

Access barriers to acute care in asylum seekers: A cross-sectional survey

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Background

Hospital based Emergency Departments (ED) face increasing levels of visits in the US and around the world [1]. By exceeding available resources this has been defined as a crisis by the Institute of Medicine in 2006 [2]. As EDs worldwide report exacerbating service demands for limited resources, the presentation of self-referred, non-urgent complaints can have a negative effect on the demand supply gap in the ED and lead to side effects like crowding [3]. Crowding is an important issue in ED care resulting in poorer patient outcomes, increased morbidity and staff burn-out [1, 4].

The proportion of non-urgent ED visits in the literature ranges between 3 to 76% with an average of 30%. Two major reasons have been identified in an interview-based study among low acute ED patients in Germany. First, convenience for the patient, in which they exploit the service character of healthcare in order to receive specialist opinion without appointment or restriction to opening hours in the ED. Second, health concerns, with patients seeking highly specialized advice about their health status in the ED [5, 6]. In a systematic review from 2016 by Kraaijvanger et al, the authors found several reasons for self-referral to the ED. Most importantly, were health concerns and expected investigations such as x-rays or blood tests, followed by the advice of the social environment and the convenience of the ED. Accessibility of the General Practitioner (GP) or confidence in the GP as well as financial considerations played a lesser role for patients seeking help in the ED [7].

Switzerland has a GP based healthcare system and the Swiss compulsory health insurance covers all costs of examinations and treatment of medical conditions and its consequences

[8]. Refugees and Asylum seekers in Switzerland are as well covered by the compulsory health insurance [9, 10].

The population consists to 23% of immigrants and ED consultations have risen in recent years by newly arrived immigrants, asylum seekers (AS) and refugees [11]. Research focusing on avoidable or non-urgent ED visits has shown that especially immigrants are among the users of EDs and GP out of hour services [12-15]. In a German study, AS had a significantly lower odds-ratio for consulting any physician or GP than the native population [16].

Furthermore, immigrants in Norway have been shown to use emergency health care services significantly more often than the native population[17]. Low health and socioeconomic status have been shown to be important factors that influence the threshold of ED use for non-urgent complaints [18].

The purpose of this study was to provide data about the decision-making of AS in terms of non-urgent conditions at a university hospital. We compared AS to the native population and their health seeking behaviour.

The knowledge about the reasons for ED visits may provide useful information for policymakers and the possibility to develop interventions to increase equity in access to primary health care services.

Methods

Study Design

We conducted a prospective, cross-sectional, controlled study in ED. We asked AS treated in the ED to participate in our survey and matched eligible asylum seekers for a predefined time frame with a sex and age matched group of Swiss citizens as a control group.

Study setting

Study site was the ED of the university hospital Bern (Switzerland). It is one of the largest hospitals in Switzerland with a catchment area of 1.8 million people. More than 40,000 patients are treated in the ED each year.

The questionnaire was designed based on current literature and with the help of a psychologist. It was available as a printed and as a protected web-based version. Trained medical students, not involved in the treatment of the participant, conducted the survey. In case that direct communication was impossible, the use of a professional translators by phone or in person was offered.

Data collection started on 01/12/2016 and ended 31/07/2017.

Eligibility criteria

For the AS group all patients that fulfilled the following criteria were included in the analysis:

- age ≥ 16 years
- Asylum status defined with the official Swiss identification card ("F": provisionally admitted foreigners, "N": permit for asylum-seekers, or "S" people in need of protection)

- No life threatening or highly urgent problems defined by the Swiss Emergency Triage Scale category 1-2 (1 acute life-threatening to 5 non-urgent)[19]
- Walk in patients

For the control group, people needed to have Swiss citizenship and had the same triage category, age +/- 10 years as well as sex. Efforts were made in order to obtain a close temporal match, i. e. recruiting a successive control patient shortly after successfully recruiting a study patient whenever possible. The control group was recruited only in a predefined, reduced time frame.

Exclusion criteria for both groups were critically ill patients and the need for expedited diagnostic evaluation (i. e. the medical condition forbade participation) judged by the consultant in charge as well as patient's refusal to participate in the study.

Variables

The survey included questions about the patient's demographics, socio- economic status (SES) including education, language skills and current employment situation. We asked all participants about their health-care-seeking behaviour including previous GP use and the perceived urgency of the current visit. We asked about the motives to seek help in the ED and asked about the knowledge of the Swiss healthcare system. The treating physician was asked to assess the urgency of the consultation and define the chief complaint, the main diagnosis (ICD-10) and the discharge status.

The questionnaire used in this study is provided as a supplement.

Statistical analysis

The distribution of categorical variables is given with the absolute and relative number and the distribution of continuous variables such as age or length of stay at the ED will be described as median with interquartile (IQR) range as normality could not be assured.

Fisher's exact test was used to test for significant differences between the asylum seeker sample and the control sample for categorical variables as sample sizes were small.

Continuous variables between groups were compared with the Wilcoxon rank-sum test.

All statistical analysis was performed with Stata® 13.1 (StataCorp, The College Station, Texas, USA). Statistical significance was considered if the p-value was smaller than 0.05.

Graphs were created using RStudio and ggplot (RStudio Team (2016). RStudio: Integrated Development for R. RStudio, Inc., Boston, MA, URL: <http://www.rstudio.com/>).

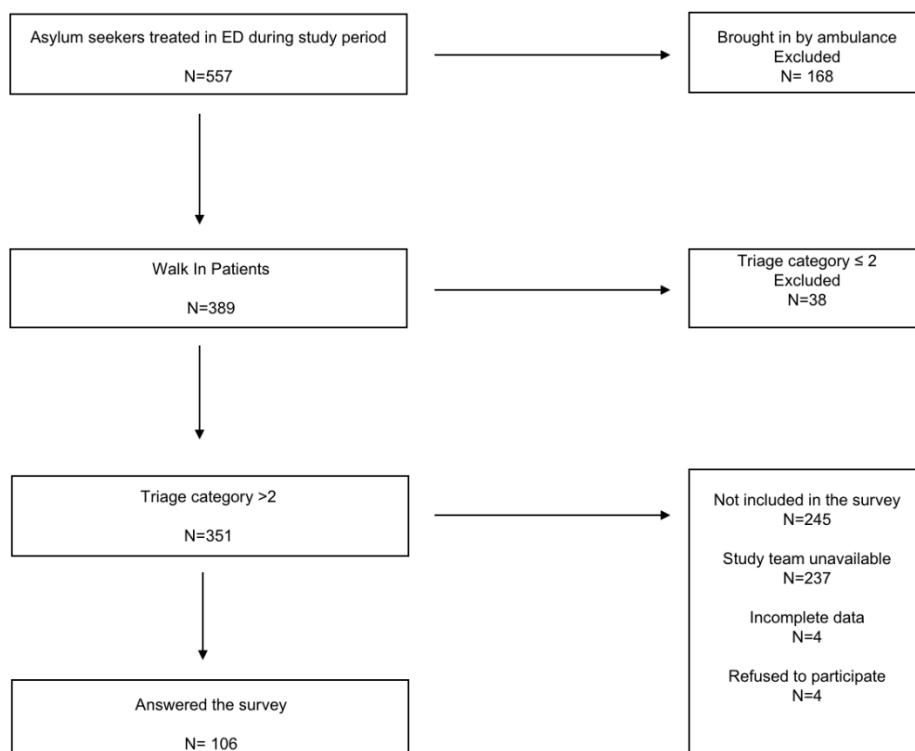
Ethical Approval

Study participation was voluntary and individual patient consent was obtained before answering the survey. Patient related information were anonymized prior to analysis. The study was presented to the regional ethics committee of the Canton of Bern, Switzerland (06.10.2016). The study was approved by the Ethics Committee of the Canton of Bern (KEK-BE: 2016-01662). The study, including data collection and extraction, anonymization, analysis, and storage was performed in accordance with Swiss law and the local ethics committee standards.

Results

In total 557 AS were admitted to the ED during the study period. 168 patients were excluded because of admission by ambulance services. Another 38 were excluded because of a higher triage category (Triage category 1 or 2). 351 AS met the inclusion criteria. 245 patients of the eligible collective could not be included due to situational circumstances in the ED , e.g. study team unavailable. Four individuals refusing consent and four patients returning empty questionnaires were excluded from the analysis (Fig. 1). Questionnaires with partly missing answers were included in the study. Missing answers are marked accordingly in the results section. A total of 106 AS completed the survey. The age (+/- 10 years) matched study group with a total number of 68 was subsequently recruited.

Figure 1



The population examined presented a considerable skew towards younger males. The gender ratio (m: f) was 1.79 with a large part of the asylum seeker collective in their early twenties (Figure 2-3). More than half of the AS were unemployed, due to regulations during the immigration process. Mean length of stay in the ED did not differ significantly between the two groups (Table 1).

Only 43% of the AS had 9 years or more of education (Figure 4). Concerning the origin of patients to the ED, there were two main regions dominating the ED presentations by asylum seekers (cumulatively, 69.6%) with Eastern Africa accounting for 40.6% and Western Asia for 29.2 % of cases, followed by Southern Asia with 17, Northern Africa 6.6 and Western Africa with 2.8 percent respectively trailing behind. Only one individual originated from Southern Europe (Table 2). Overview of the asylum status on presentation is stated in table 3.

Table 1. Baseline group characteristics

	Asylum seekers	Controls	p
Mean Age (SD)	29.78 (11.85)	33.15 (12.07)	0.071
Gender (n, males, %)	68 (64.2)	35 (51.5)	0.133
Work status, n (%)			
Employed/self-employed	18 (17)	54 (79.4)	
Student	14 (12.0)	9 (13.2)	
Homemaker	7(6.6)	2 (2.9)	
Unemployed	67 (63.2)	1 (1.5)	
Retired	0 (0.0)	2 (2.9)	
			<0.001

ED Length of stay, h, median (IQR)	3.16 (2.0, 5)	3.37 (2.7, 5.4)	0.141
Outpatient treatment, No. (%)			
Yes	96 (90.6)	62 (91.2)	1.000
No	10 (9.4)	6 (8.8)	

Table 2 Demographics Asylum Seekers

Region of origin		
Eastern Africa	43	40.6
Northern Africa	7	6.6
Southern Asia	18	17
Southern Europe	1	0.9
Western Africa	3	2.8
Western Asia	31	29.2

Missing: 1. Other: 2

Table 3 Asylum status

N = Asylum requested	70	66
F = temporarily accepted	35	33
S = in need of Protection	1	0.9

Figure 2

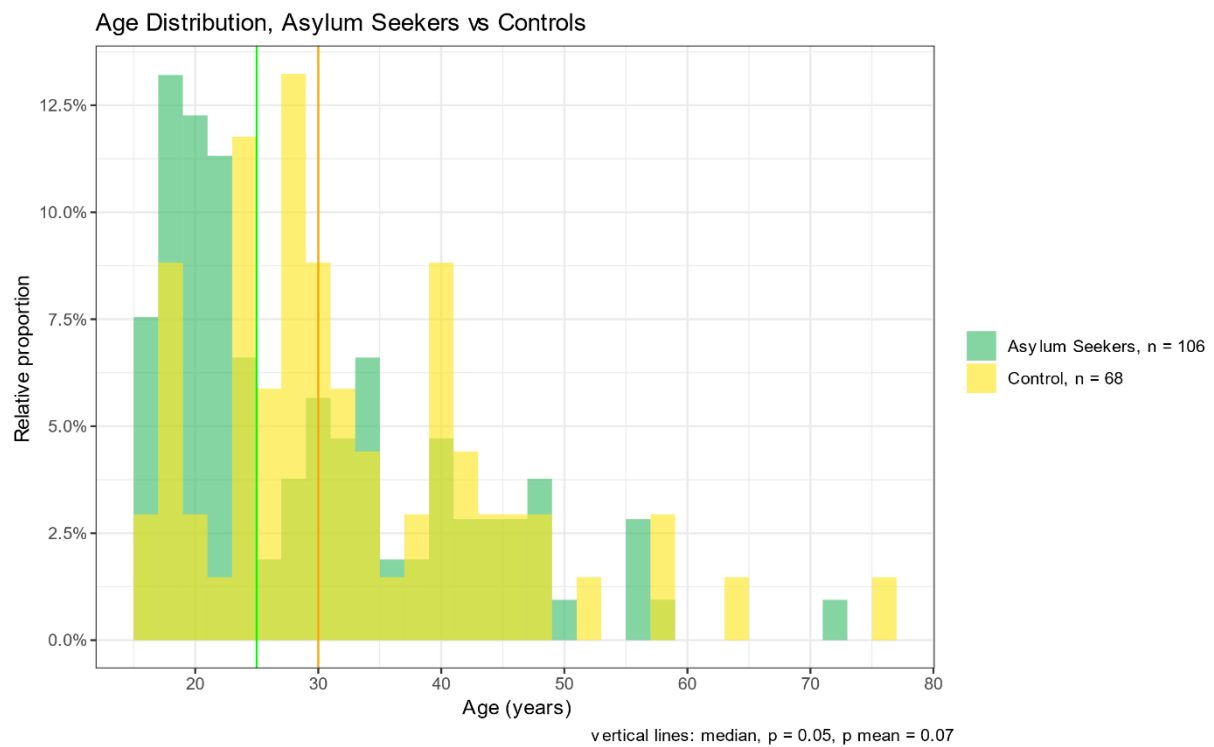


Figure 3

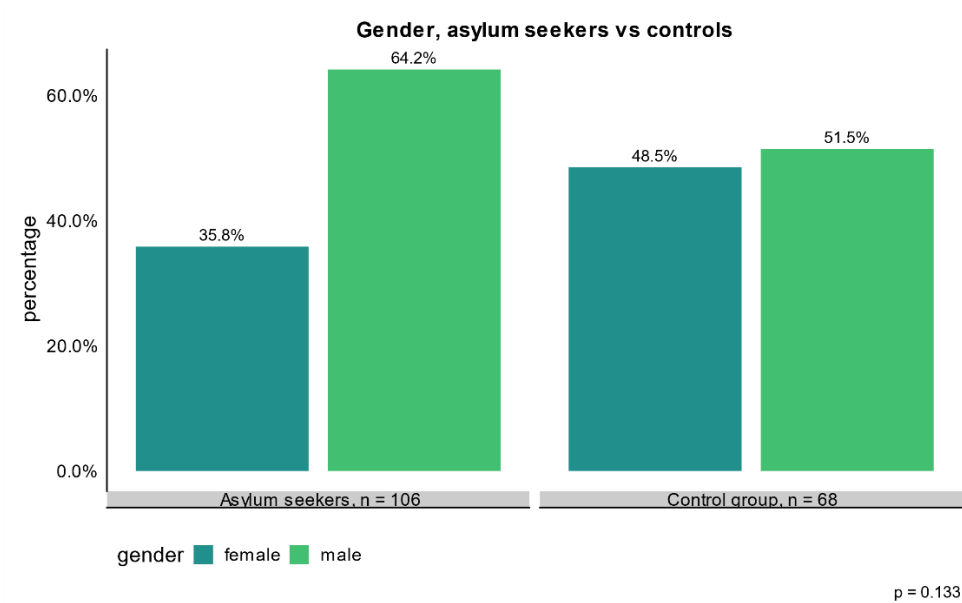
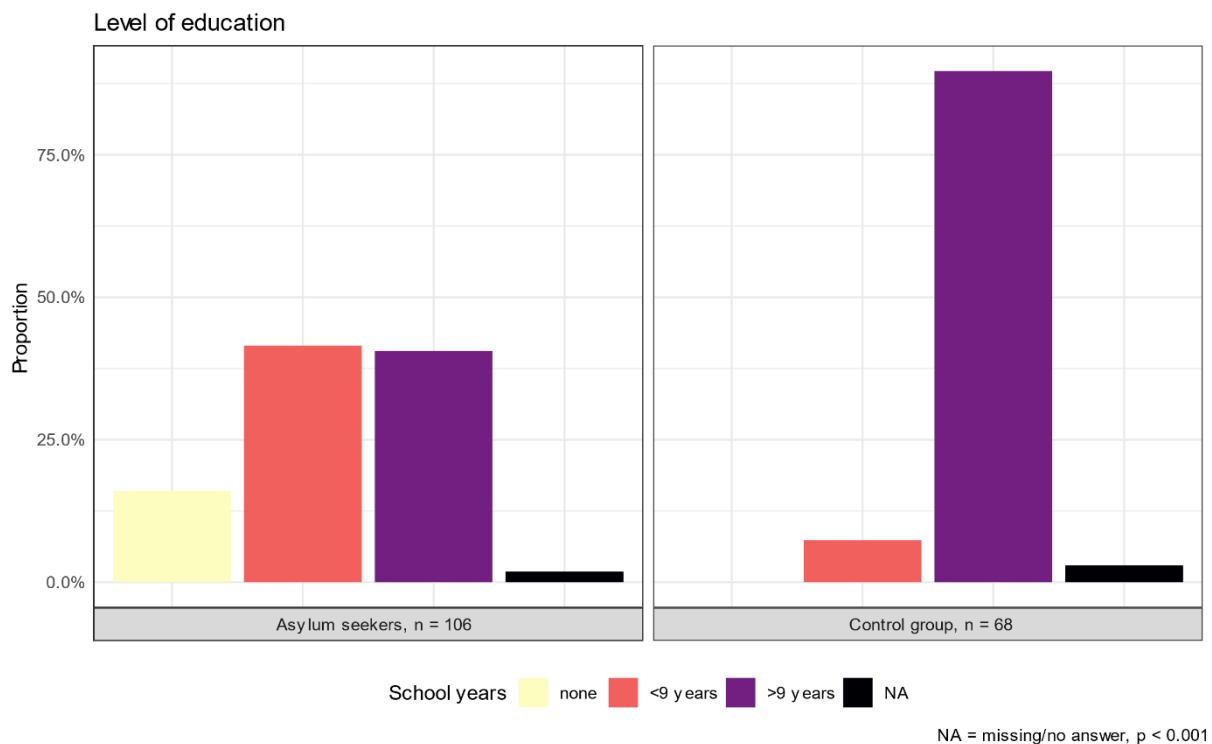
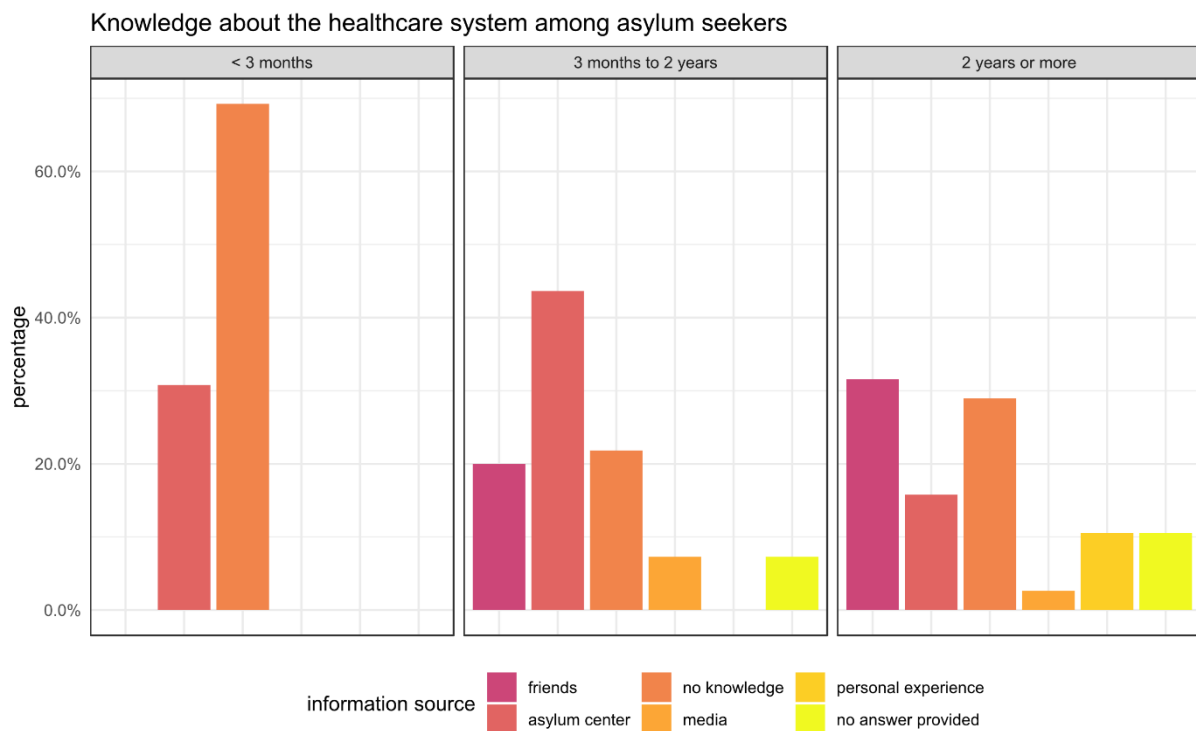


Figure 4



Information about structure and function of the Swiss healthcare system as reported by the participants was scarce among those with a length of stay in Switzerland of less than 3 months with only one quarter of the respective cases reporting to have been informed at their immigration centre. This proportion rose to 50.9% among those with a length of stay between three months and two years. After more than 2 years in Switzerland 29.7 % reported no knowledge of the healthcare system (Figure5). One third of the participants reported to have no knowledge about the healthcare system at all. However, with increasing length of stay the reported knowledge acquired from family and friends increased. Knowledge acquired using provided media (e.g. printed brochures, general advertisement, internet based information sources) was very low at 4.8 % overall.

Figure 5

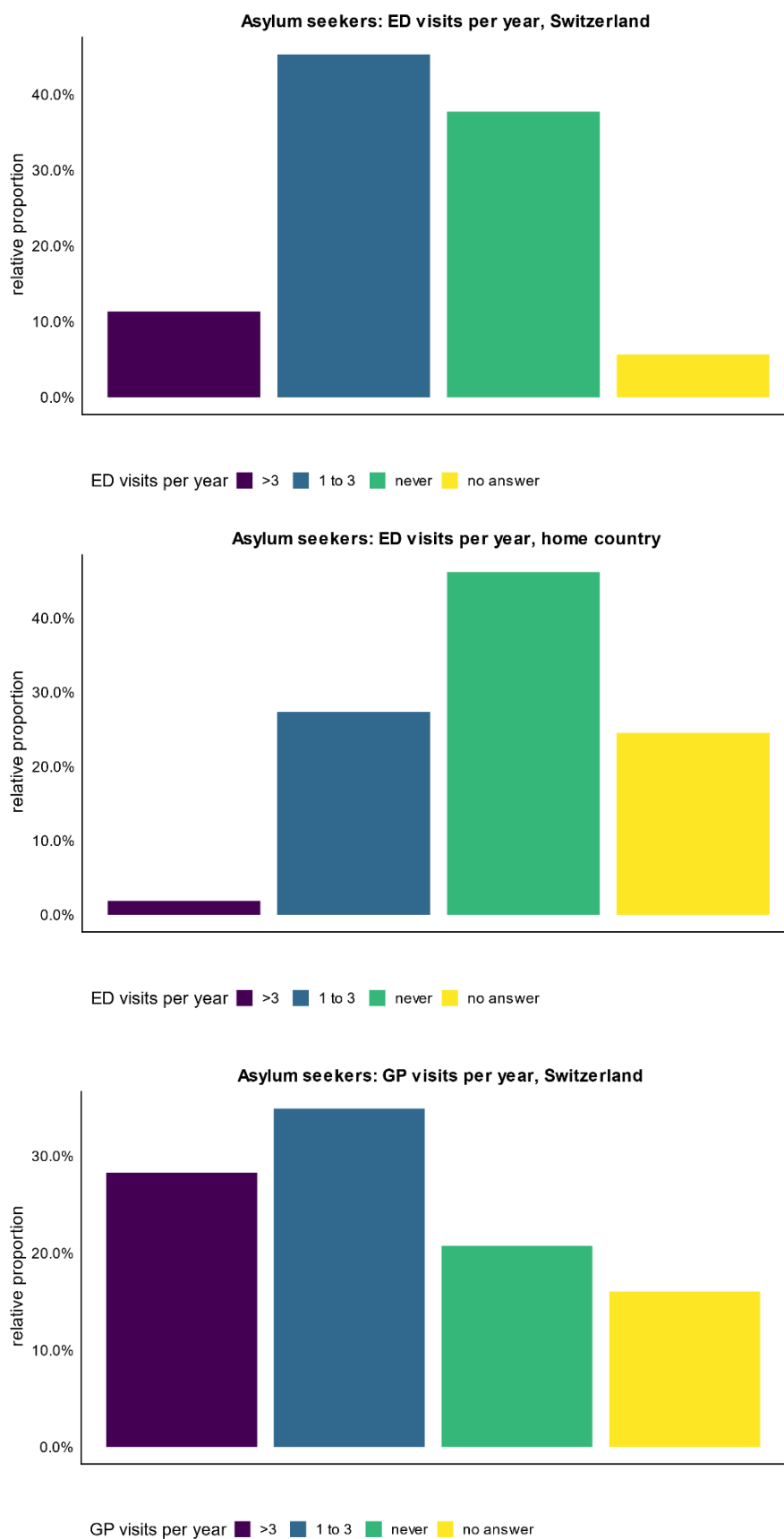


A large proportion of 61.4% of the study population has not used GP services in the country of origin. During the stay in Switzerland the use of primary care services increased to 62,4%. Occasional (1 – 3 times a year) use of the ED was reported by 27.5% for the country of origin versus 53,5% for Switzerland. However, an unusually high rate (16.5% of questionnaires) of missing responses to this question warrants special care to be taken when interpreting these results (Table 4, Fig 6 - 9).

Table 4. Comparison of the reported GP and ED consultations in Home country versus CH in number (%).

	Home		CH	
General practitioner	n	%	n	%
Never	68	(64.1)	22	(20.8)
1-3 per year	11	(10.4)	37	(34.9)
> 3 per year	6	(5.7)	30	(28.3)
Not stated/missing	21	(19.8)	17	(16)
Emergency Department				
Never	49	(46.2)	40	(37.7)
1-3 per year	29	(27.4)	48	(45.3)
> 3 per year	2	(1.9)	12	(11.3)
Not stated/missing	26	(26.4)	6	(5.7)

Fig. 6 – 9



Language barriers present a significant problem with asylum seekers in the

ED: Almost half (45.3%) of the individuals surveyed did not speak a local language or English precluding direct communication. Less than a third (31.1%) had limited skills while only in less than a quarter of the surveyed population sufficient direct communication with the patient was possible. In 44.3% of the surveyed cases, accompanying family and friends were used as translators (Table 5).

Table 5. Language barriers reported and need of assistance in translation/ communication.

Number (%)	
Direct Communication*	
Possible	24 (22.6)
Limited	33 (31.1)
Impossible	48 (45.3)
Type of Translation	
None	54 (50.9)
Family/ friends/other company	47 (44.3)
Professional Translation service	5 (4.7)

**not documented in 1 case*

The majority of asylum seekers, 62.2%, did not try to contact a doctor before consulting the ED, while only 13.8% (n=15) and 21.5% (n=23) consulted the physician in their asylum centre respectively their GP.

The reasons given for this behaviour were for the largest part (29.9%) not having a GP.

Only 4.5 and 1.5% respectively of asylum seekers reported a problem with getting an appointment or having called a medical helpline beforehand.

A slightly different picture emerges from the control group's questionnaires: Not having a GP is reported only half as often, while there is a tendency towards being outside of business

hours. The belief in getting better care at the ED is just as popular and so is having a highly urgent issue in swiss citizens versus asylum seekers (Table 6). There was a high proportion of missing answers in this part of the survey.

Table 6. Reasons why patients did not try or use GP before presenting to the Emergency Department.

Reasons	Study group n (%)	Control group n (%)	p-value
No GP	20 (29.9%)	6 (14.6)	
Calling medical helpline	1 (1.5%)	5 (12.2)	
Consultation outside visiting hours	16 (23.9%)	13 (31.7)	
Previous problem with appointment	3 (4.5%)	2 (4.9)	
Bad experience	6 (8.7%)	2 (4.9)	
Believe of better treatment in ED	8 (11.9%)	5 (12.2)	
Highly urgent problem	13 (19.4%)	8 (19.5)	0.189
Missing/not stated	40 (37.7)	26 (38.2)	

* *multiple answers possible*

Table 7. Consultation within general opening hours (8:00-18:00, weekdays) compared to control group

	Study group n (%)	Control group n (%)	p-value
Yes	66 (62.3)	33 (48.5)	0.086
No	40 (37.7)	35 (51.5)	

There was no significant difference between control and study group respective to the day of the week ($p=0.152$).

The level of urgency perceived by the study collective was in stark contrast to the assessment by the treating physician. While over a third of the patients perceived a need for treatment within an hour, this level of urgency was only assigned to 11% of cases by the treating physician. On the other hand, while only 13.8% of the enrolled participants perceived their problem as non-urgent, this assessment was afforded to 42.2% by the treating ED physician.

In the control group, the difference was less pronounced with 19% of the patients reporting their problem as non-urgent versus 27% from the ED physicians' perspective (Table 8).

Table 8. Assessment of estimated level of urgency as by patient vs. doctors, number (%).

	n (%) asylum seekers	n (%) control group	p
Urgency: Patients perspective			
Within one hour	37 (35.2)	15 (22.1)	0.172
Within few hours	53 (50.5)	40 (58.8)	
Non-urgent	15 (14.3)	13 (19.1)	
Missing	1 (0.9)		
Urgency: Doctors perspective			
Within one hour	12 (11.5)	20 (29.4)	0.007
Within few hours	46 (44.2)	29 (42.7)	
Non-urgent	46 (44.2)	19 (27.9)	
Missing	2(1.9)		

The complaint spectrum among asylum seekers was similar to that of the control group with the top three complaints matching the top three recorded ICD 10 diagnoses in the control group (Table 9-10).

Table 9. Chief complaints on arrival

Chief complaint	No.	%
Abdominal pain	15	14.1
Orthopedic injury	10	9.4
Respiratory problems	9	8.5
Headache	8	7.5
Back pain	7	6.6
Infection	6	5.6
Abdominal problems	5	4.7
Chest pain	4	3.8
Ear / nose / throat problems	4	3.8
Traffic injury	4	3.8
Allergies / hives	3	2.8
Dizziness	3	2.8
Fever	3	2.8
Psychiatric/ social problems	3	2.8
Skin complaint/trauma	3	2.8
Assault, rape	3	2.8
Body aches	2	1.8
Eye problem	2	1.9
Hemorrhage	2	1.9
Weakness	2	1.9
Other	8	7.5

The most often reported chief complaints in the control group were abdominal pain (13.2%) and orthopaedic injury (11.8%).

Table 10. ICD 10 Diagnosis (categorized in main groups e.g. M=Diseases of muscles and skeleton).

ICD Diagnosis (main classification)	No.	%
Certain infectious and parasitic diseases	6	5.5
Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism	2	1.8
Endocrine, nutritional and metabolic diseases	1	0.9
Mental and behavioral disorders	5	4.6
Diseases of the nervous system	2	1.8
Diseases of the eye, adnexa, ear and mastoid process	3	3.7
Diseases of the circulatory system	3	2.8
Diseases of the respiratory system	10	11.0
Diseases of the digestive system	14	12.8
Diseases of the skin and subcutaneous tissue	8	7.3
Diseases of the musculoskeletal system and connective tissue	14	11.9
Diseases of the genitourinary system	1	0.9
Pregnancy, childbirth and the puerperium	1	0.9
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	14	12.8
Injury, poisoning and certain other consequences of external causes	21	20.2

not documented in one case

Discussion

Demographics:

The demographic spectrum in the study group is comparable to that of immigrants currently in Switzerland [20]. Young men constitute the majority of immigrants seeking treatment in the ED[21]. The mean age of the Swiss ED population is 51.3 years [22].

Education and Socio-Economic status:

One of the very stark contrasts in this study was the difference in socioeconomic status. The level of education reported by the study group was significantly lower. Reasons for this may be manifold: with poverty, lack of infrastructure and wartime chaos coming to mind. A large majority of the study population does not currently have a job, with the big caveat in the respect that AS do not have a work permit due to the course of the asylum process. Despite the suspected reasons as selection bias of the AS we did not intend to investigate reasons for this in this study

Complaints:

The complaint spectrum did not differ in a meaningful way between the two study groups with the most commonly reported complaints being abdominal pain and orthopaedic injury. Psychiatric complaints are directly referred to the psychiatric ED service in the hospital, which explains the low rate in our study population compared to the literature [23]. The high number of unclassified complaints might be due to language barriers or to more subtle presentations of other problems including the non-specific presentation of non-somatic problems.

Language/ Communication:

Language barriers were of great importance in this study. In half of the study population direct communication with the physician was impossible. In almost all of these cases, family and friends adopted the role of a translator. A change of culture and reimbursement to facilitate access to translation services may be needed as non-professional translators may negatively impact quality of care. Furthermore, the low proportion of patients with contact to a GP or a phone hotline prior to ED consultation may also be related to language barriers. Implication of translation services might provide better medical care as well as access to primary care (help with appointment, phone calls, etc.)

Health literacy:

A total number of 30.3% reported not having any knowledge about the Swiss healthcare system (HCS). This number decreased from 75% at arrival to 29.3% after 2 years. From arrival up to three months in Switzerland, information from the immigration center appears to be the only source of healthcare knowledge available. After 2 years, the relevance of the social environment surpassed that of the initial information from the immigration center. The use of provided media including web based and printed media was very low with a total of only 5.5 % of the AS who confirmed to gain knowledge this way. The most important source of information about the HCS is the social environment like family and friends in this population. Education and health literacy building measures should focus strongly on this in order to create the largest impact.

Reasons for ED instead of GP:

Usage of primary care services was reported low in the country of origin and remained low in the first month after arrival, but a trend towards consultations with a GP after 2 years in Switzerland was reported. Patients in both groups reported a high self-perceived urgency as reason to present to the ED whereas triage category was low in our study and control group. Bad experiences with the GP system were reported in almost one tenth of the study population and the not reported proportion might be higher, more care may have to be taken concerning intercultural dialogue in order to avoid negative impact.

The high proportion of missing answers in this respect may point to a lack of understanding of the question, possibly related to a different understanding of the healthcare system. The second most claimed reason was related to opening hours followed by a sense of urgency and the notion of getting better care at the ED. Reports of having a bad experience at the GP's office should not be underestimated. Prejudice may be involved in this context.

The fact that almost one in five patients in the control group reported his problem as non-urgent despite the finding that this group was well informed about alternative possibilities represents a consumer behavior. This trend to use emergency departments as primary care providers is a well-known phenomenon[3].

Contact to GP prior to ED

About two thirds of the study collective reported not having attempted to contact a GP before ED presentation. The fact that 29.9% of the study collective reported no relation to a GP may be mostly due to a lack of information about the health care system. Restricted opening hours is a major reason to visit the ED in the perception of these patients. A lack of trust as demonstrated by reports of bad experience or the notion of receiving better care at

the ED (which cumulatively constitute one third of the responses) appears to be an important barrier in access to healthcare.

Nevertheless, the finding that despite the low impact of official information channels almost two thirds of the study collective reported GP contact is encouraging.

Business hours:

The large proportion of asylum seekers reporting being outside of GP business hours would imply impediments to healthcare access. There was, however, a comparatively small fraction actually visiting the ED outside of regular GP opening hours (Table 7).

With a large proportion of the patients receiving ambulatory treatment the reason for presentation in the ED are most probably due to the belief in being provided better care at the ED than at the GP's and being used to a hospital based health care system in the country of origin. Additional access barriers may arise from difficulties in getting an appointment due to language barriers (first contact usually by phone) and previous bad experiences.

The trend towards visiting the ED outside of regular business hours was more pronounced in the native population. This finding reflects the fact that the overwhelming majority of the control population was currently employed and hints at consumer behaviour in respect to covering medical needs, as underlined by the finding that one in five participants in that group did not consider their problem to be a matter of urgency.

Perceived urgency:

There was a significant mismatch between the perceived urgency and the physician's take on that matter in the study group. Cultural differences and related misunderstandings come to mind as a reason for this finding. Within the control group patient's and physician's

perception of urgency were more closely correlated indicating that cultural differences and language barriers were smaller.

The respective proportions of patients receiving inpatient versus outpatient treatments did not differ significantly between study groups. A large majority of over 90 % of cases in the triage categories analyzed were not hospitalized.

Limitations

First, this survey was only conducted among patients whose complaint was classified as a non-urgent problem in triage in an urban university hospital in a single-centre setting.

Accordingly, selection biases apply.

Secondly, the design as a survey and kind of questions asked, appear as the two main weaknesses of this study.

There was a number of randomly missing answers which limits the interpretation of the results.

Thirdly, the strong skew towards young males of the study collective proved hard to match in the control group. A large peak at the outmost lower end of the age group admitted to the adult ED department was compounded by an allowed age variation of +/- 10 years, which may be associated with significant changes in behaviour in early adulthood.

Conclusion

In this study several important tendencies regarding the health seeking behaviour of asylum seekers emerge:

There seemed to be a grave lack of understanding of the GP-based Swiss healthcare system in AS. The low impact of printed or other media available for AS is worrying. Different ways of intervention in this respect like community-based education may be necessary.

The strong sense of urgency among the study population was not paralleled by the physicians' interpretation of the health issue.

Language and communication is one of the main problems with restriction to access many provided primary care services as well as the need to rely on friends and family in the acute setting.

Low acuity presentations in the ED are not only originating from the AS population but also from the native population, in this case however more likely for the convenience of the patients.

Funding

The study was funded by the Swiss Federal Office of Public Health (FOPH)

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