Laere, 2008; O'Connell, 2004). Furthermore, as they have a strong tendency to vote with their feet, that is, to express their dissatisfaction with an inappropriately designed service by refraining from use (Hudson, Nyamathi & Sweat, 2008; Hudson et al., 2010; van Laere, de Wit & Klazinga, 2009). To create a better

match with their target population's behavioural patterns on the one hand and specific needs on the other, the providers participating in the PCH programme have made various adaptations to their mode of care provision since October 2006. The following paragraphs describe these adaptations, which – according to providers and shelter employees – form the key determinants for the success of the PCH programme in increasing homeless persons' use of general practice. Citations from the interviews with clients of the programme were included to present service users' view on the extent to which the PCH programme fits with their behavioural patterns and needs.

### Adapting to behavioural patterns: time and location

Like housed people, the homeless have specific routines to get through the day. They are often regular visitors of shelters, hostels and day programmes, the opening hours and locations of which largely determine the pattern by which they roam the streets. The PCH programme initially scheduled a consultation at the night shelter in Eindhoven at 9 a.m., a starting time that fitted the participating providers' work schedules. It did not, however, match the behavioural patterns of the homeless residing at that shelter.

> *The consultations at the night shelter initially started at 9 a.m., but we changed that after a few weeks, because it just wasn't a good time. All the people residing there need to leave before 9 a.m. and they are simply not going to wait around for the doctor to show, regardless of how ill they are. So we changed our starting time to 8 a.m. and are now present before people have to leave. Now more and more people are coming in, the visiting rate improved a lot.* (Shelter employee, 28 April 2008)

Visiting a consultation at 9 a.m. required the homeless to linger around the night shelter for at least an hour after closing, an effort that – according to providers and shelter employees – was made by only few. By moving the starting time of the consultations to 8 a.m., a better match was created with the opening hours of the night shelter and, as such, with homeless persons' behavioural patterns, as the following citation confirms:

> *It's just easy, I wake up here at the shelter and I don't have to make an appointment or wait a long time or travel across town. I can just walk into the doctor's office with my problem. Or I talk to an employee before breakfast and they come and get me when it's my turn.* (Homeless person, 28 April 2008)

In terms of the locations of care delivery, the suitability of different settings for the PCH programme was initially determined by providers on the basis of a singular criterion: the presence of room fit for care provision. No attention was paid to client populations in terms of number and types of homeless persons residing at the various locations, as it was expected that all homeless persons would have easy access to all shelters. This assumption proved invalid: consultations at the three shelter locations were visited solely by residents of those shelters. As a result, the client population of the PCH programme was limited to that of the locations chosen for care provision. In addition, providers noted that there was hardly any overlap between locations in terms of visiting clients: Few night shelter residents, for instance, visited the PCH programme at the day shelter, and vice versa. Data from the patient registry confirmed providers' observations: during the 3-month data collection period, 96 per cent of the clients who visited the programme more than once ($N = 33$) did so in the same location.

> *I would like to be able to see the doctor more often and we do have the opportunity to do so, but then you have to visit the day shelter, where the addicts stay, and that is just not the place for me. I can't visit that location, because I don't want to be sucked back into that cycle of drug addiction. The only way to accomplish that is to just stay away permanently.* (Homeless person, 28 April 2008)

> *They all have their own spots and we almost never have clients that visit us at multiple locations. The day shelter is where we see the serious substance abusers, those addicted to methadone. The night shelter houses some addicts to, but most people there are simply roofless and have no other place to go. The two populations hardly overlap: they are really separated.* (GP, 3 April 2008)

To create a better match with the behavioural patterns of the homeless, an additional consultation was set up at the Public Health Authority Southeast Brabant towards the end of 2008. The Public Health Authority, a low-threshold, non-shelter location in the centre of Eindhoven, was assumed by providers to be known and easy to access for all homeless, as it provides public health services, such as immunisations and treatment for sexually transmitted diseases. Adding this new location did not, however, improve homeless persons' service utilisation: according to providers, consultations were visited poorly. Hence, the providers participating in the PCH programme concluded that they needed more insight into the target population's behavioural patterns, especially with regard to the institutions they visit on a weekly basis, to make well-informed decisions concerning suitable locations for care provision. At the end of this study, a new location had not yet been found.

### Adapting to specific needs: scope, compliance and trust

Homeless persons generally suffer from multiple, complex health problems which are strongly related to their poor living conditions and social status. Hence, their needs differ from those of the general housed population and often go beyond the services offered in general practice (Institute of Medicine, 1988). During its first year, between October 2006 and October 2007, several adaptations were made to the mode of care provision used in the PCH programme to better match homeless patients' needs. These adaptations, which were implemented in a more incremental and less formalised manner than the changes in time and location of consultations, concerned the scope of the programme, patients' treatment adherence and the division of consultations among providers.

The scope of the PCH programme was initially limited to the treatment of common, minor and chronic illness, that is, those conditions that form the area of expertise of GPs and NPs. Issues other than those related to physical health were dubbed 'improper' and not dealt with during consultations, as is largely the case in mainstream general practice. According to all interviewed providers, shelter employees and clients, this narrow focus of the programme limited the extent to which treatment could result in long-term health improvement, as the poor living conditions of the homeless inevitably lead to reoccurrence of similar problems (Daiski, 2007; O'Connell, 2004; Riley, Harding, Underwood & Carter, 2003; Tsemberis et al., 2004).

> *I don't know if these visits help my health. I mean, I am out on the street. It's like carrying water to the sea, I always say. One problem gets solved and another begins.* (Homeless person, 3 April 2008)

> *You cannot focus only on physical health problems, it is impossible to separate those from other, related issues. The homeless lack even the most basic facilities that average citizens have, like a roof over their heads and a bed to sleep in, and that influences their health. Ignoring their circumstances doesn't help: restricting our services to the treatment of physical problems would be like putting a small band aid on a large wound. It's not a permanent solution.* (NP, 3 April 2008)

Focusing solely on physical health problems also resulted in the homeless feeling neither heard nor understood. Clients noted that this negatively influenced their service use, which is in line with the results of previous studies conducted in The Netherlands and elsewhere (Hudson et al., 2008, 2010; van Laere et al., 2009).

> *It makes a difference who treats you. I've seen various doctors and nurses and they have to be aware that this is a special group of people they are dealing with. These are people with a lot of problems on their mind and the last thing they need is some wise-ass doctor sitting there thinking he knows everything and has seen everything. The care providers need to look at more than just the acute physical problems, they need to treat us differently than normal people who visit them. And that is difficult for some providers, or for some people, as I have noticed.* (Homeless person, 3 April 2008)

To broaden the scope of care offered within the PCH programme, without requiring GPs and NPs to step outside their area of expertise, providers increasingly engaged in cooperation with other institutions relevant to the homeless, such as treatment centres for addiction, mental health care institutions, case management organisations, domiciles, employee recruitment centres and welfare institutions. This cooperation enabled the care providers to not only tend to clients' physical health issues but also deal with the strongly related social problems through quick and efficient referrals.

Treatment adherence is poor among the homeless, in terms of both attendance at follow-up appointments and medication compliance (Institute of Medicine, 1988; O'Connell, 2004). They face problems like being able to survive on the streets and finding night-time residence, which take priority over health, especially if health problems do not cause immediate physical complaints. Moreover, the homeless generally lack the social support networks that positively influence treatment adherence in the general population and often face difficulties in obtaining, preserving and correctly applying prescribed medications (Daiski, 2007; Gelberg Andersen & Leake, 2000; O'Connell, 2004).

> *If they are seriously ill, for instance due to some infection, they will take their medication. In case of chronic complaints, things become more difficult. Even regular patients, who do have a roof over their heads and aren't addicted, have trouble being compliant over longer periods of time. In this group, things are far worse. You can lose your pills if you don't have a house. Also, the necessity of staying afoot during the day, the short term priority, is often much greater than taking medication for high blood pressure to prevent problems in the long run. It just isn't a priority.* (GP, 3 April 2008)

> *Follow-up appointments are difficult. Most of the time, you simply need to do what you can when people are present. You can always try to persuade someone to come back, but that will be successful in maybe one third of all cases. Sure, they'll come back eventually, but that can be weeks later.* (NP, 3 April 2008)

In first instance, the care givers of the PCH programme did not engage in any special activities to stimulate treatment adherence, which likely caused the output of the programme to be limited, particularly in terms of influence on health status (van Laere, 2008; Riley et al., 2003). To improve the programme's effectiveness, several activities were implemented. Most notably, providers engaged in cooperation with the employees of the shelters where consultations are conducted. Especially there where medical staff are present, much is now done to improve compliance. Examples of activities include supervision of medication use and active stimulation of follow-up consultation attendance. The GPs and NPs involved in the PCH programme provide shelter employees with the information they need to, in a sense, take over the role of domiciled persons' social support networks in actively stimulating homeless persons' compliance to treatment (Gelberg et al., 2000)

> *Sure, if they think it's necessary, the employees here will help you get an appointment. They have told me in the past: 'Something is up with you. You should visit the doctor tomorrow mornin'.. And if they know I need a follow-up appointment, they'll plan it for me. Also, they help me with my medication use, talk to me about how it's going.* (Homeless person, 3 April 2008)

As a consequence of previous negative experiences with care services, homeless persons often have an inherent distrust of the medical profession, which prevents them from attending even when primary care is made readily available (Daiski, 2007; Institute of Medicine, 1988). Initially, the division of consultation hours among providers of the PCH programme was random and decided upon solely on the basis of convenience for the providers involved. This led to homeless persons being treated by different providers at practically each consultation and hampered the building of trust between clients and providers.

> *I have seen so many doctors walking in here over the past months, I can't even remember their names. Having a regular doctor would sure be an improvement, someone who knows your problems and takes them seriously, so you don't have to explain everything all the time.* (Homeless person, 28 April 2008)

To reduce this barrier to service use, a new division of consultations among providers was created, which entailed that each location would be visited by a maximum of two primary care providers per week, one GP and one NP, who formed fixed teams. In this manner, the number of different physicians seen by the homeless was minimised to allow both parties the possibility to build up a trusting relationship over time, an important aspect of effective care provision (Hudson et al., 2008; van Laere, 2008).

## Discussion and conclusions

The PCH programme appears successful in increasing homeless persons' utilisation of care services, in terms of both registrations and consultations. Since the start of the programme in October 2006, the number of registrations has risen steadily to approximately 210 registered individuals in April 2008. Based on a representative sample, these clients consult the programme an average of 2.2 times per 3 months, presenting with health problems that include mostly bone and joint infections, dermatologic problems and mental health issues. As we used an uncontrolled study design, it is impossible to state with certainty that the PCH programme has resulted in homeless persons' gaining more care than they would have in mainstream general practice. However, based on previous research, this seems a plausible conclusion. A considerable body of evidence shows that although the disparities in health outcomes for the homeless are considerable – studies in the USA and Canada have reported overall mortality rates three to five times higher than those among the general population (Hwang, 2000; Hwang et al., 1997) – they are reluctant to gain medical help in mainstream general practice, which leads to increased emergency department visits and hospitalisations (Hwang et al., 2005; Institute of Medicine, 1988; van Laere, 2008; O'Connell, 2004). A Dutch study conducted by Bronsveld (2004) showed that on average, the homeless visit a regular GP less than twice a year, which – based on an extrapolation of the data on service use we collected in this study – is approximately four times fewer than the number of visits of homeless persons to the PCH programme.

To develop a potential explanation for the success of the PCH programme in increasing homeless persons' service use, we conducted interviews with participating providers, shelter employees and clients. In line with previous studies, our analysis of these interviews indicates that pragmatism and a will to adapt from the side of providers are key determinants for success (Bonin et al., 2004; Dickey, 2000; Riley et al., 2003; Wright & Tompkins, 2006). Homeless persons face severe barriers in accessing health care, including poverty, lack of health insurance and transience. Reducing these barriers through the outreaching of services may form an important first step in increasing their use of primary care, yet it will not serve as a panacea to their problems if the way services are offered is inappropriate (Gelberg et al., 2000; Riley et al., 2003). In such case, the homeless tend to vote with their feet and refrain from service use. Hence, the success of homeless care programmes depends in large part on providers' ability to adapt to

the unique characteristics of their target population. On a daily basis, homeless people struggle to fulfil even the most basic human needs for safe shelter and warm meals while experiencing the effects of social exclusion and isolation. The opening hours of local shelters, day programmes and soup kitchens guide their behavioural patterns and determine their daily routines. Their health care needs tend to go beyond the usual service level in general practice (Daiski, 2007), where acute health problems are traditionally approached in a reactionary way, active follow-up is limited and cooperation with other public sectors is minimal. Given that the homeless commonly suffer from a combination of complex physical, mental and social problems, which are both caused and exacerbated by their poor living conditions, such an approach is unlikely to allow for long-term health improvements (O'Connell, 2004; Wright & Tompkins, 2006). Listening to the homeless and providing care that is tailored to their behavioural patterns and needs, on the other hand, might enable providers to not only alleviate symptoms but also treat the underlying causes of disease. Unfortunately, the PCH programme has not (yet) been merged with the Social Relief Plan in Eindhoven, despite the promising results of the Housing First method developed in the USA (Tsemberis et al., 2003, 2004). Integrating medical and social care in this manner might be recommendable, as a more comprehensive approach to tending to the needs of the homeless is increasingly considered vital to ameliorate existing health disparities (Atherton & McNaughton-Nicholls, 2008; van Laere, 2008; O'Connell, 2004).

During the relatively short existence of the PCH programme, several adaptations were made to providers' regular mode of care provision to better match homeless persons' behavioural patterns and needs. Consultation times were changed, new locations were sought, the scope of the programme was broadened, relevant collaborators were sought and working divisions were altered. Among others, these adaptations resulted in more interdisciplinary networking, improved continuity of care and an increased possibility for trust building, that is, the factors that have been mentioned in the literature as key characteristics of effective homeless care (Daiski, 2007; van Laere, 2008). Nonetheless, the main lessons that can be drawn from our case study do not concern *what* must be changed in the mode of primary care provision in order to better serve the homeless but, rather, *how* such change can be conducted in a feasible and effective manner. The characteristics of the homeless population differ dramatically from one community to another, in demographics, needs and behavioural patterns (Institute of Medicine, 1988). Given this heterogeneity, we should not search for a universal solution for the problems associated with engaging the homeless for purposes of diagnosis and treatment in ambulatory care (Atherton & McNaughton Nicholls, 2008). Our article illustrates the importance of basing change plans on true knowledge of the behavioural patterns and needs of specifically those homeless which a programme aims to reach. It shows that even logical expectations, for instance, concerning the attractiveness of a specific location to the homeless population, can prove invalid and not achieve intended outcomes. To prevent foot voting, services must be properly designed, reflecting the diversity and complexity of homeless persons' needs.

In addition to the lack of a control group, there are some other limitations to our study. First, and most notably, we lack clear and concise evidence on health gains, as the duration of the programme is still too limited for visible results regarding improvements in health status. Given the considerable human and financial resources necessary for outreach care programmes for the homeless (Rosenheck, 2000), a clear proof of effectiveness is important to support policy makers in their efforts to care for those least well-off. In further studies, prospective data collection would enable us to gain insight into the impact of the PCH programme on homeless persons' health outcomes. Second, the fact that we conducted a single case study and were able to include only a small number of clients as respondents for the interviews limits the generalisability of our findings. We do not, however, consider this a severe limitation, as we: (i) set out to explore a possible explanation for the success of the PCH programme rather than to draw conclusions regarding causal relationships; and (ii) were able to corroborate the findings on the 'service-user viewpoint' gained from clients of the PCH programme with scientific evidence on homeless persons' specific challenges in gaining primary care. Nevertheless, in future research, the use of a multiple case study design would enable us to further test the validity of our explanation that pragmatism and a will to adapt on providers' side are key determinants for the success of care programmes for the homeless.

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