Gaps in Health Care Services for Refugees in Cologne, Germany – a Mixed Methods Analysis

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Research Article

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Posted Date: December 10th, 2020

DOI: https://doi.org/10.21203/rs.3.rs-120232/v1

Gaps in Health Care Services for Refugees in Cologne, Germany – a Mixed Methods Analysis

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Abstract

Background: Ever since the peak in the number of refugees arriving in Germany in 2015, existing health care structures have faced major challenges. The city of Cologne developed ad-hoc new structures: a separate department for refugee medicine was set up. In the context of this study, the actual gaps in the health care of refugees in the city of Cologne were examined. The study provides lessons learnt for the health care of refugees.

Methods: The present study used an embedded mixed-methods approach using 20 semi-structured interviews and a database including 353 datasets with socio-demographic, health-related and resource-related information to cross-check the results of qualitative data.

Results: The qualitative data revealed gaps in providing health care to refugees. These gaps were found concerning approving health care services and medical aids by the municipality, communication and cooperation between the actors in care of refugees, undersupplies in mental health care and addictive disorders as well as improper housing situations for vulnerable groups of refugees with mental health issues, psychiatric disorders or elderly persons. Quantitative data confirmed the gap in approving health care services and medical aids, whilst no valid statement could be made about communication and cooperation. Undersupplies for mental health issues were confirmed, the gap for treatment of addictive disorders shows a divergence within the database. Improper housing situations for mentally ill persons were reflected, for elderly persons this did not appear in data.

Conclusion: Analysing the gaps can stimulate necessary changes to improve health services for refugees locally, while others are beyond the control of the local authority and require legislative and political action.

Trial registration: none

Keywords: health care services, migration, asylum seekers, Germany, Cologne, accessibility to health care, mixed methods, qualitative

Introduction

Refugees are more vulnerable than local people due to increased morbidity [1;2;3;4]. In recognition of their vulnerability, they have nationally and internationally also certain rights with regard to health care provision [5;6]. According to the Asylum Seekers Benefits Act § 3 and §6, individual medical care includes “treatment of acute illnesses and pain conditions” for “recovery, improvement or for the relief of illnesses or consequences of illness" [7].

In Germany, the responsibility for health care (and other needs) of asylum seekers is structured regionally with different procedures and specifications by federal state [8;9;10] and by cities [11]. This has been an issue for discussion, as no general regulations for health care are in place [12;13].

The City of Cologne, located in the federal state North Rhine Westphalia, took in about 5% of the 21% [14] assigned refugees of this federal state [15] since a federally agreed distribution system, the so-called “Königsteiner Schlüssel”, was determined in 2015. In response to the large number of refugees arriving, the City of Cologne set up ad hoc new structures: a department within the Public Health Department was specifically responsible for the delivery of medical care for refugees. This made Cologne one of the pioneers regarding health care delivery structures for refugees.

Although the number of asylum seekers has steadily decreased since the peak of 890.000 refugees arriving in Germany in 2015 [16], calculating the needs of refugees in advance [17] was difficult: The countries of origin varied due to changing inhumane conditions (for example war, civil war) or season. However, processes within the supply structures and their stakeholders were less subject to variability. Hence, an analysis with regard to coordination, structures, processes and cooperation appeared helpful to optimize supply. Before and during

the transition from specialized services for asylum-seekers to regular care, the effectiveness of the care structures has been shown to be important for vulnerable patients [15]. Previous medical care and medical aids[1] could only be accessed when granted by Social Welfare Departments of the city of residence. This process caused delays and occasional unjustified rejection, which has been improved by issuing an electronic health insurance card by the statutory health insurance for refugees [18;19] to clarify the issue of health care funding. However, barriers like communication [20;21], interpretation of statements and cultural differences [3;22;23] remain.

[1] Medical aids are items that are prescribed by a doctor to support the therapy and healing process or to make everyday life easier. For example, bandages for herniated discs or wheelchairs for people with walking difficulties.

Methods

Aim

For improving quality and effectiveness [24;25] of the care structure for this particularly vulnerable population of asylum seekers and refugees, this study looked at gaps in health care for refugees in Cologne. Specifically, it 1) identifies reasons for sub-optimal care, 2) investigates which actors are involved in the care and how their cooperation is organized, and 3) describes deficiencies as well as over- or undersupplies in particular areas.

Procedure (Study design)

An exploratory mixed methods approach with two data sources was used: the database of the refugee medicine department (Dep.RM) and interviews with key informants. First key actors were identified and interviews were conducted. The statements were analysed using content analysis based on the Grounded Theory methodology with regard to actual gaps and barriers in providing health care. These were cross-checked with the findings of the database. This approach was intended to check to what extent the statements from the qualitative data analysis were reflected in the secondary data. The research was conducted in German.

Setting

The study took place in the City of Cologne. In 2018 a total of 10.216 refugees were recorded in Cologne, in 2019 this figure dropped to 7.460 [26]. These refugees were provided shared accommodations and emergency care by the municipality in three major NGO operators managing the accommodations.

The study was conducted within the newly established department for Refugees health constitutes one of the 16 departments within the Public Health Department of the city. It consists of doctors and social workers and its function is to support the accommodation

operators, to advise other actors in the city administration (such as for example housing Department) and to organize the provision of health care for refugees in urgent medical cases.

Qualitative sampling and data collection

Professionals

Professionals were recruited according to the following selection criteria: Professionals were included who worked in accommodations for refugees as nursing staff or social workers as well as persons with an advisory function in health care for refugees. They had to work in Cologne and be older than 18 years. It was preferable if the persons had experience in cases of refugees with complex health problems. Professionals that were not involved in health care of refugees were excluded.

The professionals were recruited through contacts of the Dep.RM to operating institutions for refugee accommodations. Line managers permitted the staffs´ participation and recommended employees. The first half of persons was recommended by the Public Health Department and contacted by email or telephone. Afterwards complementary participants were contacted by snowball principle by telephone and email. Recruiting was done sequentially and sampled, so that each profession and accommodation institution were represented. All major players who operated accommodations were invited. 20 professionals from managing and operating organisations in the administrative boundaries of Cologne were approached and 18 persons consented, 2 didn’t respond to the request.

The professionals were interviewed either in their own offices, in other rooms within the accommodation or in a coffee house. The participants were provided with the consent form, the information leaflet and a short summary of the study in advance. Informed consent was

taken from all participating professionals. The researcher used audio recording to collect the data.

Refugees

Refugees were recruited according to the following selection criteria: They had to live in Cologne and be 18 or above years old and had to be able to communicate in German, English or with a language interpreter. They also needed to have experienced a gap in health care. This gap was not previously defined. Refugees were recruited through the contact with professionals. The accommodation staff got informed about the aim of the study and presented this to refugees with medical issues and perceived insufficient care. When the refugees agreed to participate, the consent form, the abstract and the information magazine were sent to them directly or to the accommodation where they were living in in advance. Three refugees were approached and two took part, one refugee refused to take part. Informed consent was taken from all participating refugees. The refugees chose a community room in their accommodation and a coffee house as location for being interviewed.

Description of study participants

The professionals (n=18) had a mean age of 45.5 years (± 2.3), 88% were female (n=16) and had a mean work experience of 5.4 years (min: 0.5 years; max: 40 years). They worked for the municipality of Cologne (25%), the German Red Cross (40%), Caritas (20%) and a Lutheran Charity organisation (5%). 61% of the professionals were medical staff and 39 % social workers. 44% worked directly on the health care of refugees (executive role), 33% were

consulting other professionals or refugees (advisory role) and 22% were superiors of the executives (managerial role).

10% (n=2) of the participants were refugees. They were male, had a mean age of 42.5 (±17.5), and had a mean time of being in Cologne of 4 (±2) years.

Data collection

A socio-demographic questionnaire including questions on gender, age, work experience in years, profession and actual role in the care of refugees, and characterization of the accommodation was given to and filled in by the participants before the actual interview.

A semi-structured interview guide was used for professionals and adjusted for refugees (adjustment in brackets). The following subject areas were queried in open questions: Work experience in the care of refugees (general experiences in Cologne), care pathways and actors (own pathway in health care), problems in care (own experience), explanations and similarities of the problems mentioned (explanations and similarities compared to the care of other refugees), effects on the individual, ideas for improvement. The interview guide was pre-tested and discussed in an interdisciplinary research colloquium on migration, organised by HIGH and in a research workshop for qualitative health care science.

All interviews were carried out by the first author in German language or with a language interpreter. The average time for interviews was 30-45 minutes, ranging from 20 minutes to 90 minutes.

Data analysis

The content analysis was carried out after the Grounded Theory approach. The data was coded inductively with MAXQDA [27]. Two independent persons who worked on health services research, tested randomly selected transcripts, crosschecked and discussed discrepancies to obtain a clear coding scheme of the codes with the first author.

In the analysis, different areas had been defined as gaps in the care of refugees. These areas were divided into reasons for suboptimal care, cooperation and organization as well as deficiencies, oversupplies and undersupplies (see figure 1).

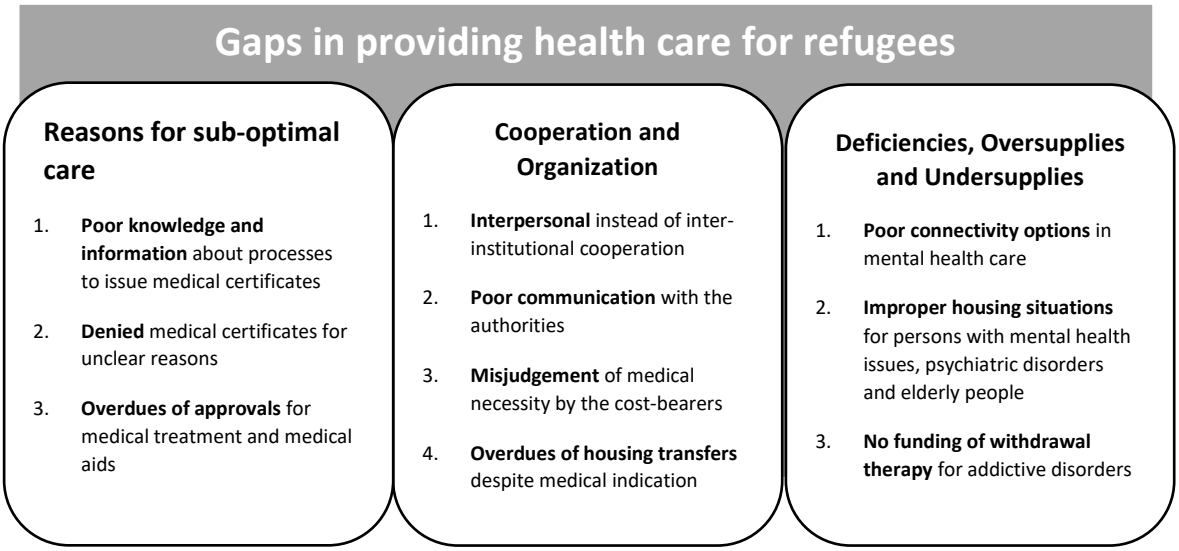

Figure 1: Coding paradigm of the study: themes and subthemes

Quantitative data and populations

A database was set up in March 2019 by the first author and supplemented subsequently the following months. All refugees who were looked after by the Dep.RM from January 2018 to June 2019 were included in the current data analysis. In total 353 data sets were entered with the following information:

Information about the patient	Medical information	Information concerning the linkage to the health care sector
unique ID	classification of morbidity (mono-, co- and multimorbidity	admission and closing date of the case (a case being a sick refugee with health care need who had been linked to the Dep.RM)
country of origin	number and type of diagnoses	the person who linked the refugee to the Dep.RM
birthday	ICD 10 diagnosis group [29]	access route
age and age cohorts[2] [28]		reason for contact
gender		number of contacts of the Dep.RM with the municipality concerning the refugee
family connection		number of contacts of the Dep.RM with the accommodation concerning the refugee
number of children		number of contacts with the providers in the health care sector
type of accommodation		total number of contacts (including all contacts for providing care)
		difficulty in care (rated from 0= no difficulties to 2= serious difficulties)

190

191 However, not all data sets consistently contain all information, data from January 2018 to
192 March 2019 was sometimes incomplete. The database was analysed descriptively with Excel.
193 The number, the mean and the confidence intervals were calculated when applicable results
194 of the qualitaitve interviews are matched with corresponding data of database analysis.

195

[2] The categorization of age cohorts was based on the model of UN Migration Report 2017 [27]

196

197 Results

198 The qualitative and quantitative results are presented simultaneously regarding in line with
199 the coding themes presented in the methods (see figure 1).

200

201 *Description of study population*

202 Out of the 348 client records 41.4 % (n=146) referred to men and 57.4% (n=202) to women.
203 The most common disease groups according to ICD 10 were F = “mental and behavioural
204 disorders" with about 15% and O "pregnancy, childbirth, puerperium" with about 17%. The
205 most frequent requests to the Dep.RM concerned residence certificates and the
206 linkage/referral in the health care system.

207 The most important characteristics of the database are shown in figure 2. These were mostly
208 the base for the following analysis.

209

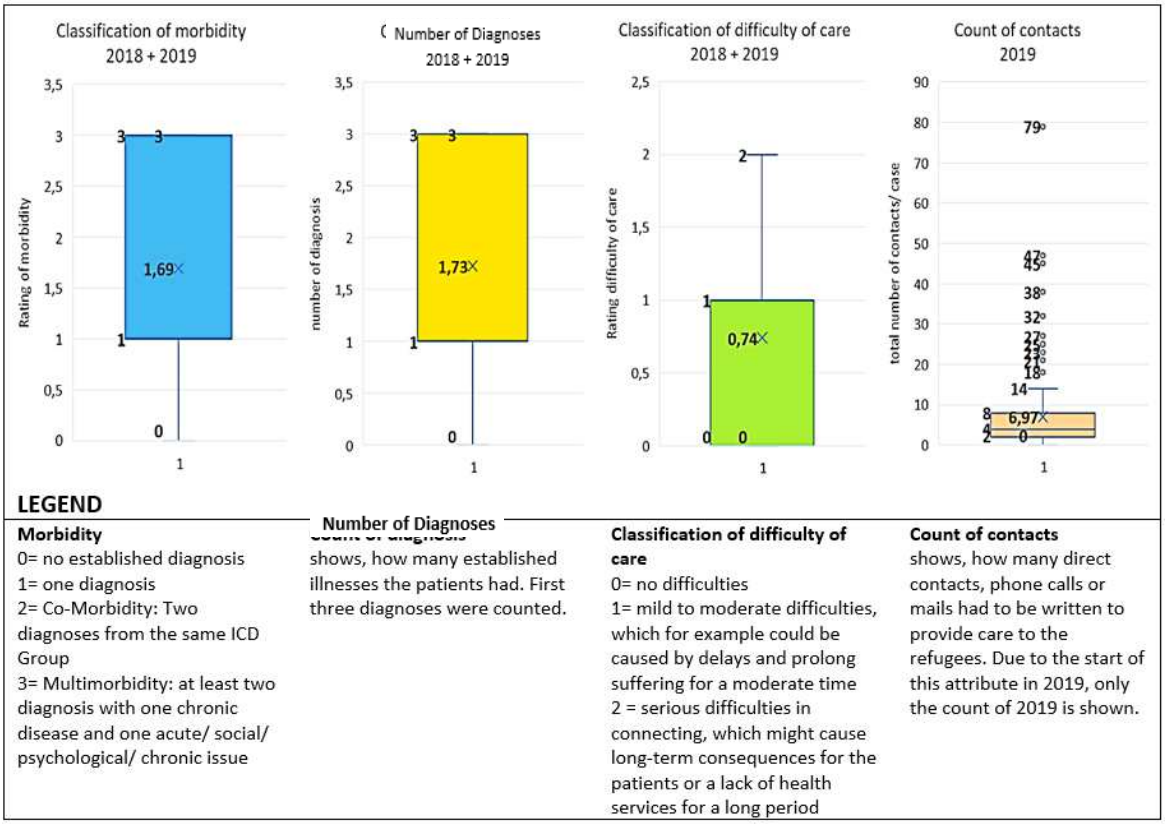

Figure 2: Overview of the classification of morbidity, difficulty in care, number of diagnoses and the count of contacts for 2018 and 2019

210

211 As shown in figure 2, the population had a mean of established diagnoses of 1.7, most of the cases
212 were between 1 and 3 diagnoses (cases with no information were excluded). In order to sort the
213 diagnoses, they were classified in a morbidity scheme [30;31] between 0 and 3 (0 = no established
214 diagnosis (n=45), 1 = one established diagnosis (n=137), 2 = co-morbidity (n=63), 3 = multi-morbidity
215 (n=83). There was no information for n= 22). The mean in **morbidity** was 1.7 (without morbidity = 0;
216 n=45, with morbidity = no information). The Dep.RM was asked to rate the challenges while helping
217 the refugees in a three step Likert Scale from 0 (=no difficulties) to 2 (=serious challenges). The mean
218 of this value was 0.7, most of the cases were rated between 0 (n= 104) and 1 (n=239). Only 10 cases
219 were rated with 2. Also every contact made by the Dep.RM for helping the refugees (e.g. with the

municipality, the accommodation, etc.) was counted: The mean for all cases was 7.0 (±2.0)[3] contacts. The normal range was between 2 and 4 contacts with outliers.

Reasons for sub-optimal care

Identified reasons for suboptimal care were poor knowledge and information about processes to issue medical certificates, denied medical certificates for unclear reasons, and overdue approvals for medical treatment and medical aids.

Poor knowledge and information about processes to issue medical certificates

The provision of health services in the form of diagnostics and treatment was rated mostly the same as for German citizens by the interviewees. In critical or complex cases, organizational support from the Public Health Department was often used to integrate the refugees into the care structures.

A critical point in providing care for refugees was getting the approval for financing the health care services. This required a medical treatment certificate issued by the Social Welfare Department. The interviewees mentioned that the process of issuing treatment certificates had changed several times in the past few years. Due to lack of communication about these changes the employees had difficulties planning care within the accommodation facilities.

"Then they come back without a medical treatment certificate. And that's just really happening a lot. Also, that women in late stages of pregnancy are sent to the Social Welfare Department and then you want to connect them, maybe you have even made an appointment. Because

[3] Standard deviation in brackets

you assume that she has an appointment today - so she goes to the Social Welfare Department today and then she also has a medical treatment certificate. And then she didn't get one." I17

This meant additional work for the employees, because health care appointments had to be rescheduled and the issuing of the treatment certificate had to be taken up with employees from the Social Welfare Department.

"You can only get them (…) in some cases only medical treatment certificates and also according to demand and pressure from us. (…) And that just inhibits our work, right? So, we can't connect the sick people to doctors. (…) What´s the policy behind it? I can´t say that. And this is annoying. This is unsatisfactory at all levels." I9

In the quantitative data 21.8% of the cases connected to the Dep.RM needed to be linked to care providers. These patients had an average number of diagnoses of 1.6 (±1.0). This shows a high variability. The average difficulty of care was 0.8 (±0.5). In complex cases with two or more diagnoses difficulties in connecting were rated 1.0 (± 0.6), indicating a light increase. This could also be seen in the count of contacts that had to be made for linking patients to the health care sector: In complex cases there had been 10.8 (± 11.8) contacts, in all cases 9.7 (±11.5). As such, the quantitative data shows, that many more patients were connected to and helped by the Dep.RM than suggested in the interviews.

Denied medical certificates for unclear reasons

The interviewees reported cases, where medical treatment was necessary right away for instance for children with diarrhoea. Due to the lack of treatment certificates, which could also have arisen from other causes such as office opening times, interviewees on occasion

tuned to trusted medical contacts. These doctors then treated the refugees without a treatment certificate and had them submitted later.

"You have usually found a paediatrician with whom you work. Who also takes in a child when he is acutely ill and does not yet have a medical treatment certificate." I17

In quantitative data supporting refugees to get their medical treatment certificate had to be done 7 times in 2018 and 2019. This compared to 2.0% of all cases. The patients all had one diagnosis (±0) and the difficulty was rated with 1 (±0). Data did not allow for further comparisons.

Overdue approvals for medical treatment and medical aids

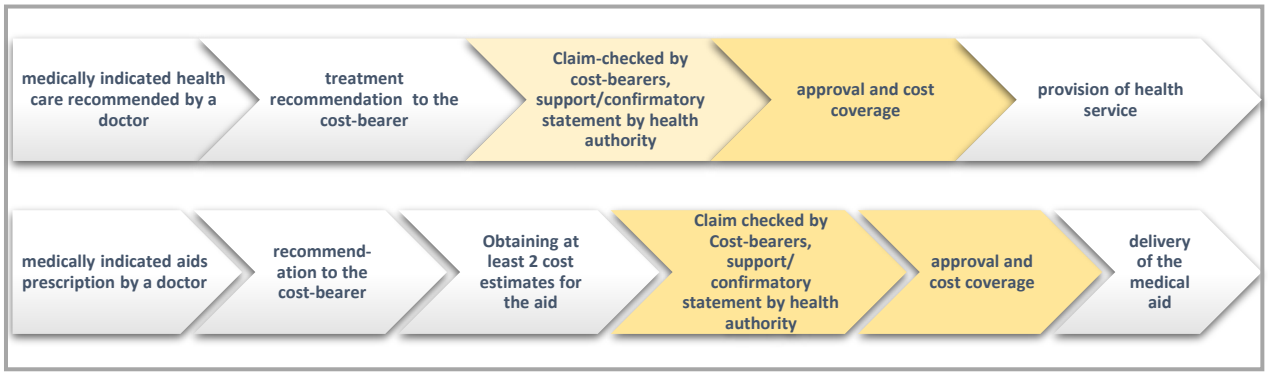

figure 3: Procedures of approvals for health care and medical aids.

The challenging steps are color-coded.

Additional health care benefits that went beyond regular care required additional permits to cover costs (figure 3). According to medical advice and in the case of medical aids, the estimated costs were checked on necessity and token over by the responsible department. Obtaining medical aids had been described as difficult, complicated and lengthy.

"It was about a child who needed a rehab buggy. And it was at an age where it could no longer sit in the stroller. It was also completely inadequate for the child's posture and (…) this child cannot be carried up and downstairs continuously. Then I lack the understanding of (…) where these hurdles arise, that it took time and time and time. And in this case, an almost unfortunate situation has arisen with regard to the housing situation and the supply of aids. And that has dragged on for months." I2

More than the half of the participants described situations with overdue approvals. Worries about long-term consequences were also described, but rarely situations where the aids were not delivered at all.

Statements for cost coverage for medical treatments were requested in 8.2% of cases, statements from cost-bearers excluded (in total with cost-bearers 10.2%). The mean diagnosis of these cases was 1.9 (±0.8), difficulty was rated at 0.7 (± 0.4). It is evident that the patients were mostly comorbid or multimorbid and the fulfilment of the request was not associated with extraordinary difficulties. In 2019 the Dep.RM had to do 7 (±6.7) contacts in average regarding inquiries to cost coverages. This showed that the support was needed and that the problems were solved by the Dep.RM with less effort than by the accommodation staff, as was stated in the interviews.

Cooperation and Organization within the Care of Refugees

In the early process the accommodation staff was in charge of organizing most health care related matters for refugees. Later on, when the refugees became more integrated and got more knowledgeable of the system, they act more independently. As can be seen in figure 4 many actors could be involved.

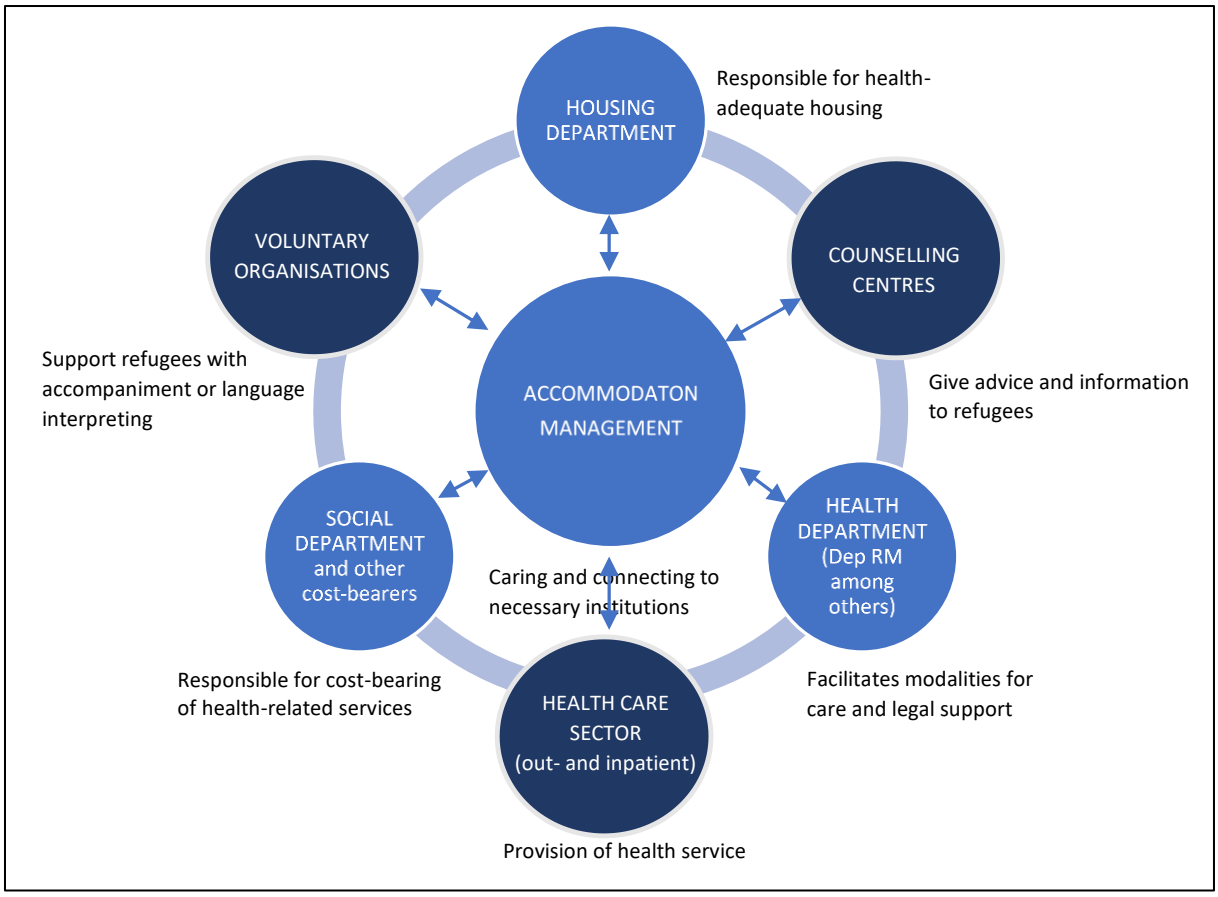

figure 4: Actor landscape

Gaps related to cooperation and organization within the care of refugees included issues such as interpersonal instead of institutional cooperation, poor communication with authorities, misjudgement of medical necessity by the cost-bearers, and overdues of housing transfers despite medical indication.

Interpersonal instead of inter-institutional cooperation

It became clear in all interviews that communication and networking between these actors was of great importance. Interpersonal relation and interaction were very important enablers for accessing health care as exemplified by the following quote:

“Two of our colleagues (...) did internships in the day clinic. It was actually nice, since then there has been personal contact. You can now also use the phone. There is a basis of trust. And in that respect, we got used to it a bit, they just come over from time to time. And we send people there. That is actually quite positive. "I7

This type of interpersonal cooperation was also highlighted in cases where health care funding was likely but not yet secured. This occurred in the event that a treatment certificate was not yet available, but treatment was necessary.

“I had a paediatrician in DISTRICT, and even if they didn't have an insurance certificate, I could send them there. And I promised, as soon as the certificate arrives, I would bring it over myself. And then it was actually okay. “I8

This kind of personal level cooperation within the city could make work more difficult. The responders referred to these difficulties with clinics, medical and social centres like this:

"It is often personal. Yes. I think it can be with different organizations or something like that, the cooperation with some of them goes very smoothly and the communication. And then you have another person, where it is a bit bulky like this.” I5

Poor communication with the authorities

Challenges could also be found within the communication between all persons organizing health care for refugees as well as with the municipality. Many interviewees mentioned a lack of communication especially with the Social Welfare Department.

"I already know a few names [in the Social Welfare Department [4]] and mostly those where things didn't go well and I know about six names. Six, seven names." I17

The respondents indicated that communication between the municipality and the accommodation should be expanded. Several respondents cited the introduction of "border crossing certificates" as an example. When refugees arrived in the emergency accommodations with this document, the staff wasn't informed about the scope of services.

"With so-called border crossing certificates, that was a new paper that we knew nothing about, which suddenly appeared here at the end of the year." I7

This lack of communication concerned not only exceptional situations like the one mentioned above, but also the scope of health services covered by the medical treatment certificate or the electronic health card. The limited/constrained communication led to dissatisfaction among many respondents. Some assumptions were made about how the changeable reimbursement of benefits arose. It was increasingly stated that the reimbursed scope of cost-bearing of health-related services was based on the personal opinion of the responsible person in the Social Welfare Department.

"Depending on who takes care of it and ... how much understanding or sympathy, or I don't know, empathy? That they just have, I think. I think it depends on that." I17

Misjudgement of medical necessity by the cost-bearers

Another repeatedly expressed assumption besides personal opinion was also the question of the responsibility and the medical knowledge of the people who decided about bearing the

[4] Supplemental information of the author

treatment costs. Several respondents expressed doubts that the people responsible could correctly assess the urgency of treatment.

“They were purely administrative people who did not see what was directly happening to the people affected. And these are quite, that were ... so in the interim time very often things where we went insane (...) and said "That can't be true". … And then we had to translate why that's so bad now and why something has to happen today and not just next week.” I4

When this kind of problem occurred the vast majority of interviewees working in emergency accommodations asked the Public Health Department to step in and support. Only a proportion of the interviewees working in counselling centres or shared accommodations used this option.

In 64% of all cases there was no information about the access path to the Dep.RM. Of the 126 cases where information was available, 40% where connected through other departments in the municipality and 47% through accommodations. Health care providers connected 6% of the cases as well as other actors from refugee care.

Overdues of housing transfers despite medical indication

In cases of high urgency, the employees from the accommodations stated that quick transfers to an adequate housing situation were not always possible despite the medical indication. Sometimes this was due to local conditions. Solutions sometimes had to be found between the higher levels of the operator institution, the Public Health Department and the Housing Department.

"That means that there is a lack of transparency ... definitely towards us and in some way the wish that we don't know about everything. Especially by the Housing Department, because otherwise we would also disagree with many people regarding the accommodation situation and would accordingly cause trouble that this would change." I3

In addition, there was often a desire to for mor traransparency and imporved communication. Compression of work processes and better interface management would save time and the supply processes could be implemented more promptly and efficiently.

“50 percent of the resources of our daily work are going into communication. If you think about it, that's the Housing Department. They have the power. That is their establishment. We are only a guest here. We are the home management.” I18

Improved transparency and communication would also counter considerations about the decision-making bases that currently exist.

Deficiencies, Oversupplies and Undersupplies

The interview analysis did not identify any oversupply of services, nor the complete absence of a required service. Four areas were identified where supply was regarded critically short: poor connectivity options in mental health care, improper housing situations for persons with mental health issues, no funding of withdrawal therapy for addictive disorders, and no proper housing situations for elderly people.

Poor connectivity options in mental health care

Undersupply in mental health care, partly declared as the greatest gap, was mentioned by all participants.

“there is definitely a big problem ... and with the medical care it`s similar. The biggest supply gap I see ...is in the psychiatric psychological area… in connection of people with post-traumatic stress disorder” I3

Most notable was the lack of access to therapists and psychiatrists. Usually there were waiting periods of 12-24 months for adults, children could be referred faster within 3-6 months. Intermediate offers for bridging up to therapy had been rated as positive by persons who give advice, persons who worked in accommodations hadn’t commented on it. The difficult linkage was due to lack of capacity, but also due to a reluctance to work with language interpreters and justify the financing of language interpreters.

“Because the problem is: when they open the barrel, they get the barrel closed again? And that's a lengthy process, and that's just too difficult for them to find therapists or opportunities to even go into therapy. Because here again the language barrier exists and many psychologists or psychotherapists do not like to work with interpreters, but the language is not covered. Or just the problem again, who pays the interpreter? Where do you get this from?” I1

It had often been noted that mostly only emergency care was provided in the clinics and that there was no long-term support, including language support. Due to the lack of care and support in the outpatient and inpatient sector, the refugees repeatedly found themselves in emergency care and suffered an aggravation or chronicity of their disease.

"Yes, there are so many revolving doors patients, no. Who are always psychiatry in, out, in, out." I10

The analysis of the database revealed the following: 14.7% of all cases were treated for ICD 10 group F “psychological and behavioural disorders”, the second largest group after ICD Group O “Pregnancy, childbirth and puerperium”. In 2018 37 cases (10%) were linked to the Dep.RM, in 2019 there were 15 cases (11%). The patients had an average of 2 diagnoses (± 0.9). The difficulty in care was rated 0.8 (± 0.4) in average.

Improper housing situations for persons with mental health issues

Furthermore, a large part of the respondents noted that the housing situation of mentally ill refugees was inadequate.

"I feel like I've been in a room for two years, like a prison, like a solitary cell." I20

Destabilization caused by a restless and noisy environment without privacy was seen as problematic for refugees with acute mental illnesses. This delayed an improvement in mental health and led to prolonged needs of therapeutic services.

“Or somehow a lot of noise. Around. That simply a lot of people live together under one roof. These ones often have sleep disorders anyway and cannot calm down, not even during the day. Because there is no room for privacy. (...) So that there are drastic break-ins again (...) that has an incredible impact on health. "I16

Furthermore, the accommodation of refugees with chronic psychiatric illnesses was discussed. This means refugees whose disorder did not necessarily arise due to the situation at home or while fleeing, but rather affected their personality. The shared accommodation of mentally ill people with other refugees would make the living situation more difficult for everyone

involved. Assisted living with care would be an added value, but integration was mostly not possible in the existing system before.

“That is also the biggest shortcoming, (…) Because there is no special form of accommodation at all. (...) But there are also really blatant ... with psychiatric disorders. They drive all other residents crazy, too.” I12

The most frequent reason for contact were inquiries for change of residence with 40%, followed by 25% without information and 21% for a connection to the healthcare system as well as advice and support. These numbers confirmed the statements of the interview partners that the biggest issues are mental health problems as well as the housing situation and the link to specialists.

No funding of withdrawal therapy for addictive disorders

As secondary issue related of mental health, the subject of addictive disorders was discussed divergently by half of the participants.

"I have not been able to find care gaps within addicts. They could be well connected everywhere." I3

This usually included the connection to a substitution clinic with methadone therapy. However, it was more commonly argued that there was still the need for withdrawal psychotherapy to reduce relapses. The approval of addiction treatment therapies depended on residency status and was a barrier in care as most were not approved. Close care of the patients was considered necessary for recovery.

"They go into detoxification for a week, come back and quickly relapsed. (...) After the detox, they come to us after a week. And they would have to go through several weeks of withdrawal for it to really makes sense. Unfortunately, that will not be funded. "I7

As a consequence, relapses occur, which caused higher costs as a combined therapy of methadone and psychotherapy according to the respondents.

"If you say "pay attention, then we'll do a full-time therapy ", directly detoxification plus for example three months of withdrawal. (...) Then that would be much cheaper than if he has been picked up by the ambulance, then by the police, then again by the ambulance, then emergency briefing, then by PsychKG[5]. In the end (...) thousands of euros were spent. But no, we'll stick to it. These follow-up therapies are not being adopted. "I16

Health assurance companies only costs assumed for treatment if the person had a permanent right of residence. Two respondents noted that cold withdrawal in jail was considered as an option for addicts to avoid access to drugs for a prolonged period and relapses.

“The residents who consume drugs and are dependent also realize that after the detoxification nothing will move forward. And that then they can quickly relapse back ... They know that, too. So that they are considering the possibility of going to jail.” I7

For the most part, the problem of caring for people with an addictive disorder included granting psychotherapy; the difficult access to psychotherapeutic care wasn’t called as a barrier.

Addiction was noted in 6 of 353 patients, which corresponded to a percentage of 1.7 %. Only 2 patients were connected to the Dep.RM due to their addiction, in the other cases addiction

[5] Law for protective measures and help with mental illnesses

was a secondary diagnosis. On average these patients had 2,67 diagnoses (±0.52) and the difficulty in care was rated 0.8 (± 0.4). None of the patients were linked to a mental health or addiction specialist due to addiction.

Here, a difference between the needs in qualitative data and the quantitative results could be seen.

No proper housing situations for elderly people

Half of the respondents also mentioned the housing situation as a problem in health care. In addition to the structural situation of the accommodations, which were described as "ramshackle" (I18) and "old" (I12), the respondents emphasized the accommodation of those in particular need of protection. This relates not only the mentally ill but also the elderly, for whom there was no separate accommodation with additional care provision. It was cited by persons who worked in accommodations that the care of elderly refugees and migrants in need was a hurdle. At the time of the survey, there was a difficulty in accommodating refugees in need of care in retirement homes. Up to this point in time there was no separate accommodation option, so the question of a long-term solution arose.

"F*or those in need of care in a retirement home. It's actually very, very, very difficult to get a place for them." I12*

There were no indicators for movement to a retirement home in the quantitative data. In the age cohorts over 50 years, 6 cases (1.7%) related to a change in living situations were found. These persons had an average diagnosis number of 2.3 (±0.8). The average difficulty of their care was 0.5 (±0.5). On the basis of the patient database no statement was possible about the extent and the sustainability of the care as well as the accommodation in assisted living.

Discussion

The mixed methods analysis showed a number of modifiable aspects that impair adequate health care provision for the vulnerable group of refugees. Some of which have been clearly highlighted by interviewees directly involved in the support services for refugees.

The challenge of issuing medical treatment certificates concerned almost only emergency accommodations with newly arriving refugees. This matter had since been discussed and resolved within Cologne: The Social Welfare Department now issues non-personal, blank certificates, which can be used by the accommodations in order to close this care gap. In emergencies or at the discretion of staff following necessary medical examinations, the blank certificates could be issued to residents in order to provide health care through the regular system.

In order to get a more precise picture of the problem of cost approval for treatment and medical aids, the executing persons in the respective offices should be interviewed. Further surveys on this topic would have to be carried out with the responsible persons in the authority.

The interpersonal relationships mentioned in the qualitative survey as the basis for the cooperation should be viewed critically. It could not be ascertained in the interviews whether there was a contractually based cooperation between the different parties. Cooperation with the actors of the City of Cologne should be strengthened through improved communication so that the supply can be carried out more smoothly. In addition to changes to inner-city

527 regulations on care this also applies to changes in accommodation, especially in the case of
528 medical indications.

529 The accommodation of refugees with mental illnesses in shared housing was mostly presented
530 as inappropriate due to noise and lack of privacy [32], but this type of placement prevented
531 other consequences like isolation. Nurses and social workers worked in the emergency
532 accommodations to take care of residents' concerns and were able to deal with exceptional
533 situations. But qualified staff for diagnosing or treating [33] mental illness represented a gap,
534 which had also been criticized [34, p. 32].

535 Linkage to psycho therapists had also been seen as necessary and as has finding a solution for
536 financing language interpreters [35]. Compared to the average waiting period of 23.1 weeks
537 [36] (= 5.7 months) for German citizens, the waiting periods with 12 to 24 months for refugees
538 in Cologne were at least twice as long.

539 The gap of financing and working with interpreters could also be found in other areas.
540 However, due to the existing study situation [37;38;39], this will not be discussed further.
541 Offers of temporary solutions were available from multiple providers. These offers had to be
542 brought closer to refugees to bridge the time until therapy places were available [40].

543 The separation of psychiatric patients in a separate housing situation would eliminate the
544 negative impact on refugees without psychiatric disorders. With the need for 24/7 care, it is
545 questionable who would finance and operate this accommodation as well as whether such an
546 accommodation separation would mean an improvement in the health of the patients.

547 It´s possible that addictive disorders didn’t show up a lot in quantitative data because the
548 linkage to the methadone clinic was easy and no other possibilities for treatment were
549 available. This might have caused the small number of patients with addictive disorders within

the database. Addictive disorders could arise from different reasons, for example mental health issues or medical treatment for physical illness. Further research about the need and the local situation would have to be carried out. In neighbouring countries like Austria or Switzerland refugees have full access to health care [9], which includes care for addictive disorders.

Limitations

We are aware and acknowledge that the analysis has its limitations. The database showed only a limited view on the linkage, care and support of refugees due to the introduction in March 2019 and further expansion during 2019. So, some characteristics like the “count of contacts” couldn’t be evaluated for 2018.

The scope of the database is limited as well: other departments in the Public Health Department were taking care of special diseases like tuberculosis as well as less serious illnesses were linked to the health care system by the accommodation staff themselves. Thereby these cases would never be covered and be part of this patient database. Furthermore, bias of selection could be found within the database due to the access path of refugees into the Public Health Department. Nevertheless, not only one type of patient group could have been examined like it was often the case in other studies [41]. Through the different types of linkages to the Dep.RM like accommodation staff or persons from the health care sector a broad range of clinical pictures and age groups of refugees was included.

In qualitative research, the participants were disclosed to the cooperation of the authors with the Public Health Department, what might have caused social desirability bias. The statements could also be biased through the recommendation of the superiors to participate. The sample

was focused more on persons working with refugees than on refugees due to their increased experience in challenges in health care. Therefore, the perspective of refugees is not strongly represented.

Conclusion

The aim of the study was to provide a broad overview of gaps and problems in the care of refugees in Cologne: approvals of health services, communication and cooperation, lack in care for mental health issues and improper housing situations. The most significant aspects of the interview partners´ statements have been compiled here. The cross-check with the database of the Dep.RM showed which gaps were known and covered, like issuing medical treatment certificates.

As a recommendation a contact point for health care related topics could be installed within the municipality. This facility should network with all departments within the municipality and be able to make health care related decisions on the basis of specialist knowledge. The installation of a case manager for refugees is intended to optimize care and accelerate decisions.

Decisions about new regulations, issuing legal papers and other information must be clearly communicated by the city. This would have simplified processes and created clarity for every actor involved.

There needs to be more focus on mental health as key issue in health care. Due to the lack of therapists, intermediate offers should be communicated to the patients and new ones should be implemented if necessary.

Declarations

Ethics approval and consent to participate

The study protocol was approved by the ethics committee of the faculty of medicine of Heidelberg University (S-351/2019) and complied with the declaration of Helsinki. For the participation of persons working in the care of refugees the permission of the respective superiors was asked. All data was pseudonymised. All participants received information about the study in advance. It is ensured that the data is safe from third party access.

Consent for publication

Not applicable.

Availability of data and materials

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

Competing interests

The authors declare that they have no competing interests

Funding

No funding in conception, data collection or analysis except support by a one-time payment of interpreting costs by the Cologne Public Health Department. We acknowledge financial

support for publication costs by the Baden-Württemberg Ministry of Science, Research and the Arts and by Ruprecht-Karls-Universität Heidelberg.

Authors' contributions

Angelika Warmbein: conception/ design of the study, data collection, data analysis, writing the manuscript. This study was carried out as master thesis at the University of Heidelberg.

Claudia Beiersmann: Contributing to developing data collection tools, contributing to writing the manuscript, supervision

Jaqueline Demir: data collection (including specific contributions to developing data collection tools), data analysis, contributing to writing the manuscript

Andrea Eulgem: data collection (including specific contributions to developing data collection tools), data analysis, contributing to writing the manuscript

Florian Neuhann: conception / design of the study contributing to writing the manuscript, supervision

Acknowledgements

I would like to thank the two persons who tested the transcripts for the accuracy of the codes. As well as the Public Health Department of Cologne who made this work possible and provided the patient database. Special thanks to the department of refugee medicine for supporting this work.

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636

637 Authors' information (optional)

638

639 This study was carried out as a master thesis at Heidelberg University.

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Figures

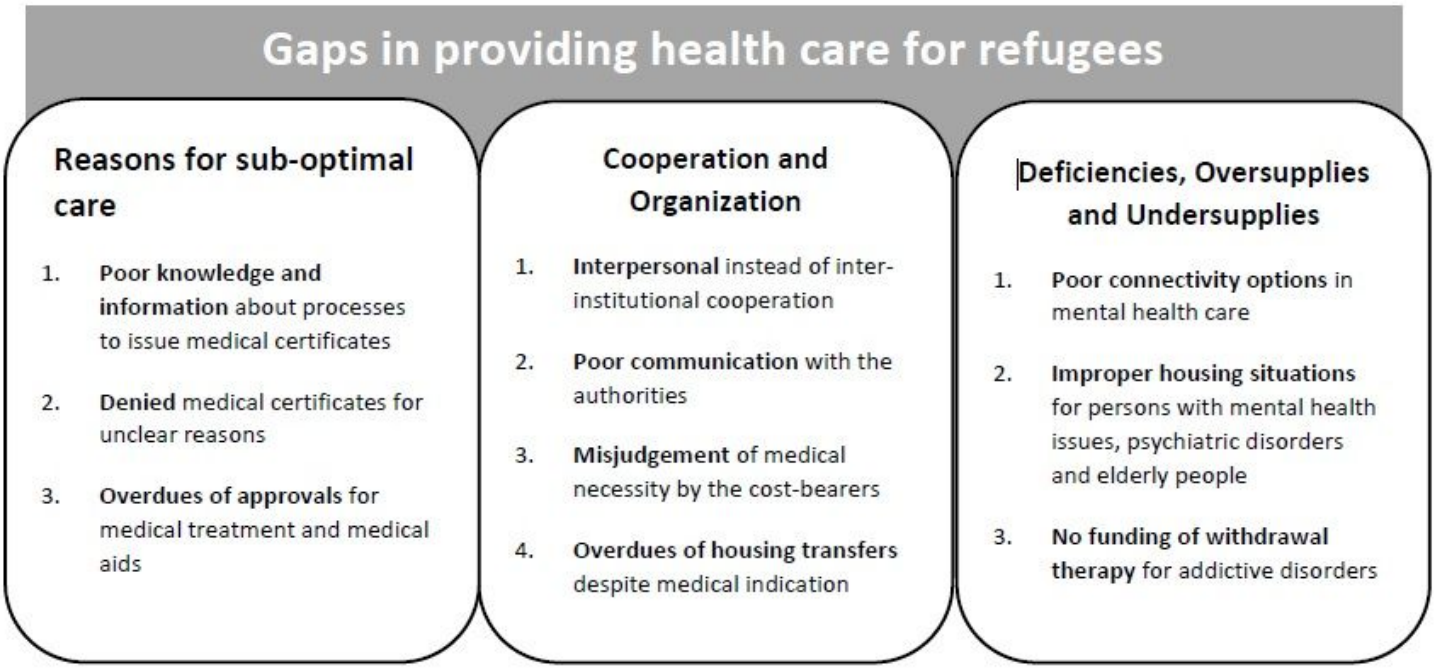
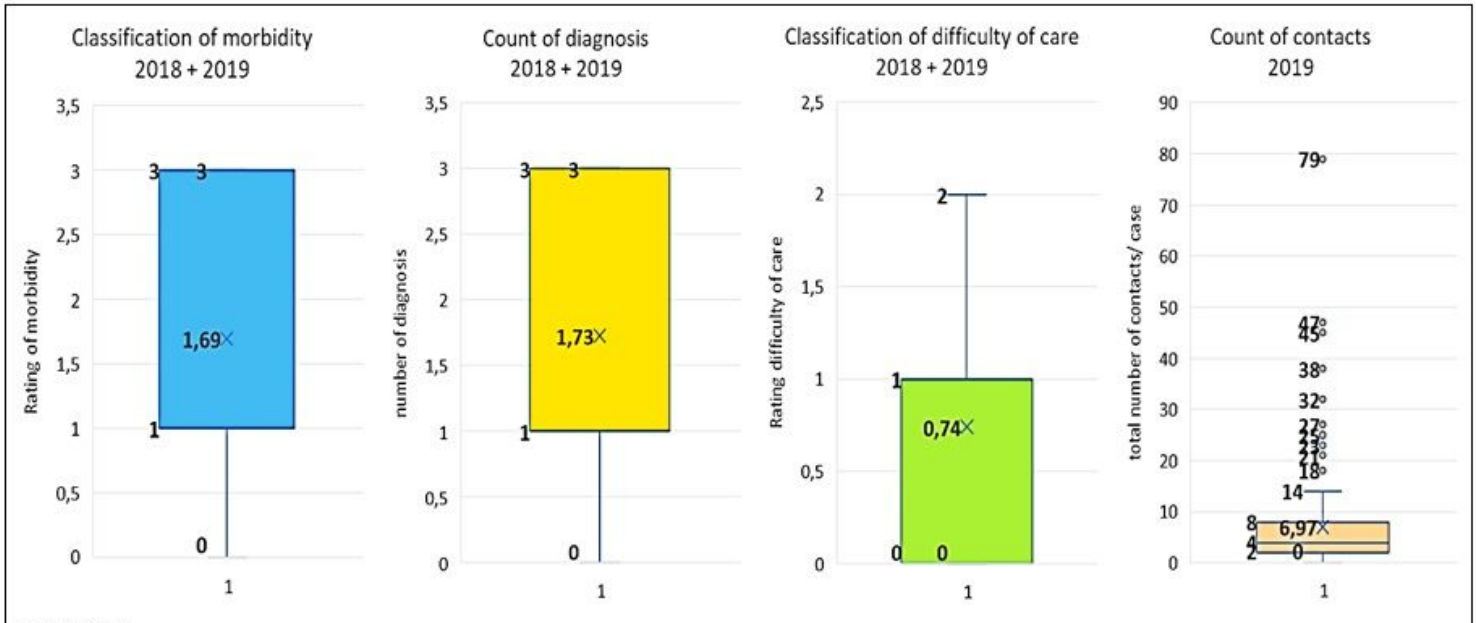


Figure 1

Coding paradigm of the study: themes and subthemes



LEGEND

Morbidity
0= no established diagnosis
1= one diagnosis
2= Co-Morbidity: Two diagnoses from the same ICD Group
3= Multimorbidity: at least two diagnosis with one chronic disease and one acute/ social/ psychological/ chronic issue

Count of diagnosis
shows, how many established illnesses the patients had. First three diagnoses were counted.

Classification of difficulty of care
0= no difficulties
1= mild to moderate difficulties, which for example could be caused by delays and prolong suffering for a moderate time
2 = serious difficulties in connecting, which might cause long-term consequences for the patients or a lack of health services for a long period

Count of contacts
shows, how many direct contacts, phone calls or mails had to be written to provide care to the refugees. Due to the start of this attribute in 2019, only the count of 2019 is shown.

Figure 2

Overview of the classification of morbidity, difficulty in care, number of diagnoses and the count of contacts for 2018 and 2019

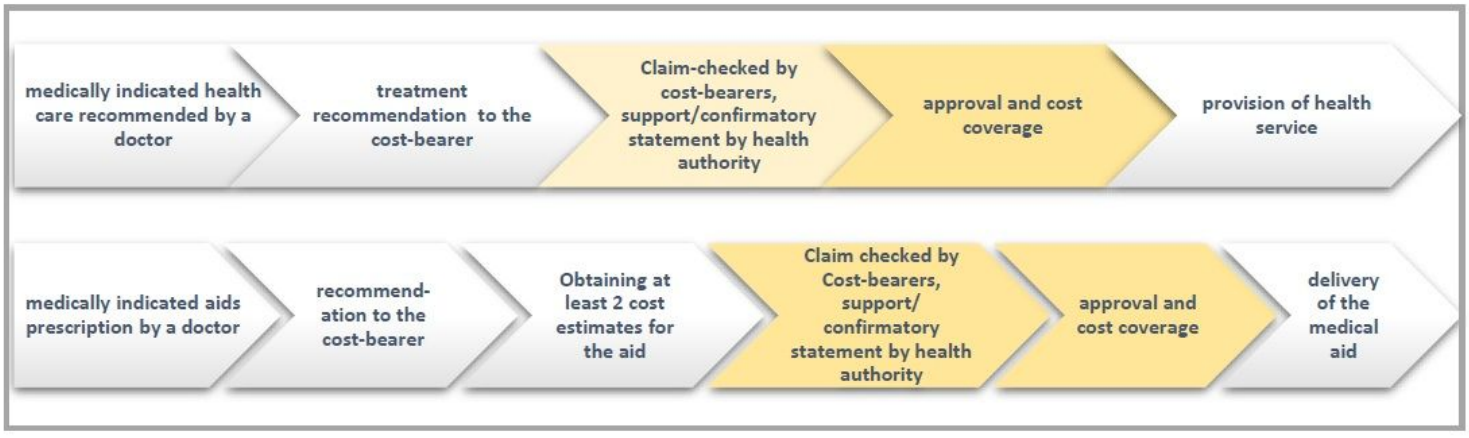


Figure 3

Procedures of approvals for health care and medical aids. The challenging steps are color-coded.

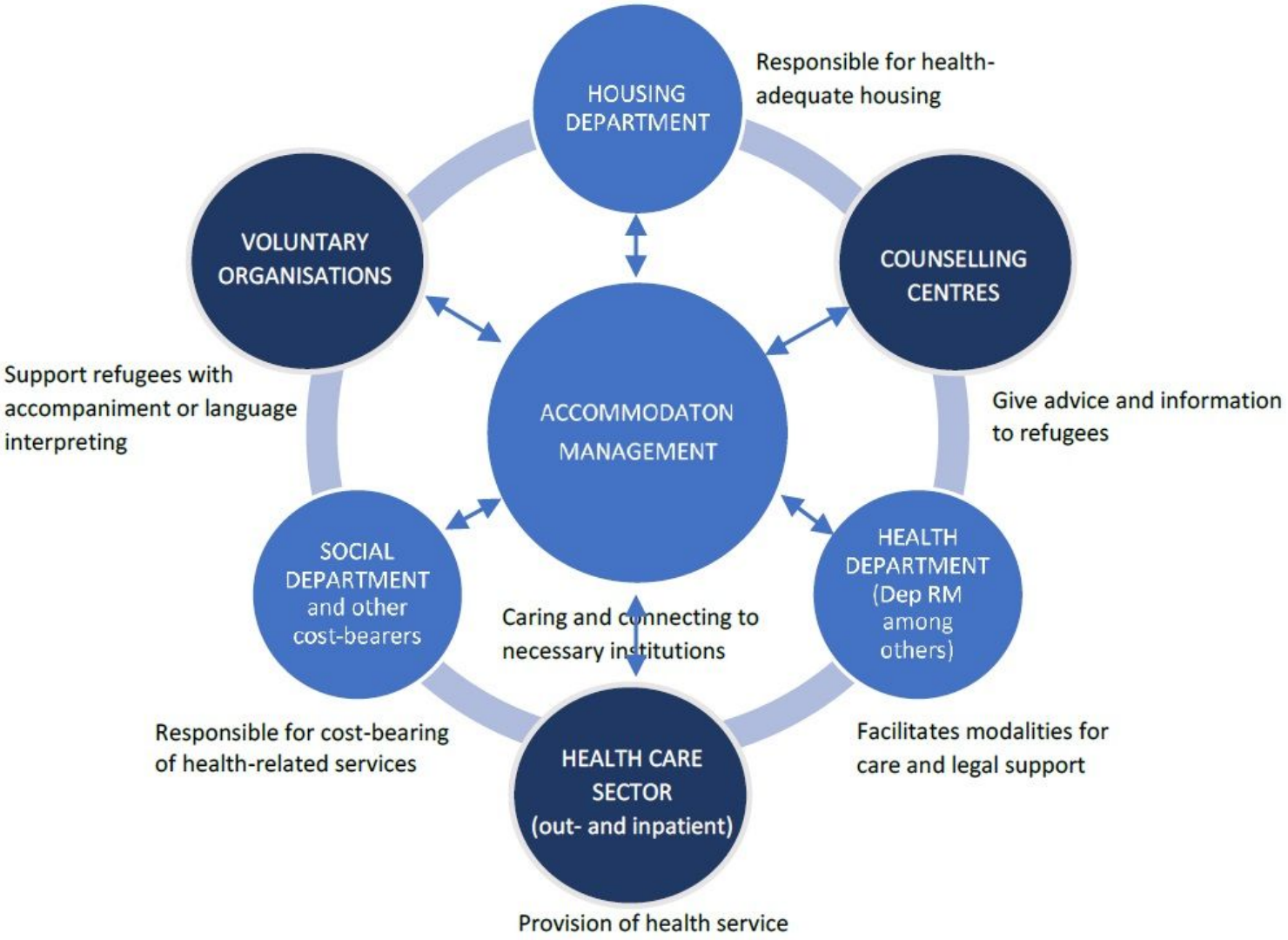


Figure 4

Actor landscape