Understanding the experience in the healthcare system of non-migrant and migrant frequent users of the emergency department in French-speaking Switzerland: a comparative qualitative study

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ABSTRACT

Background Previous research revealed the vulnerability of frequent users of emergency department (FUED) because of concomitant medical, psychological and social issues. Case management (CM) provides FUED with effective medical and social support, however, the heterogeneity of this population has highlighted the need to explore the specific needs of FUED subpopulations. In response, this study aimed to explore qualitatively the lived experience of migrant and non-migrant FUED in the healthcare system to identify unmet needs.

Methods Adult migrant and non-migrant FUED (≥5 visits in the ED in the past 12 months) were recruited in a Swiss university hospital to collect qualitative data on their experience within the Swiss health system. Participants were selected based on predefined quotas for gender and age. Researchers conducted one-on-one semistructured interviews until reaching data saturation. Inductive conventional content analysis was used to analyse qualitative data.

Results In total, 23 semistructured interviews were conducted (11 migrant FUED and 12 non-migrant FUED). Four main themes emerged from the qualitative analysis: (1) self-evaluation of the Swiss healthcare system; (2) orientation within the healthcare system; (3) relationship with caregivers and (4) perception of own health. While both groups were overall satisfied with the healthcare system and care provided, migrant FUED reported language and financial barriers to access it. Both groups expressed overall satisfaction over their relationship with caregivers. Migrant FUED reported a feeling of illegitimacy to consult the ED based on social status, whereas non-migrant FUED felt more often the need to justify their use of the ED. Finally, migrant FUED perceived their own health to be affected by their status.

Conclusion This study highlighted difficulties specific to subpopulations of FUED. For migrant FUED, these included access to care and impact of migrant status on own health. Adapting CM to the specific needs of migrant FUED could help reduce their vulnerability.

STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ This was the only qualitative study, to our knowledge, focusing on migrant frequent users of emergency department (FUED). Findings highlighted both specific migrant FUED’s and non-migrant FUED’s difficulties and needs within the healthcare system.

⇒ Results were based on participants recruited from a single hospital in a single region. Further studies involving other centres are needed to confirm our findings.

⇒ Responses from migrant FUED could have been biased by their migrant status, and reluctance to criticize the Swiss healthcare system.

INTRODUCTION

Frequent users of emergency departments (FUED; ≥5 visits in the past 12 months) have received increased attention over the past decades, including in Switzerland. A systematic review reported that FUED accounted for 0.1%–16.2% of all patients attending ED and for 1.9–20.5% of all ED admissions, thereby contributing to ED overload. FUED are commonly multiply affected by medicopsychosocial difficulties, rendering them particularly vulnerable. In response, case management strategies were developed in North America and in Switzerland as ‘a collaborative approach to ensure, coordinate and integrate care and services for patients, in which a case manager evaluates, plans, implements, coordinates and prioritises services on the basis of the patient’s needs.’ Case management provides medical and social support to FUED and is effective in reducing ED visits and improving patient quality of life. Despite these promising findings, emerging evidence indicates that case management intervention...
might benefit from adaptations based on subpopulations specific needs. Indeed, FUED constitute a heterogeneous population, ranging from homeless people to patients with multiple mental and somatic comorbidities, from different ethnicities, and each subgroup faces specific challenges and needs. Accordingly, qualitatively exploring the specificities of these subcategories of FUED could help better tailor case management interventions.

Migrant patients are a particularly vulnerable subcategory of FUED. According to the United Nations of Department of Economic and Social Affairs, a migrant refers to ‘any person who changes his or her country of usual residence and (it) excludes[es] movements due to recreation, holiday, visits to friends and relatives, business, medical treatment or religious pilgrimages’. Whereas a systematic review highlighted a lack of consensus in Europe on migrant versus non-migrant patients’ use of the ED, the Swiss Health Observatory reported in 2018 that residents of foreign nationality used hospital emergency services more often than Swiss nationals (respectively, 255 and 173 consultations per 1000 inhabitants annually). A study conducted by our group documented higher attendance of the ED by non-European FUED compared with Swiss or European FUED. In another study conducted in our hospital, findings revealed that 7.38% of FUED were asylum seekers, and their prevalence was proportionately 10 times higher than among the general population, highlighting over-representation in the ED. When comparing asylum-seeker to non-asylum-seeker FUED matched for age and gender, asylum-seeker FUED visits were non-urgent at triage. Consistent with these findings, a recent European systematic review documented that migrant patients attended the ED more often for non-urgent pathologies than non-migrant patients.

To date, research exploring the reasons behind the pattern of recurrent ED use among migrant patients has been scarce. A recent quantitative study documented a lack of knowledge of the health system and language differences as possible causes. In another study, lower occupancy rates and level of education in migrant patients were associated with unequal use of care compared with non-migrant patients. Although these findings provide initial evidence of specific patterns among migrant FUED, a deeper understanding of their lived experience in healthcare, encountered challenges and health needs is necessary for targeted case management interventions. In response, this study aimed to qualitatively explore migrant and non-migrant FUED’s experience, use and understanding of the Swiss healthcare system, and identify issues specific to migrant FUED that could be improved by tailored case management.

METHODS

Setting and participants

This study was conducted in the ED of the Lausanne University Hospital, one of the five university hospitals in Switzerland. It included patients consulting the ED both for somatic and psychiatric complaints.

We conducted interviews with migrant and non-migrant FUED to compare their lived experience in healthcare, use and understanding of the healthcare system, and specific health-related needs. The inclusion criteria were: FUED (≥5 visits to the ED in the past 12 months) and adults ≥18 years old. The following definition was used to categorise the two groups: (1) migrant FUED (including economic and forced migrant): asylum seeker (residence permit N, for people who had applied for asylum in Switzerland and currently in the asylum-seeking procedure), refugee (residence permit F and B, qualifying for refugee status under international law), any person with a deportation decision after the rejection of their asylum application in Switzerland, and undocumented persons. In Switzerland for <5 years; (2) non-migrant FUED: Swiss nationals. Exclusion criteria were: (1) incapacity to provide informed consent and (2) unavailability of an interpreter.

Purposeful sampling

Participants were selected based on equal quotas for gender and age between the two groups. Interviews were conducted until reaching data saturation.

Procedures

Recruitment and interviews were conducted by a master-level physician, a master-level researcher and a bachelor-level medical student between 15 December 2021 and 15 May 2022. Participants were recruited based on a list generated twice daily in the ED identifying all admitted FUED. Screening was based on inclusion criteria, and eligible participants were contacted directly during their hospital visit whenever possible or after discharge by phone. They were informed about the goal and procedures of the interviews. Each participant provided written informed consent. If not fluent in French or another language fluently spoken by the investigator (Italian, English), a professional interpreter was involved during both the informed consent process and the semistructured interview. Participants received a CHF20 (~US$22) voucher in compensation for their time.

Measures

Sample description

A short questionnaire assessed participant demographics (online supplemental annex 1).

Semistructured interviews

Interviews were conducted with an interview guide featuring open-ended questions and prompts to explore participants’ lived experience in healthcare, use and understanding of the healthcare system, and specific health-related needs. The interview guide we developed identified the subject areas we wanted to explore, addressing one large question at a time and adjusting the language of the interview according to the respondent (online supplemental annex 2).
The interviews were conducted over a period of 5 months, from mid-December 2021 to mid-May 2022.

**Qualitative data analysis plan**
The semistructured interviews were audiorecorded and transcribed verbatim. Transcripts were stripped of personally identifiable information before qualitative data coding. Qualitative data were analysed using inductive conventional content analysis. This inductive method enables avoidance of preconceived categories (ie, deductive approach), allowing categories and categories’ names to flow from the data. First, two research team members (bachelor-level and master-level medical students) conducted initial coding separately on a subset of qualitative data, using a line-by-line technique, whereby coders characterised the actions described in interviews. Following initial and focused coding, we created a codebook in consensus meetings, pooling incident-by-incident codes and removing or collapsing idiosyncratic or redundant codes. Next, the codebook was confronted by another member of our team (PhD-level researcher) and following a consensus of all members, we developed the final codebook. A single coder independently coded the remaining sessions with V.8 of ATLASTi (2021). Finally, we pooled our memos and explored overarching themes (Dey, 1999).

**Patient and public involvement statement**
None.

**RESULTS**

**Sociodemographic data**
A total of 23 participants were recruited: 11 in the migrant FUED group and 12 in the non-migrant FUED group. Average age was 33.0 (19–57) years for migrant FUED, and 41.3 (26–72) years for non-migrant FUED. Female participants represented 27% of migrant FUED and 58.7% of non-migrant FUED.

**Qualitative results**
Four main themes emerged from the qualitative analysis: (1) self-evaluation of the Swiss healthcare system; (2) orientation within the healthcare system; (3) relationship with healthcare professionals and (4) perception of own health. Table 1 provides a summary of findings divided by study group.

**Evaluation of the Swiss healthcare system: global satisfaction despite several barriers to access to care**
Most participants answered ‘satisfied’ when evaluating their experience within the Swiss healthcare system. Non-migrant FUED were generally satisfied with the quality of care. Although one Swiss participant did express a rather negative opinion, saying he had ‘the impression of having been abandoned by the health system’ (ID 873, non-migrant male) in view of the perceived unsatisfactory care received.

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ED, emergency department; FUED, frequent users of emergency department; GP, general practitioner.
Migrant FUED commonly reported the good quality of care and perceived important differences compared with their country of origin: ‘Here the medicine is better in my opinion. Because I really suffered in Lebanon and in Syria. The suffering there and the suffering here now it’s nothing alike.’ (ID 650, migrant female). Despite overall positive perceptions, most undocumented participants reported encountering several barriers to care, one of which was financial issues. Several participants had no health insurance and said they had to pay out-of-pocket for their care: ‘I don’t have the money to pay. I’ve already been told that my care is too expensive and that’s why we don’t do it. A doctor told me that ‘The hospital can’t pay for it.’ (ID 832, migrant female). Others mentioned physical barriers to accessing healthcare. For example, a homeless and undocumented migrant FUED described complicated access to the ambulatory care structure for the homeless population: ‘Many times the nurse says ‘come to the care structure for homeless people’. I say yes, but then I don’t go. You must go to the other side of town, take three buses, you must climb the stairs, […].’ (ID 202, migrant male). For non-French-speaking migrants, access to an interpreter was commonly described as highly challenging in ED: ‘I was told that… there was an interpreter but this was one time out of three.’ (ID 832, migrant female).

Orientation within the healthcare system: difficulties to find the right institution

Participants explained how they navigated the different healthcare institutions when they needed to consult. They commonly specified using the ED only in case of necessity or when other primary care institutions were not accessible or appropriate.

Migrant FUED: Asylum seekers and refugee participants explained they referred to the institutions dedicated to migrant patients in the first instance. Similarly, homeless participants mentioned being provided for within the different emergency shelters or mobile consultation units. Migrant FUED generally reported going to the ED only when ‘there was no availability in the doctor’s office. And I needed someone to see me quickly enough, urgently’ (ID 694, migrant male). One participant explained what his first instinct was when he arrived in this new country and had to consult: ‘[…] I couldn’t go and see a doctor straight away, but I went to the hospital straight away. That’s what you do if you’re new [in a country] and you don’t know anything.’ (ID 969, migrant male). Another regretted the lack of explanation when he arrived in Switzerland: ‘All this I had to learn by my own will, my own efforts. Because I wanted to understand. But nobody came to explain anything to me.’ (ID 321, migrant male).

Non-migrant FUED frequently reported first attempting to consult their general practitioner (GP): ‘Generally I phone my GP first. If he’s not available, then of course I must go to the ED.’ (ID 30, non-migrant female). Another participant mentioned using ED for urgent needs: ‘If I’m short of breath, I’ll definitely come to the ED; I won’t wait […]’. (ID 30, non-migrant female). They also mentioned that sometimes the pain started at night or outside the GP’s working hours, leading them to visit the ED. Finally, another difficulty was finding the right institution according to their symptoms and the perceived severity of the pathology: ‘I would say that it is sometimes complicated as a patient to know which institution to turn to, depending on the symptoms you have. We don’t necessarily manage to realise how serious it is; what kind of disease you might have.’ (ID 554, non-migrant female).

Relationship with healthcare professionals: the feeling of not being listened to and illegitimacy

Overall, participants expressed positive views on their relationships with healthcare professionals. Most non-migrant FUED spontaneously felt grateful to them. Close to this idea, a sense of empathy was evoked towards the substantial work done by healthcare professionals. Some relational barriers were mentioned despite patients’ understanding of the healthcare professionals’ difficult working conditions, with nuances between migrant and non-migrant participants.

Migrant FUED: Regarding the relationship with GPs, participants generally reported receiving good care and being able to develop a relationship of trust. GPs were perceived as ‘understanding’ and ‘competent’ by most. Conversely, participants commonly evoked a perceived lack of empathy among care professionals other than GPs; close to this idea, some participants mentioned facing ‘unfriendly’ healthcare professionals in situations where they were already in a vulnerable position.

Non-migrant FUED expressed mixed opinions about the relationship with their GPs, ranging from a lack of interest—‘I don’t think he cares’ (ID 355, non-migrant male), to a good relationship—‘I was at ease with him […] he listens to me’. (ID 353, non-migrant male). Non-migrant participants also commonly reported feeling not listened to by healthcare professionals. They mentioned several times that the carers had not considered their own feelings and instincts about their health. One participant explained: ‘And again I was not taken into account […] I said, ‘this is not normal, this is not the same as usual’ (ID 30, non-migrant, woman).

Regarding referral to the ED, one point emerging from the interviews was legitimacy to consult. Five migrant FUED felt this was being questioned based on their social status. One of the migrant patients explained: ‘why do they ask me this question ‘Why do you come to the ED?’ when I am bent over backwards with the pain […] sometimes I think that I am asked this question because I am on social benefit, and I feel very embarrassed. Because I can’t understand why I’m being asked this question’. (ID 311, migrant female) One of the patients also perceived mistrust from healthcare professionals: ‘They look at the [health] card and sometimes they ask ‘Where do you live?’ ‘What is your birth date?’ as if this card was a fake one’. (ID 130, migrant male).
Six of the non-migrant FUED felt the urge to insist that their ED visits were legitimate and justify their presence. One participant said: ‘When I went to the ED it was always... well how can I say that? ... well, necessary.’ (ID 30, non-migrant female) Moreover, their feeling of illegitimacy was sometimes conveyed by the healthcare professionals: ‘I didn’t feel comfortable with this person; because I felt that she thought I was acting, which was not the case because I really had an infection. And yes, I felt very uncomfortable because I didn’t feel listened to at all.’ (ID 534, non-migrant female). Most participants also expressed avoiding the ED whenever possible: ‘I really try, even if I have symptoms coming on, well... I try not to go to the ED anymore’. (ID 81, non-migrant female).

Impact on health of psychological and social issues

The majority of non-migrant FUED valued the human side of caregiving. They typically asked to ‘be heard, to be listened to... and to be respected for what we say’ (ID 534, non-migrant female). Communication was perceived as central, one participant explaining that ‘For me, the key factor remains communication. I think that communication will put the patient at ease; for me, every time I came to the hospital and I communicated... with a doctor or whatever, it went very well.’ (ID 353, non-migrant male). With this need for communication came the need to ‘reassured about my health’ (ID 907, non-migrant female), about symptoms and pathologies: ‘In hospital [...] I feel more reassured when I have these attacks... here than at home.’ (ID 684, non-migrant male).

In line with this trend, an important point that emerged from these interviews was anxiety about health, expressed among half of non-migrant participants and often generated by their pathologies and symptoms ‘It’s been too much [...] These are things I don’t know; these are symptoms I don’t know. And it totally made me... anxious and distressed.’ (ID 534, non-migrant female). Most of these participants explained being fully aware of their anxiety and its causes, and some worked to address them: ‘I feel a bit better because I’m less worried about... So I’ve noticed that I suffer less than before. Before I was too tense, it was a lot of anxiety, a lot.’ (ID 907, non-migrant female).

Migrant FUED: Socioeconomic-related issues were mentioned by half of the asylum seekers and refugees as factors affecting their health. Some mentioned the importance of being employed, specifying the moral impact of not having a job. Others evoked precarious living conditions (no family in Switzerland, no leisure) or housing conditions: ‘We can’t sleep in the shelter; it is almost impossible. I can’t live in a place where there are only problems.’ (ID 969, migrant male). Other elements brought by the migrant participants were the somatic and mental negative consequences related to migratory paths: ‘[...] I started to have pains in my arm, and then in Switzerland it increased, it got worse. But these are the after-effects of the torture I suffered [...]’. (ID 969, migrant male) The reasons mentioned for consulting the ED were solely somatic. Interestingly, for both migrant FUED and non-migrant FUED these answers contrasted with hospital medical records where psychiatric issues were often cited as the main reason for visits.

Finally, both migrant FUED and non-migrant FUED mentioned a diagnostic errancy due to pathologies leading them to repeatedly consult the ED and their specialists, without finding adequate treatment. One patient said: ‘I have been coming for treatment for a year now but there are no effects and I wonder why there are no effects?’ (ID 845, migrant female). This diagnostic wandering was also perceived by participants as the reason for seeking therapists practising complementary medicine: ‘That’s why I looked for alternative and natural medicine. Because the urologists can’t help me with my case. I have the feeling that they are not able to help me with my case.’ (ID 694, migrant male). This uncertainty was also perceived as a cause of distress: ‘we go home but we still don’t know what we have. And the pain doesn’t go away’. (ID 327 non-migrant female)

DISCUSSION

This study provided a qualitative description of migrant FUED compared with non-migrant FUED’s experiences with the Swiss healthcare system. Findings revealed good experiences overall, although migrant FUED reported financial and language-related barriers to access to care. Participants also reported overall satisfaction with their relationship with healthcare professionals, although migrant FUED reported a feeling of illegitimacy to consult the ED based on their social status, whereas non-migrant FUED felt more often the need to justify their visits to the ED. Finally, migrant FUED perceived their own health to be affected by their status.

How can we break the barriers to access to care?

Although participants’ overall evaluation of the healthcare system was positive, it was somewhat nuanced by their migration status. In this regard, a specific point that emerged among migrant FUED included financial and language-related barriers to access healthcare. These findings are consistent with other published research highlighting the extent to which financial issues can represent a major obstacle to access to care, especially for those without insurance and/or for undocumented people. The elevated cost of healthcare in Switzerland is a known barrier for low-income people. Our study also showed that participants typically consult ED because of pathologies they felt required urgent attention, a reason found also for Swiss citizens, which makes them even more vulnerable financially. These findings underscore the important role that case management could play for new users of the healthcare system. Case management has shown especially encouraging results in improving social quality of life, but also providing support with administrative tasks that migrants face, such as applying for health insurance. Providing case managers with training in the specialised field of health insurance for undocumented
migrants and/or people in financial difficulties could be a significant asset for all of those involved.

Communication is the key point
Other findings indicated communication issues with care professionals for some non-migrant FUED. The need for FUED to justify their visit to the ED was strong, and some mentioned a feeling of illegitimacy. These findings align with previous research describing the propensity of certain healthcare professionals to consider FUED’s recourse to the ED as illegitimate, even influencing FUED’s access to medications. In another study, most healthcare professionals at our hospital considered the motives provided for the ED visit inappropriate, whereas in most instances patients had in fact consulted for acute needs. Furthermore, the healthcare workers’ feelings were reported to be borne out by participants’ perceptions. These reports are important to consider, as the perception of being discriminated against is associated with greater vulnerability and worse patient self-assessment of their health. Moreover, subjective positive experiences are associated with better clinical effectiveness and patient safety. Case management could play an important role in raising healthcare professionals’ awareness of patients’ feelings of discrimination, with case managers acting as mediator between groups.

The impact on health of being a migrant
During the interviews, migrant FUED mostly highlighted the impact of social factors on their health. Refugee status is a traumatic life event, due to deprivation of activities, loneliness, or concern for relatives left behind. This was confirmed by the participants of this study and could be a reason for more ED visits and highlights the importance of taking into account of the impact of being a migrant on a patient’s health. The cross-cultural competencies of our case managers could help provide social and psychological support.

Diagnostic errancy leading to ED consultations
A point raised by non-migrant FUED was the perception of not being listened to by healthcare professionals when describing their bodily complaints or state of health. This lack of consideration could also lead to misdiagnosis resulting in repeated ED visits. For patients who do not yet have an established diagnosis, multiple consultations can also be the source of an additional feeling of apprehension when visiting the ED. The uncertainty regarding the cause of their pathology may have further exacerbated patients’ feelings of anxiety and anguish already heightened by their pain. The psychological and social impacts of symptoms often mentioned may also have been the main undisclosed reason for some consultations. Our findings confirm that FUED patients accumulate different vulnerabilities, as discussed in later studies. A patient’s sensitivity to the psychological distress resulting from diagnostic errancy or certain pathologies could be another interesting aspect to consider in case management. Unfortunately, we cannot link this directly to the fact that participants are FUED.

LIMITATIONS
First, we did not include non-FUED participants in our study and can, therefore, not establish whether some conclusions could have been similar for this population. Second, recruitment itself was somewhat limited by the language barrier, although resorting to interpreters whenever possible minimised this issue. Third, results were based on participants recruited from a single hospital and region. Further studies involving other countries are needed to confirm our findings. Moreover, participants were not always explicit if talking about ED consultations or other experiences in the healthcare system. Lastly, responses from migrant FUED could have been biased by their migrant status, and fear to criticise the Swiss healthcare system.

CONCLUSION
Both migrant and non-migrant FUED participants reported overall satisfaction with the Swiss healthcare system and care provided in the ED. Regarding access to care, migrant FUED reported language and financial barriers. The high level of medical and social vulnerability of this population also appeared to further exacerbate their health issues. We believe these findings will help tailor case management strategies already in place to better address the complex needs of migrant FUED.

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Contributors CC received funding, conceived parts of the study design, conducted the background literature review, conducted assessments among FUED, provided scientific project management, assembled measures, conducted the analyses, drafted the manuscript and is the guarantor of this study. ES and JN conducted the background literature review, conducted assessments among FUED, provided scientific project management and critically reviewed the manuscript. VG and PB helped conceive the study and its design, helped to conduct the analyses, provided scientific project management and critically reviewed the manuscript. OH helped conceive the study and its design and critically reviewed the manuscript. All authors read and approved of the manuscript.

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Patient consent for publication Not applicable.

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REFERENCES