



Reaching out to the forgotten: providing access to medical care for the homeless in Italy

Gianfranco De Maio^a, Rafael Van den Bergh^{b,*}, Silvia Garelli^a, Barbara Maccagno^c, Freja Raddi^c, Alice Stefanizzi^d, Costantina Regazzo^d and Rony Zachariah^b

^aMédecins Sans Frontières, Operational Centre Brussels, Italy Mission, Rome, Italy; ^bMédecins Sans Frontières, Operational Centre Brussels, Medical Department, Operational Research Unit (LuxOR), Luxembourg, Luxembourg; ^cMédecins Sans Frontières, Operational Centre Brussels, Operations Department, Rome, Italy; ^dFondazione Progetto Arca onlus, Milan, Italy

*Corresponding author: Tel: +3224753611; E-mail: rafael.van.den.bergh@brussels.msf.org

Received 20 September 2013; revised 30 December 2013; accepted 31 December 2013

Background: A program for outpatient and intermediate inpatient care for the homeless was pioneered by the humanitarian organization Médecins Sans Frontières (MSF) in Milan, Italy, during the winter of 2012–2013. We aimed to document the characteristics and clinical management of inpatients and outpatients seen during this program.

Methods: A clinic providing outpatient and intermediate inpatient care (24 bed capacity) was set up in an existing homeless hostel. Patients were admitted for post-hospitalization intermediate care or for illnesses not requiring secondary care. This study was a retrospective audit of the routine program data.

Results: Four hundred and fifty four individuals presented for outpatient care and 123 patients were admitted to inpatient intermediary care. On average one outpatient consultation was conducted per patient per month, most for acute respiratory tract infections (40%). Eleven percent of all outpatients suffered from an underlying chronic condition and 3% needed referral to emergency services or secondary care facilities. Most inpatients were ill patients referred through public reception centers (72%), while 28% were post-hospitalization patients requiring intermediate care. Out of all inpatients, 41% required more than 1 week of care and 7% needed counter-referral to secondary care.

Conclusions: The observed service usage, morbidity patterns, relatively long lengths of stay, high referral completion and need for counter-referrals, all reflect the important gap-filling role played by an intermediate care facility for this vulnerable population. We recommend that in similar contexts, medical non-governmental organizations (NGOs) focus on the setup of inpatient intermediary care services; while outpatient services are covered by the public health system.

Keywords: Intermediary care, Italy, Homeless, Médecins Sans Frontières, Migrants, Operational research

Introduction

Accurate estimates of the size of the homeless population in Europe are not available.¹ Anecdotal reports estimate the long-term homeless population at 600 000,² with many more are at risk of intermittent short-term periods of homelessness. Such people are particularly vulnerable to a spectrum of acute and chronic illnesses resulting from poor living conditions.^{3–4} In addition, co-morbidities related to mental health and substance abuse are common.⁵ In contrast to the housed population, the homeless are frequent users of unscheduled care, with five

times more emergency room (ER) attendances, three times more hospital admissions and longer durations of hospital stay. This population constitutes an eight-fold higher cost for secondary care.⁶

Across Europe, vulnerable but documented individuals, including the homeless, benefit from access to healthcare and most European Union (EU) citizens have free or subsidized access to health services. However, for the homeless in an irregular situation (without local residency status and/or not fulfilling administrative requirements), access to care is restricted, e.g. in Italy, where the current study is set, their entitlement is to seek

emergency care only. Studies in the UK demonstrated dramatic underutilization of primary care by the homeless and overuse of secondary care.⁷ Only in settings where specific measures are taken to reduce barriers for the homeless to seek primary care can relatively good access be ensured.⁸ Typical barriers to seeking care include a lack of trust among vulnerable populations, inconvenient locations and opening times of services and health service funding and management issues.⁹

A major gap in healthcare for the homeless lies in the recuperative phase of care that follows a medical intervention. Due to bed shortages, hospitals cannot keep such patients until completion of their, often long, recovery period; while nursing support at home is also impossible. This intermediary gap between hospital discharge and complete recovery indicates a need for a working model of 'intermediate care' facilities; an emerging concept in healthcare that may offer a promising alternative to long-term hospital admission for vulnerable groups of patients.¹⁰⁻¹²

Here, we aim to describe a first-of-its-kind urban integrated primary and intermediate care program provided by the Médecins Sans Frontières (MSF) in collaboration with the public health sector and partner organizations in Milan, Italy, during the winter of 2012-2013. Specifically, we set out to document the demographic characteristics, the morbidity pattern and management of this vulnerable population in Milan.

Methods

Study design

This was a descriptive study using routine project monitoring data.

Study setting

The study was conducted in Milan, Italy and included the period 21st December 2012 to 31st March 2013.

According to a survey conducted by the National Institute of Statistics (ISTAT) in late 2011, Italy has an estimated homeless population of approximately 48 000 people.¹³ Most are male (87%), non-Italian (59%) and/or under 45 years of age (58%). More than half (59%) of the homeless population utilizing support services live in the north of Italy, and most use services based in Milan (13 000 individuals or 28%) or Rome (7 900 individuals or 16%). The homeless population in Italy consists of two distinct groups: Italians and non-Italians. The non-Italian homeless are typically younger in age and are less likely to use health services (48% versus 64% of Italians). They are also at higher risk of infections and skin diseases such as pulmonary tuberculosis and acariasis, probably due to poor hygiene and living conditions.¹⁴

In November 2012, MSF received an official request from the city authorities of Milan to participate in the 'Emergenza freddo per senzatetto' ('cold emergency' for homeless persons) intervention, to provide medical and nursing care to the homeless population of Milan during the coldest period of the year. This intervention also anticipated the announced end (January 2013) of housing assistance by the Italian government to migrants recently arriving from Libya. It was speculated that this announcement would increase movement of such persons towards the major urban centers during the winter.

Model of intermediary care

In response to the request to participate in the 'cold emergency' intervention, MSF set up a program in Milan between December 2012 and March 2013, in collaboration with the municipal social service Help Center, the authorities of the four largest hospitals of the city and the partner association Progetto Arca Foundation, which is in charge of hostel services and social follow-up.

MSF managed a medical clinic in an existing 120-bed hostel for the homeless (managed by Progetto Arca). They provided outpatient consultations and inpatient intermediary care (24 beds, in four rooms). Outpatient consultations were carried out twice per day, for 4 hours both in the morning and evening. This allowed MSF clinicians to respond to the basic health needs of the homeless, as well as to identify cases requiring admission to inpatient intermediary care or if needed, referral to secondary level care facilities. The basic components of the MSF care package are presented in [Box 1](#).

The admission criteria for inpatient intermediary care were all clinical conditions requiring daily medical and nursing care. Additionally, cases referred at hospital discharge and cases sent by the Help Center of the municipal social services, were also admitted to inpatient care. Staffing for the intermediary care consisted of five MSF nurses who were present 24 hours per day in shifts of 8 hours each, and three half-time clinicians performing regular ward rounds of 4 hours, twice daily. Almost all patients discharged

Box 1. Package of activities offered by MSF for outpatients and inpatients cared for during the 'cold emergency' intervention, Milan, Italy (December 2012–March 2013)

- (A) Outpatient consultations (a consultation area was located in the same structure where people were hosted). Intake and follow-up consultations were conducted for relatively simple conditions such as: acute respiratory tract infections (common cold, otitis, bronchitis), muscle pain (sprain, strain), skin diseases, mental disorders (anxiety, insomnia), dental infections (acute dental abscess), gastrointestinal disorders (gastritis, non-complicated ulcers), chronic diseases (diabetes and hypertension), simple trauma (minor wounds, injury and sprain).
- (B) Inpatient nursing and medical care (24 beds for care of persons who were sick but did not require hospitalization, or who needed intermediate care post-hospitalization). Activities included:
- Ensuring the referrals for seriously sick patients to identified public hospitals of the town of Milan by municipal ambulances.
 - Collaborating with the Red Cross and MD Association mobile teams, providing basic medical care in the main railway station and nearby areas.
 - Offering treatment free of charge (drugs and small medical equipment provided for free by the Italian Pharmacists' Association and partially by MSF if not included in this donation).

from the MSF intermediary care service remained guests in homeless hostels in neighboring areas and continued to benefit from follow-up in the outpatient department (OPD). However, some patients were referred back to ER services or secondary care using the public ambulance service, and transport and accompaniment to consultations at secondary level care facilities were ensured by MSF.

Data collection and analysis

Data were collected in a dedicated Excel database and were validated against patient medical records. For each patient, three diagnoses could be collected: a principal diagnosis reflecting the dominant clinical condition as assessed by the attending clinician, and up to two additional conditions, which for the purposes of this study were only used to assess whether patients had an underlying chronic condition. Program data was imported into EpiData Analysis software v.2.2.1.171 (EpiData Association, Odense, Denmark) for simple summary statistics.

Ethics

This study met the Médecins Sans Frontières' Ethics Review Board (Geneva, Switzerland) approved criteria for analysis of routinely-collected program data. As all activities were conducted by MSF under the umbrella of Progetto Arca, mandated by the national authorities for support to the homeless, and as the study used only routine, anonymous data, full ethics review was not sought.

Results

Characteristics of the study population

A total of 454 individuals benefited from outpatient consultations, while 123 individuals were admitted to the inpatient intermediary care services. General demographics of these patients are presented in Table 1. Almost all patients from both groups were male and their age distributions were similar. Individuals of Italian nationality represented 29% (133/454) of the outpatients and 39% (48/123) of the inpatients. The other nationalities represented a classic pattern of migration to Italy; made up of mainly North African (Moroccans and Tunisians) and Eastern European nationalities.

Outpatient morbidity pattern and referrals

Diagnoses and treatment characteristics of outpatients are shown in Table 2. An average of 2.9 consultations was conducted per patient, translating to about one consultation per patient per month. There was a high prevalence of acute respiratory tract infections 40% (522/1311) with 11% (51/454) of all patients also having an underlying chronic condition (cardiovascular disease, chronic obstructive airway disease, diabetes, epilepsy, chronic hepatitis, hypertension or malignant neoplasms). Such patients were more likely to have a higher follow-up rate, however, no data were collected on follow-up of specific patients and individual follow-up rates could therefore not be calculated. About 3% (38/1311) of all consultations led to referral for emergency or secondary level care.

Table 1. Demographic characteristics of outpatients and inpatients treated by MSF during the 'cold emergency' intervention, Milan, Italy (December 2012–March 2013)

	Outpatients N (%)	Inpatients (intermediary care) N (%)
Total patients	454	123
Age ^a (n=231)		
20–29	40 (17)	14 (11)
30–39	63 (27)	23 (19)
40–49	62 (27)	44 (36)
50–59	41 (18)	25 (20)
60+	25 (11)	17 (14)
Median (IQR)	41 (33–51)	43 (35–54)
Females	2 (0.4)	1 (0.8)
Origin		
Italy	133 (29)	48 (39)
North Africa	117 (26)	25 (20)
Eastern Europe	74 (16)	18 (15)
South Asia	49 (11)	11 (9)
Other	81 (18)	21 (17)

^a Collected from February 2013 onwards, n=231. IQR: interquartile range.

Table 2. Morbidity pattern and referrals of patients presenting for outpatient treatment during the 'cold emergency' intervention, Milan, Italy (December 2012–March 2013)

	N (%)
Total consultations	1 311
Mean consultations/patient	2.9
Main diagnoses	
Acute respiratory tract infections	522 (40)
Localized aches/pains	202 (15)
Skin diseases	88 (7)
Acute psychiatric disorders	63 (5)
Dental and periodontal infection	54 (4)
Gastro-intestinal diseases	53 (4)
Trauma	49 (4)
Other	280 (21)
Suffering from underlying chronic conditions ^a (among first consultations only, n=454)	51 (11)
Referrals from outpatient department	
Did not require referral	1 265 (97)
Emergency Room	5 (0.4)
Second level of care	38 (3)
Other referrals	3 (0.2)

^a 'Chronic conditions' comprise a diagnosis of cardiovascular disease, chronic obstructive airway disease, diabetes, epilepsy, chronic hepatitis, hypertension or malignant neoplasms.

Table 3. Morbidity pattern, length of stay and outcomes of intermediary care inpatients during the ‘cold emergency’ intervention, Milan, Italy (December 2012–March 2013)

	Referred through public reception center N (%)	Referred through hospital N (%)	Total N (%)
Total admissions (%)	89 (72)	34 (28)	123
Main diagnoses			
Acute respiratory tract infections	53 (60)	5 (15)	58 (47)
Acute psychiatric disorders	8 (9)	2 (6)	10 (8)
Skin diseases (infectious)	2 (2)	5 (15)	7 (6)
Diabetes	4 (4)	1 (3)	5 (4)
Surgical case	3 (3)	2 (6)	5 (4)
Others	19 (21)	19 (56)	38 (31)
Suffering from underlying chronic conditions ^a	13 (15)	16 (47)	29 (24)
Length of stay			
<1 week	62 (70)	10 (29)	72 (59)
1–2 weeks	9 (10)	6 (18)	15 (12)
2–3 weeks	7 (8)	4 (12)	11 (9)
3–4 weeks	0	6 (18)	6 (5)
>4 weeks	11 (12)	8 (24)	19 (15)
Median (IQR)	4 (2–8)	16 (5–28)	5 (3–18)
Outcome			
Discharged	85 (96)	22 (65)	107 (87)
Referred	2 (2)	6 (18)	8 (7)
ER	2 (100)	5 (83)	7 (88)
Secondary care	0	1 (17)	1 (13)
Absconded	2 (2)	6 (18)	8 (7)

^a ‘Chronic conditions’ comprise a diagnosis of cardiovascular disease, chronic obstructive airway disease, diabetes, epilepsy, chronic hepatitis, hypertension or malignant neoplasms.

ER: emergency room; IQR: interquartile range.

Inpatient morbidity, length of stay and outcomes

Among the 123 patients admitted to the inpatient intermediary care, a similar pattern of morbidities as for outpatients, was observed (Table 3). There was also a high prevalence of acute respiratory infections (47%; 58/123), with a higher proportion of patients suffering from chronic conditions (24%; 29/123). Patients were referred either through public reception centers (72%; 89/123) or at hospital discharge (28%; 34/123). All patients who were referred, presented at the MSF facility, i.e. there was a referral completion rate of 100%. All those requiring admission were admitted. Forty one percent (51/123) of all admissions required more than 1 week of inpatient care. In addition, a total of 7% (8/123) of patients could not be managed at the intermediary facility and required further referral, highlighting the serious condition of these patients. Marked differences were observed between patients referred through the public reception centers and those referred through hospitals: hospital-referred patients had a more diverse morbidity pattern; were more likely to suffer from chronic conditions; had a longer length of stay in the facility and were more likely to be counter-referred to an ER or to voluntarily abandon the service before the end of treatment. During the study period there were no in-facility deaths.

Discussion

This is one of the first studies describing the experience of a non-governmental organization (NGO) in managing medical care for the homeless in Europe. It shows that a relatively high proportion of homeless people are Italians, contrary to the presupposition that the homeless are typically undocumented migrants. This may be a reflection of the growing economic recession in Europe and the resulting loss or lack of employment, which influences the ability to pay for housing. The morbidity pattern, relatively long lengths of stay and need for referrals justify the important gap-filling role played by MSF. It also demonstrates how health services can be adapted in an innovative manner to client needs.^{6,8}

In both our inpatient and outpatient services, a high number of acute respiratory conditions were observed due to the winter conditions. These high case-loads during this period negate the conditions commonly seen in homeless population (skin diseases, acute psychiatric disorders, dental infections, trauma and chronic conditions such as diabetes and hypertension).^{10,13–14} Overall, the medical condition of the ambulant homeless population led to about 3% of patients being sent to emergency or secondary care. Approximately one in ten of all patients had an

underlying chronic condition. One wonders what would have happened to these patients in the absence of the ambulatory service. The outpatient service most likely played an important role in linking these patients with appropriate services. In addition, this service may have helped to prevent the deterioration of health of the guests/patients, which would then have required higher levels of care. Although this is plausible, we do not have data to substantiate this hypothesis.

Inpatient intermediary care services were well-utilized, with considerable numbers of patients being admitted over 3 months. The inpatient services were attended more by Italian individuals, who were typically older in age. From our results, it is not possible to conclude whether Italians had better access to our services and thus increased the average age of our patient population, or whether they had increased medical needs, due to their older age. The considerable number of patients with chronic conditions requiring long-term treatment suggests a need to ensure systematic follow-up and accommodation for them in appropriate facilities. The fact that about four (41%) in every ten patients admitted required over a week long hospital stay, highlights the important intermediary care role played by the MSF facility. Frequently, emergency care and subsequent hospital admission are the only form of health care used by the homeless. The relatively high referral rate from hospitals (28%), the 100% referral completion and the low counter-referral rate to the ER or to hospitals (7%), emphasize the crucial need for intermediary care and is also supported by findings of other studies.^{8,11–12,15–18} Integration of the inpatient service with ambulatory care reflected the good practice of providing access to different aspects of health care in one program, as described elsewhere.¹⁹

The strengths of this paper are that provision of care and the data collection were done by the same individuals, and a high level of accuracy was achieved by systematic data validation. However, the study also has some limitations. For data collection purposes, a database was used with a maximum entry limit of three diagnoses. This is not ideal when individuals may have multiple co-morbidities such as mental health disorders, drug addiction and alcohol dependency. In the future, an adapted database should be used to better capture such chronic co-morbidities. Additionally, social conditions were not included in the data collection, which would have led to a better understanding of the co-factors that contribute to the vulnerability of the homeless population.

The ideal situation would be that medical NGOs such as MSF concentrate their efforts and limited resources on the management of medium-term inpatient intermediary care services for vulnerable homeless individuals discharged from hospitals and/or identified through a public social service; while outpatient services are covered by the public health system (albeit ideally integrated within the same physical location).¹⁹ This central role of NGOs has also been recommended elsewhere.²⁰ There is a need for commitment of local health authorities to provide universal access to health care, particularly for vulnerable groups. In countries like Italy there is currently a strong tendency towards privatization of services which will result in payment for services, and this would consequently make access to healthcare even more difficult.

This experience points to the need for parallel initiatives in other European countries^{8,16,18} to help policy-makers and public health managers to find solutions on how to organize social and

medical care for homeless people, how to measure social and medical outcomes and how to calculate the associated health costs.

In conclusion, we have highlighted an emerging public health problem of access to health care for the homeless in Italy. We call for increased cohesiveness and coordination between international organizations working with homeless people in different countries so that a comprehensive approach can be developed to address the various problems of this vulnerable population group.¹⁰

Authors' contributions: GDM, SG, BM and FR conceived the study; GDM collected the data; RVdB developed the data collection tools and analyzed the data. GDM and RVdB wrote the first draft of the manuscript; SG, BM, FR, AS, CR and RZ critically revised the manuscript for intellectual content. All authors read and approved the final manuscript. RVdB is guarantor of the paper.

Funding: None

Competing interests: None declared.

Ethical approval: This study met the Médecins Sans Frontières' Ethics Review Board (Geneva, Switzerland) approved criteria for analysis of routinely-collected program data.

References

- 1 Edgar B. European Review of Statistics on Homelessness. European Observatory on Homelessness. Brussels, Belgium: FEANTSA; 2009.
- 2 Tsenkova S, French M. Affordable land and housing in Europe and North America. Nairobi, Kenya: UN-HABITAT; 2011.
- 3 Sun S, Irestig R, Burstrom B et al. Health-related quality of life (EQ-5D) among homeless persons compared to a general population sample in Stockholm County, 2006. *Scand J Public Health* 2012;40:115–25.
- 4 Beijer U, Andreasson S. Physical diseases among homeless people: gender differences and comparisons with the general population. *Scand J Public Health* 2009;37:93–100.
- 5 Fazel S, Khosla V, Doll H et al. The prevalence of mental disorders among the homeless in western countries: systematic review and meta-regression analysis. *PLoS Med* 2008;5:e225.
- 6 Hewett N, Hiley A, Gray J. Morbidity trends in the population of a specialised homeless primary care service. *Br J Gen Pract* 2011;61:200–2.
- 7 Crisis UK. Critical Condition: vulnerable single homeless people and access to GPs. London, UK: Crisis UK; 2002.
- 8 Verlinde E, Verdee T, Van de Walle M et al. Unique health care utilization patterns in a homeless population in Ghent. *BMC Health Serv Res* 2010;10:242.
- 9 Flanagan SM, Hancock B. 'Reaching the hard to reach'—lessons learned from the VCS (voluntary and community Sector). A qualitative study. *BMC Health Serv Res* 2010;10:92.
- 10 Carpenter I, Gladman JR, Parker SG et al. Clinical and research challenges of intermediate care. *Age Ageing* 2002;31:97–100.
- 11 Dorney-Smith S. Nurse-led homeless intermediate care: an economic evaluation. *Br J Nurs* 2011;20:1193–7.
- 12 Schneller K. Intermediate care for homeless people: results of a pilot project. *Emerg Nurse* 2012;20:20–4.

- 13 ISTAT. Le persona senza dimora - anno 2011. Ministry of Welfare, Caritas Italiana, FIO.PSD; 2012.
- 14 Uccella I, Pajno MC, Nosotti L et al. Gli stranieri senza dimora: studio delle condizioni predisponenti ad alto rischio di marginalità. XI Congresso Nazionale SIMM. Palermo; 2011.
- 15 Van Laere I, de Wit M, Klazinga N. Shelter-based convalescence for homeless adults in Amsterdam: a descriptive study. *BMC Health Serv Res* 2009;9:208.
- 16 O'Carroll A, O'Reilly F, Corbett M et al. Homelessness, health and the case for an intermediate care centre. *Mountjoy Street Family Practice*; 2006.
- 17 Kertesz SG, Posner MA, O'Connell JJ et al. Post-hospital medical respite care and hospital readmission of homeless persons. *J Prev Interv Community* 2009;37:129-42.
- 18 Anon. Improving hospital admission and discharge for people who are homeless. *Homeless Link and St Mungo's*; 2012.
- 19 Priebe S, Matanov A, Schor R et al. Good practice in mental health care for socially marginalised groups in Europe: a qualitative study of expert views in 14 countries. *BMC Public Health* 2012;12:248.
- 20 Karl-Trummer U, Novak-Zezula S, Metzler B. Access to health care for undocumented migrants in the EU: A first landscape of NowHereland. *Eurohealth* 2010;16:13-16.