Social medical care before and during homelessness in Amsterdam

van Laere, I.R.A.L.

Citation for published version (APA):
chapter 6

Shelter-based convalescence care for homeless adults
Shelter-based convalescence for homeless adults in Amsterdam: a descriptive study.

Igor van Laere, Matty de Wit, Niek Klazinga
BMC Health Services Research

Research article
Shelter-based convalescence for homeless adults in Amsterdam: a descriptive study
Igor van Laere¹, Matty de Wit² and Nick Klazinga³

Address: Dr Valckenier Outreach Practice for Homeless People, GGD Municipal Public Health Service, PO Box 2220, 1000 CE Amsterdam, The Netherlands; Department of Epidemiology, Documentation and Health Promotion, GGD Municipal Public Health Service, PO Box 2220, 1000 CE Amsterdam, The Netherlands; Department of Social Medicine, Academic Medical Centre, PO Box 22400, 1100 DD Amsterdam, The Netherlands

Email: Igor van Laere¹ - igor.laere@ggd.amsterdam.nl; Matty de Wit² - m.wit@ggd.amsterdam.nl; Nick Klazinga³ - n.klazinga@am.uva.nl

* Corresponding author

Published: 18 November 2009
Received: 22 January 2009
Accepted: 18 November 2009

This article is available from: http://www.biomedcentral.com/1472-6963/9/208
© 2009 van Laere et al; licensee BioMed Central Ltd.

Abstract
Background: Adequate support for homeless populations includes shelter and care to recuperate from illness and/or injury. This is a descriptive analysis of diagnoses and use of shelter-based convalescence in a cohort of homeless adults in Amsterdam.
Methods: Demographics of 88 homeless adults, diagnoses, referral pattern, length of stay, discharge locations, and mortality, were collected by treating physicians during outreach care provision in a shelter-based convalescence care facility in Amsterdam, from January 2001 through October 2007.

Results: 629 individuals accounted for 889 admissions to the convalescence care facility. 83% were male and 53% were born in the Netherlands. The mean age was 45 years (SD 10 years). The primary physical problems were skin disorders (37%), respiratory disorders (33%), digestive disorders (24%) and musculoskeletal disorders (21%). Common chronic conditions included addictions 78%, mental health disorders 20%, HIV/AIDS 11% and liver cirrhosis 5%. Referral sources were self-referred (18%), general hospitals (21%) and drug clinics (27%). The median length of stay was 20 days. After (self)discharge, 63% went back to the previous circumstances, 10% admission housing, and 23% went to a medical or nursing setting. By March 2008, one in seven users (n = 83; 13%) were known to have died, the Standard Mortality Ratio was 7.5 (95% CI: 4.1-13.3). Over the years, fewer men were admitted, with significantly more self neglect, personality disorders and cocaine use. Lengths of stay increased significantly during the study period.

Conclusion: Over the last years, the shelter-based convalescence care facility users were mainly homeless single males, around 45 years of age, with chronic problems due to substance use, mental health disorders and a frail physical condition, many of whom died a premature death. The facility has been flexible and responsive to the needs of the users and services available.

Background
Over the last decades, shelter-based convalescence care programs, (also termed respite, intermediary, recuperative and intermediate care), increasingly emerged in the western world [1-13]. Programs differ from one another, though many provide room, board, on site 24-hour care, and a range of social and medical services. On average, these programs are small, with a median of 13 beds, and reimbursement depends on patchwork funding [6].

The limited body of research in Australia, Canada and the US suggests that these programs are cost-effective, reduce hospital readmissions, and have important social medical support and service-networking benefits for the clients [1-6]. However, it is argued that much remains to be learned about these programs, including their funding sources, their relationships and arrangements with hospitals and other referral sources, and where patients go when they are discharged from these programs [6].

To contribute to the knowledge, we describe a shelter-based convalescence program for ill homeless adults in Amsterdam, the Netherlands. A seven-year period of shelter-based convalescence use was reviewed to determine the demographics, medical diagnoses, referral patterns, length of stay, discharge locations, mortality rate, and use patterns. Information about the experiences in this specific shelter will help program and policy makers to design or adjust shelter services that adequately fit the needs of homeless populations, and are efficiently linked to the healthcare system.

Shelter-based convalescence program in Amsterdam
In Amsterdam, shelter-based convalescence care facilities were introduced in the early 1990s. In these days a relative small proportion of the Amsterdam general hospital beds were occupied by HIV infected drug users [14]. As a result of lifestyle concerns and strict admissions criteria, aftercare for this group was not offered by the mainstream nursing homes. Initially in two shelters, a total of ten overnight beds were transformed to 24-hour convalescence care beds to fill the hospital-to-streets gap. Through the years, in response to a growing care need, in three shelters the number of convalescence beds has increased to a total of 134 beds today. The convalescence care beds were embedded in the system of medical care provided by health professionals from the Municipal Public Health Service (MPHS) in Amsterdam, that also provides outreach medical care in three day centres, and three overnight shelters and 18 residence shelters (in total 1,090 beds) [15,16]. At most sites, MPHS health workers have access to objective electronic client medical health records. The client records aim to give an overview of the social medical biographies and relevant medical letters from healthcare providers in the care network, and the actual medication prescribed, network partners, and care plan.

The shelter-based convalescence care facilities are staffed by nurses, orderly, social workers, housekeepers, and volunteers and offer integrated and problem oriented services that include a bed, food, clothing, on site 24-hour nursing care, medication compliance by daily observed therapy, wound care, vaccination, physical therapy, assistance for identity cards, benefits, debt control and health insurance, family reunion, pastoral support, and transportation to relevant services. Shelter rules tell to behave and not to consume alcohol or drugs on premises. The costs for this service were covered by Amsterdam Welfare department payments per user per night, donations by the public, and a contribution for board, lodging, and health insurance premies paid by the users.

Sources of referral are homeless people themselves, medical workers in the primary and secondary care sector, and by social workers, the police and penitentiary staff. Although most referrals occur during the day, for advice and/or admission the MPHS health workers can be contacted around the clock, all days of the year.

Criteria for admission are homelessness and ill health and/or injury, often in combination with chronic problems with addiction, mental and physical health. MPHS outreach physicians are responsible for the admission assessment, direct medical care, making the individual care plan and follow up. In case patients are too sick to stay they are transferred to general hospitals. Convalescence care users can be admitted up to three months. Based on interdisciplinary observations trajectories for suitable housing and care after discharge are initiated. The length of admission can be prolonged another three months, or longer for those with multiple conditions in need for chronic nursing care, palliative care for the terminally ill included [15].

Methods
Study population and data collection
For this study, data were collected at a shelter-based convalescence care facility, named the Gastenburgh, a Salvation Army run shelter located in the Amsterdam red-light district. It started as an overnight shelter in the 1980s, and gradually transformed into a facility with 25 convalescence care beds and 25 chronic nursing care beds today. At admission, the patient was assessed by the GP, the MPHS physician, and demographic data, medical conditions, medication and treatment plan were recorded. The experience of the treating physician [17], referral letters and the available medical letters in the MPHS electronic client records were used, and diagnoses were coded according the International Classification of Primary Care (ICPC) [18]. Data were collected for and during all admissions from January 2001 and October 2007. Patient consent was obtained at admission.

Referring partners in the care network included several outreach centers in locations throughout Amsterdam, and
patients were self-referred and admitted for convalescence care. Referrals also occurred through social networks such as social workers at day centres and general residence shelters, police, and after release from prison. Medical referrals included those from general practitioners, hospitals, MPHS outreach safety net teams and MPHS drug clinics [16], as well as addiction health clinics and mental health services. The duration of the admissions was measured in days, from the date of admission till the date of discharge or death.

The whereabouts after discharge where divided in social and medical settings. Social settings could be: a house (rent apartment, sub renting, including doubling up with family or friends), general residence shelters, prison, the streets and unsheltered places, or unknown in case of self discharge or expulsion due to misconduct. Medical set- tings could be: a shelter-based chronic care facil- ity, nursing homes, hospitals, addiction- and mental health residence clinics. To determine the mortality rate, by patient name and date of birth, the Amsterdam popula- tion register and MPHS electronic patient records were used up till March 2008. The study design did not need a process of ethical approval according to the Dutch Act on Medical Research.

Study assessments and analysis

Statistical analyses were performed using SPSS 14.0 and were mainly descriptive. Demographics, diagnoses, length of stay and whereabouts after discharge were compared between the years of admission. Differences were com- pared using chi square and Fisher exact tests for categori- cal variables and Wilcoxon median test for continuous variables. Trends over the years were tested with trend analyses. The mortality rate was calculated from time up of admission until death or until the end of follow-up (March 2008). The standard mortality ratio was calculated by comparing the mortality among the users in a mortality with a comparable group (3-year-age groups, gen- der, ethnic background) in the general Amsterdam popu- lation. Survival analysis was performed to determine factors independently associated with higher mortality rates.

Results

Written consent for inclusion to access information was obtained, this was granted in 99% of those asked. A total of 889 admissions by 629 unduplicated individuals, between January 2001 and October 2007, the majority of the convalescence care users were admitted once (75%) or twice (18%). A small group (n = 46) was admitted from 3-5 times for a total 192 admissions; this was 22% of all admissions. No seasonal influences were noticed, as 94% of the admissions were in October to March. Among the mentally ill (28% versus 45%, p < 0.001). Heroin users, most of whom were former injectors, were three times more often HIV infected than those not using heroin (19% versus 6%; p < 0.001).

Diagnoses upon admission

In table 2, the medical diagnoses upon admission are shown. The most frequently noted diagnoses were psy- chological disorders (poor hygiene 47%, schizophrenia 5% and personality disorders 14%), skin disorders (immersion foot 17%, skin injuries and infections 13%, erysipelas 12%, and chronic ulcers 4%), respiratory disor- ders (pneumonia 22% and COPD 15%), digestive disor- ders (hepatitis B/C 11%, gastroenteritis 7% and cirrhosis of the liver 5%) and musculoskeletal disorders (injuries 19% and fractures 6%). Other diagnoses were exhaustion in 8%, diabetes in 7%, epilepsy in 5% and incontinence of urine in 4%. Thirteen individuals were diagnosed with a malignancy (2%). On average, 2.7 medical diagnoses were noted per admission.

Referrals, length of stay and discharge locations

In table 3, referrals, length of stay and discharge locations are shown. The major referral sources were general hospi- tals and MPHS drug clinics. A large number of admissions had a length up to two weeks (41%). The median dura- tion of admission was 20 days, the average length of stay was 47 days, ranging from self discharge within 24 hours to 811 days. After discharge the majority went back to the previous circumstances, such as the streets and overnight shelters. One tenth obtained housing in an apartment or general residence shelter. For 5% the condition had wors- ened and were transferred to a general hospital. Despite a high rate of addiction and mental health problems, only a few went to a residential clinic for these problems. Among those who had multiple problems and needed chronic and/or palliative care, 13% stayed for this in the Gastenburg.

Mortality

The Amsterdam population register and MPHS electronic patient records were analysed for all convalescence care users that had died between their admission and March 2008. Among 629 homeless users, 517 were known to the Amsterdam population register, illegal immigrants were not registered, and 83 were known to have died (13%). For one person the date of death was unknown. Among 82 deaths, 74 male, the mean age was 52.7 years (SD 10.7 years, range 32-77 years). The convalescence care users died seven and a half times more often than the general Amsterdam population with comparable sex and age. Overall, the standard mortality ratio was 7.5 (95% CI 4.1- 13.5), and the figures were 7.6 and 6.5 for males and females, respectively. Survival analysis, with correction for age and sex, showed an increased mortality risk for HIV, hazard ratio 3.5 (95% CI: 2.1-5.7); dual diagnosis 2.2 (95% CI: 1.3-3.9), cirrhosis of the liver, 2.1 (95% CI: 1.0- 4.6); mental illness, 1.6 (95% CI: 1.0-2.6), and malig- nancy, 7.8 (95% CI: 3.5-17.2).

Users pattern over seven years

In table 4, the users pattern and service data are shown. The group of convalescence care users became smaller and stayed significantly longer. The number of self-referrals decreased, referrals through social partners increased and less self discharge was noted. Over the years, the percent- age of males and those born in Surinam and the Nether- lands Antilles increased significantly. A trend of more
Due to limitation of record discretion of often volumi-
ous electronic patient records, and due to unsubstantiated
information among multiple medical service providers.
Third, the mortality rate might be higher than reported here
due to incomplete data in the population registrar and MPHS
on to medical records, and due to unshared information
found in the electronic patient database, e.g. death of unidentified
cases, loss to follow up, and illegal immigrants who are not
included in the official death statistics.

Comparison to other convalescence care facilities
In Australia, Canada, Germany, the Netherlands and
the US, convalescence care users were predominantly male,
and the mean age was also around 45 years. The rate was
mostly Caucasian in Australian, Canadian and Dutch studies
while in the US most were African American [1-8].
The medical conditions studied in our study are compara-
tive to other studies of convalescence care in homeless per-
sons. In convalescence care studies the users presented;
more or less, with what O’Connell et al. refer to as tri-mor-
bidity; a mix of addiction, mental and physical health
problems [19]. We found 59% drug users, 28% alcohol
users and 21% were known with a mental illness. Among
convalescence care users in Rotterdam (n = 99); the figures
are similar; drugs 69%, alcohol 32% and mental
illness 28% [8]. Among Cottage Project users in Melbourne (n
= 45), the figures were; alcohol 70%, drugs 32%, and men-
tal illness 14% [1]. In Canada and the US, the figures for
substance use were 30% and 33% respectively, and for
mental illness 84% and 46% respectively [2-4]. These fig-
ures, including physical problems, show a high preva-
lence of tri-morbidity among convalescence care users in
the western world. Our referral patterns, length of stay and
discharge locations are comparable to those in other stud-
ies, and discharge locations were, more or less, the previ-
ous circumstances, residence shelters, and facilities for
chronic nursing or hospice care [1-8].

Mortality
Thirteen percent of the users had died during the course
of our study. In Boston, O’Connell et al. [19] designed a high
risk profile among homeless people, based on risk factors
for premature mortality among homeless persons, that
sleep on the streets 6 months or longer with one of the follow-
ing conditions: 1) tri-morbidity of substance use, severe
persistent mental illness, and multiple chronic physical
problems [19]. The same profile was repeated in a study
resulting in hospital admission, multiple emergency
department visits (3 or more visits in the previous 3
months), or admission to the respite facility anytime during
the previous year, 3) age over 60 years, 4) known HIV/
AIDS, 5) known cirrhosis, end-stage liver disease or renal
failure, 6) previous history of homeless, hypothermia, or
immersion foot. These conditions are consistent with those
among the homeless in our study. Many users were
diagnosed with tri-morbidity, 21% stayed in a general
hospital prior to convalescence care admission, all were
admitted for convalescence care, and 3) was over 60 years,
11% was known to be HIV infected, 5% had liver cirrhosis
and 17% presented immersion foot. Furthermore, the
Netherlands is an advanced welfare state with a large social housing sector, housing and welfare
benefits, universal health insurance, and numerous
arrangements for the lowest income groups. Those
who fall through all safety nets available might be the most
difficult to serve in the community.

15 years convalescence experience and practice
implications
In our experience, referrals, admissions and destinations
after discharge depend on many factors. What is the size
and nature, and the development of the profile, of the
homeless population and of the community services? Do
homeless people themselves know when and how and where
to find assistance? Are the partners in the mainstream
social and medical care network aware of the existence
of the convalescence service, the admission criteria and
the routing to realise admission? Is transportation or personal
guidance needed to make sure the ill homeless person will
arrive at the shelter? Is payment or having a medical insur-
ance card obligatory to access? Are the facility and staff
equipped to address multiple and complex conditions
[20,23]? Furthermore, the length of admission, hence the
next place to stay, depends on the nature and severity of
problems among the convalescence care users on one
hand, and the availability of problem oriented services in
the community on the other. Waiting lists for a place in
a general shelter or guided living facilities extend the length
of stay.

In Amsterdam, the development of the size and nature of
marginalized populations, such factors as a growing
homeless population, and mentally ill patients, has been monitored for
many years [15,16]. We have been witnessing an aging and
frail population in growing need for tri-morbidity
and palliative care. Among the homeless population, a
subgroup suffers extreme cocaine and/or alcohol depend-
ence and conduct disorders that make them hard to serve
other than during moments of crisis, and multiple hospi-
al, convalescence and prison admissions. Over the recent
years, however, to several individuals with this profile,
compulsory psychiatric treatment measures have been applied to reduce harm and prevent avoidable deaths.

In anticipation to trends and care needs among homeless people in Amsterdam [22], and with substantial national and local financial support, housing, social and medical services have been able to expand their activities. More guided living options in the social housing sector are being offered, more integrated one stop social medical service units are and will be build, and the number of beds in shelters, addiction and mental health care facilities are being increased [23]. In addition, in 2003, the shelter-based convalescence care facilities, as well as general shelters and regular nursing homes, were able to adapt and/or transform their services into a chronic guiding, nursing and/or convalescence facility, by additional public insurance funding through the Exceptional Medical Expenses Act. As a result, community services have been able to cater for more marginalised people. It is within this context, most likely, that we witnessed a decrease of the number of admissions, an increase in the length of stay and less self-discharge towards the end of our study. The convalescence facility has been flexible and responsive to the needs of the users and services available.

Conclusion

In Amsterdam, community services are challenged to prevent homelessness most commonly among single living men with financial mismanagement, addictions and/or mental health problems [24-26]. Specifically, treatment services should target a new generation of cocaine users to prevent further marginalisation [27]. To reduce harm to the individual and society, care providers should target individuals at high risk of tr-morbidity and mortality. To apply upstream prevention strategies, intensive social medical care programs, similar to the nature of shelter-based convalescence programs, should be available continuously before and during homelessness.

Competing interests

The authors declare that they have no competing interests. No funding was provided for this research.

Authors' contributions

IYJ contributed to the study design and implementation, collected data and wrote the manuscript. MDW analysed the data and assisted in writing the manuscript. NK contributed to the manuscript design and assisted in writing the manuscript. All authors read and approved the final manuscript.

Acknowledgements

We thank Hugo Salamon and Bert van de Loo, social nurses at the Goozenburgh, Salvation Army in Amsterdam, for collecting data. We thank Dr. Marcel Smolders, MD, Homeless convalescence care team Rotterdam, for sharing data and information. We thank Dr. Jim O’Connell, MD, President of the Boston Health Care for the Homeless Program, Boston, MA, USA, for his valuable advice and comments on the manuscript. We also thank Ellen Basuck, Lilian Gelebr, Norwees Mibran and Tita Pudymow for reviewing the manuscript.

References

7. Doughty TI, Harris D, Ritter M, Ficcher GC, Steenweg B: [Health situation of homeless in a health care home in Hanover]. Gesundheitswesen 2002, 64:817-82. (German)
22. Berg N van den, Bitter MC, van Wilhelms B: [Care needs of the homeless population in Amsterdam]. In Amsterdamse deelnemen in de huidige Amsterdamse Gemeente Amsterdam WPO serviceconferentie, 2007.
23. [Off the streets: better care, less homelessness and less nuisance. Changes in service delivery for the years 1997-2007].