

Máster en Salud Pública UPF-UAB

Trabajo Final de Máster

**Perceptions on Access to Health Services of Migrants with
Chronic Diseases in Barcelona, Catalonia, Spain:
A Qualitative Study**

Alumna: Shannon Leigh O'Brien

Directoras: Aida Oliver Anglés, Ingrid Vargas, María Luisa Vázquez

Institución:

Servei d'Estudis i Prospectives en Polítiques de Salut (SEPPS);
Consorci de Salut i Social de Catalunya (CSC)

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Aida Oliver Anglés
Gestora de proyectos y asistente de investigación
El Servei d'Estudis i Prospectives en
Polítiques de Salut
Consorci de Salut i Social de Catalunya



Ingrid Vargas
Investigadora permanente
El Servei d'Estudis i Prospectives en
Polítiques de Salut
Consorci de Salut i Social de Catalunya



María Luisa Vázquez
Directora
El Servei d'Estudis i Prospectives en
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En la presentación del trabajo final de máster original, las tareas para estar realizadas por la alumna eran:

1. Elaboración del protocolo de investigación.
2. Trabajo de campo: adaptación de la guía de entrevista; realización de las entrevistas; transcripción de los resultados; entre otras.
3. Análisis temático de los resultados.
4. Redacción del artículo y tesina.
5. Publicación del artículo científico derivado de la tesina.

Al final, las tareas realizadas eran:

1. Realizar la revisión bibliográfica y redactar el protocolo de investigación y la guía de entrevista.
2. Presentar el protocolo al tribunal universitario y entregarlo al Comité de Ética para su aprobación.
3. Gestionar el trabajo de campo al conectar con instituciones e identificar informantes.
4. Planificar, organizar, y realizar las entrevistas y transcribir sus grabaciones.
5. Codificar y analizar los resultados y triangulizar el análisis con el equipo investigador.
6. Redactar el manuscrito TFM según estipulaciones de un artículo científico, adaptándolo según revisiones del equipo investigador.

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COREQ (COnsolidated criteria for REporting Qualitative research) Checklist

A checklist of items that should be included in reports of qualitative research. You must report the page number in your manuscript where you consider each of the items listed in this checklist. If you have not included this information, either revise your manuscript accordingly before submitting or note N/A.

Topic	Item No.	Guide Questions/Description	Reported on Page No.
Domain 1: Research team and reflexivity			
<i>Personal characteristics</i>			
Interviewer/facilitator	1	Which author/s conducted the interview or focus group?	
Credentials	2	What were the researcher's credentials? E.g. PhD, MD	
Occupation	3	What was their occupation at the time of the study?	
Gender	4	Was the researcher male or female?	
Experience and training	5	What experience or training did the researcher have?	
<i>Relationship with participants</i>			
Relationship established	6	Was a relationship established prior to study commencement?	
Participant knowledge of the interviewer	7	What did the participants know about the researcher? e.g. personal goals, reasons for doing the research	
Interviewer characteristics	8	What characteristics were reported about the interviewer/facilitator? e.g. Bias, assumptions, reasons and interests in the research topic	
Domain 2: Study design			
<i>Theoretical framework</i>			
Methodological orientation and Theory	9	What methodological orientation was stated to underpin the study? e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis	
<i>Participant selection</i>			
Sampling	10	How were participants selected? e.g. purposive, convenience, consecutive, snowball	
Method of approach	11	How were participants approached? e.g. face-to-face, telephone, mail, email	
Sample size	12	How many participants were in the study?	
Non-participation	13	How many people refused to participate or dropped out? Reasons?	
<i>Setting</i>			
Setting of data collection	14	Where was the data collected? e.g. home, clinic, workplace	
Presence of non-participants	15	Was anyone else present besides the participants and researchers?	
Description of sample	16	What are the important characteristics of the sample? e.g. demographic data, date	
<i>Data collection</i>			
Interview guide	17	Were questions, prompts, guides provided by the authors? Was it pilot tested?	
Repeat interviews	18	Were repeat interviews carried out? If yes, how many?	
Audio/visual recording	19	Did the research use audio or visual recording to collect the data?	
Field notes	20	Were field notes made during and/or after the interview or focus group?	
Duration	21	What was the duration of the interviews or focus group?	
Data saturation	22	Was data saturation discussed?	
Transcripts returned	23	Were transcripts returned to participants for comment and/or	

Topic	Item No.	Guide Questions/Description	Reported on Page No.
		correction?	
Domain 3: analysis and findings			
<i>Data analysis</i>			
Number of data coders	24	How many data coders coded the data?	
Description of the coding tree	25	Did authors provide a description of the coding tree?	
Derivation of themes	26	Were themes identified in advance or derived from the data?	
Software	27	What software, if applicable, was used to manage the data?	
Participant checking	28	Did participants provide feedback on the findings?	
<i>Reporting</i>			
Quotations presented	29	Were participant quotations presented to illustrate the themes/findings? Was each quotation identified? e.g. participant number	
Data and findings consistent	30	Was there consistency between the data presented and the findings?	
Clarity of major themes	31	Were major themes clearly presented in the findings?	
Clarity of minor themes	32	Is there a description of diverse cases or discussion of minor themes?	

Developed from: Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care*. 2007. Volume 19, Number 6: pp. 349 – 357

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Resumen

A pesar de tener protección legal al Sistema Nacional de Salud, la evidencia sugiere que todavía existen barreras para la población inmigrante que vive en Barcelona, especialmente para los más vulnerables. Guiado por el marco de Aday y Andersen para el estudio del acceso a la atención médica, se llevó a cabo un estudio cualitativo exploratorio-descriptivo basado en entrevistas individuales semiestructuradas realizadas durante febrero y marzo de 2023 a inmigrantes con enfermedades crónicas (n=10) utilizando una guía temática para identificar los factores del sistema y de la población que afectan su acceso a la atención médica en la actualidad. Tras la transcripción, se realizó un análisis temático de contenido basado en la codificación y categorización. Los resultados fueron triangulados entre distintas investigadoras. Los principales factores identificados que influyeron en el acceso relacionado con los servicios de salud fueron los largos tiempos de espera y las barreras tecnológicas. En relación con la población, destacaron la carga económica producida por los costos asociados, la obtención de la tarjeta sanitaria y las barreras relacionadas con la alfabetización digital y el conocimiento del sistema de salud por parte de los informantes. Estos últimos factores estaban influenciados por la compleja relación entre su estatus administrativo, sus condiciones laborales y su salud. Por último, los informantes también identificaron los factores relacionados con la calidad de la atención recibida. En conclusión, este estudio proporciona evidencia sobre la persistencia de barreras en el acceso a los servicios de salud por parte de esta población ya destacadas en investigaciones previas, a pesar de la protección legal.

Abstract

Despite having legal access to the Spanish National Health System (SNHS), evidence suggests barriers still exist for the immigrant population living in Barcelona, especially for the most vulnerable. Guided by the Aday and Andersen framework for the study of access to medical care, we conducted an exploratory-descriptive, qualitative study based on semi-structured, individual interviews conducted during February and March 2023 of immigrants with chronic diseases (n=10) using a topic guide in order to identify system and population factors affecting immigrants' access to health care. After transcription, a thematic analysis based on codification and categorization was conducted, and results were triangulated among the investigative team. The main factors identified influencing access relating to the health delivery system were long wait times and technological barriers. The primary factors influencing access relating to the study population were the economic burden of associated medical costs, obtaining the individual health card, and barriers pertaining to digital literacy and informants' knowledge of the health system. These latter factors were influenced by the complex relationship between administrative status, labor conditions, and health. Lastly, informants also discussed persistent factors related to the quality of care received. In conclusion, this study provides evidence that barriers highlighted in prior research persist for the immigrant population in Barcelona, despite legal guarantee.

1. Introduction

In Spain, international immigration has steadily increased throughout the 21st century [1]. Within the European Union (EU), it is the country with the third largest foreign-born population [2,3,4]. This increase in immigration has resulted in sociodemographic shifts and changing demands on various services, such as those related to the health system [1].

Various studies highlight the discrepancies between health care access for the national versus non-national population throughout the EU as a whole, citing such barriers as lack of knowledge and discriminatory practices in addition to illustrating how immigrants perceived they needed but did not have access to a health system [5-7]. Those with chronic conditions indicated the highest odds of needing and not having access to services compared to migrants with other health problems [6]. However, these barriers vary in magnitude depending on the population, country, and the existence of a national health system.

In Spain, the National Health System (SNHS) was legally established in 1986 [8]. In 2003, access was granted even to non-nationals without a residence permit [9]. This access was short-lived, however, as rights were then rescinded for this population in 2012 [10]. Yet even during the period of legal protection, the little evidence on immigrant access in Spain that does exist indicates that barriers prevailed, and only worsened when rights were revoked [11-17].

In Catalonia, a region of Spain with one of the largest populations of foreign-born residents [1,4], some of these identified barriers were the reduction of health personnel (which led to increased wait times), immigrant's precarious employment conditions, clinic hours, language or cultural barriers, and co-payments [14-17]. Furthermore, these studies also identified the difficulty in obtaining the Individual Health Card (IHC). In Catalonia, the IHC is needed in order to access free health service, and in order to obtain it, one must be registered at an address with the city council (a process called *empadronamiento*), which was often contingent upon possessing a legal residence permit [14-17].

In 2018, however, legal protection to health services in Spain once more was reinstated for those even without a residence permit [18]. Then, in 2020, as elsewhere in the world, Spain suffered the effects of COVID-19. Emerging evidence shows how the pandemic globally impacted the least socially advantaged populations most, citing a lack of resources as a system-level barrier and illustrating how routine and non-urgent care was often postponed or else managed virtually (which highlighted important barriers pertaining to digital literacy) [19-22].

Nevertheless, despite this evidence no further identified study exists on what access is like today (especially after the reinstatement of rights in 2018 and after COVID-19) for vulnerable migrants residing in Catalonia. Furthermore, while the studies on this topic specific to Catalonia are important, only two identified were qualitative in design, only one of which included immigrants themselves as informants. Qualitative studies are important because they highlight not only "what" is happening, but also consider the "how" and "why" - which are vital to identify the ways in which access can be improved, especially for the population with the "lived experience" of the phenomenon.

As access to care is a complex phenomenon affected by a variety of factors, this study was guided by Aday and Andersen's framework for the study of access to medical care (Figure 1 in the annex), which distinguishes between potential and actual access and the policies that influence both. Potential access takes into account various characteristics of health services (such as resources and organization) and of the study population (such as

both mutable and immutable predisposing and enabling factors, and perceived or evaluated need). Actual access considers utilization (which includes type, site, purpose, and time) and satisfaction (which refers to convenience, costs, coordination, courtesy, information, and quality) [23]. Under this framework, this study aims to analyze what access to healthcare, and its influencing factors, is like today for vulnerable migrants with chronic disease in Barcelona (Catalonia, Spain), thereby filling an important gap in knowledge.

2. Methods

2.1 Study design

A qualitative, exploratory-descriptive and phenomenological study from an ETIC standpoint (where the investigators acknowledge being outsiders to the phenomenon) was conducted [24]. The study population consisted of vulnerable migrants with chronic conditions that reside in the city of Barcelona, Spain. The study investigated informants' experiences and perceptions regarding their access to and use of the SNHS and its influencing factors.

2.2 Sampling

A purposive, intentional, and accumulative sampling technique [24] guided the selection of informants who met the following inclusion criteria: non-nationals living in Barcelona, the ability to communicate in Spanish or English, a diagnosis of a chronic condition, and the use or attempted use of the SNHS during the six months prior to the study. Variability criteria included the possession (or lack) of a residence permit and the IHC, the level of care sought, the informant's gender, their time residing in Barcelona, in-person or virtual care, and knowledge (or not) of Spanish or Catalan.

During recruitment, informational flyers and e-mails were sent to institutions working with the study population registered with the city council. In the end, all informants (n=10) were recruited telephonically through Red Cross Catalonia and Foundation Cepaim, with whom the main researcher had personal contacts.

Participating informants consisted of immigrants primarily from Latin America, with one each from Morocco, Georgia, and Equatorial Guinea. All but the participant from Georgia spoke fluent Spanish (it being the first language of those from Latin America), with the participant from Georgia able to communicate confidently in Spanish. In the end, almost all informants possessed the IHC, but almost none possessed a residence permit (Table 1 in the annex). Furthermore, all informants had used or attempted to use multiple levels of care and in-person as well as virtual care. The final study population was determined by saturation of information upon repetition of similar themes.

2.3 Data collection

Fieldwork was conducted between February and March of 2023. Data was collected through individual, semi-structured interviews (conducted in Spanish) using a previously piloted topic guide (Figure 2 in the annex). They were realized by the primary investigator, a

Masters of Public Health student with training in qualitative studies and previous experience working with migrant populations.

Explored topics included informant's use of the SNHS in the previous six months, considering different care levels, facilitators and barriers to access, virtual or in-person care, and suggestions for improvement. To investigate facilitators and barriers to access, the following aspects were explored: IHC obtention, the location, availability, and transportation to services, associated costs, hours of attention, scheduling processes, wait times, and the availability of information. When needed, probing questions on population factors considered informant's economic resources, labor conditions, community support systems, cultural and linguistic aspects, and their perceptions about their disease and level of need.

Eight interviews were conducted at Red Cross Catalonia and two at Foundation Cepaim. They lasted between 35 and 75 minutes. None were repeated. They were recorded using a mobile phone with a connected microphone and the primary investigator took field notes during. The audios were transcribed using Office 365 Word online and corrected by hand as necessary by the main researcher.

2.4 Data analysis and information quality

A thematic analysis was conducted [24], with constructed categories based on the guide and emergent topics. Themes were identified, coded, and classified according to Aday and Andersen's framework. An emergent theme not originally stratified for in the interview guide regarded the quality of care received (a factor of satisfaction in the Aday and Andersen model) and was analyzed according to Donabedian's division: factors relating to technical quality (i.e. the structure and process) or else interpersonal quality [14, 25].

Similar patterns were identified by discerning consistencies or differences in data through comparisons. Data quality was ensured by saturation and by triangulation among the investigative team to verify consensus on conclusions and improve the analysis. Furthermore, another member of the investigative team participated in the first interview in order to provide feedback to the primary investigator. Due to time constraints, transcriptions and results were not triangulated with the informants.

2.5 Ethical considerations

This study protocol and interview topic guide were approved by the Medication Investigation Ethics Committee (CEIm reference code 2022/10745) to guarantee they complied with legal ethical considerations. Before the interview, study participants were informed of the reason and purpose of the study in addition to their rights both verbally and in writing. They were provided information on how to follow up with the investigative team after the interview. Informed consent was thus ensured, and verbal consent was captured in the audio recording. Confidentiality and anonymity were guaranteed by assigning each informant a code during transcription and analysis. The investigative team declares no conflict of interest.

3. Results

The main factors discussed that influenced access related to the health delivery system were long wait times (associated with the saturation or lack of sufficient sanitary personnel) and technological barriers. Regarding population characteristics, the main factors identified that influenced access to health services were associated with the complex relationship between health, administrative status, and labor conditions in addition to the interplay of knowledge and technology. These were namely the economic burden of associated medical costs (i.e. medication and transportation) and obtaining the IHC, or else topics related to informants' digital literacy and understanding of the health system. The main consequence of such barriers was the worsening of one's health condition.

The biggest facilitator discussed overall in accessing the SNHS was the assistance provided by informants' social network and by community services (such as non-profit organizations (NGOs)). An additional main topic that emerged were factors related to the quality of the medical care received (such as resources available, the integration of the system and knowledge of medical professionals, and the treatment of sanitary personnel towards informants) (Tables 2 and 3 in the annex).

Overall, informants primarily used specialty or hospitalized attention for ongoing treatment of disease management and urgent care at primary clinics or emergency care at hospitals (especially when primary care clinics were closed) when seeking critical treatment.

3.1 Factors influencing access related to the health delivery system

The primary health system barrier informants discussed were the long wait times - especially in urgent care, to receive specialty care, and for diagnostic testing. Though some informants described wait times as acceptable, most expressed negative experiences, with the consequence of a perceived worsening of informants' conditions. Regarding wait times in urgent care, one informant explained, *"I arrived at 7 at night...and they attended to me almost...at 4 in the morning...I hadn't eaten...I hadn't taken my medication...they didn't tell me anything...just to then tell me I was in excellent condition but I told them then why would I have come...but for waiting for so long...I despaired...and left"* (CR2). For diagnostic tests, informants discussed waiting for a few months to more than a year, one describing, *"[in January 2023] my neurologist requested...a genetic exam...I have the appointment in March...2024...it's strange, to not say a bad word, that they give you an appointment...for something that is important to know soon in a year and a few months"* (CP1). In waiting for specialty care, one informant expressed, *"the letter arrived and [the appointment is in] practically a year and a month...it's not fair...waiting one year with this pain...if I had [the resources] to go to a private doctor, I would, to be seen quickly. But I don't"* (CR8).

Informants associated these long wait times with the lack or saturation of healthcare professionals and the lack of urgent care at primary care clinics during nights and weekends. They expressed, *"the doctors aren't at fault...the problem is the government that makes cuts to the workers...primary care functioned well before but lately with the cuts is where the problems come from"* (CR7), *"the few that are working are overwhelmed...they can't even spend 10 minutes with you"* (CR3) and *"...now they don't give you an appointment in a week but in a few months...they tell you that during COVID everything accumulated, but COVID has passed...it's like everyone is going quickly...yet despite the fact they are running...they give you an appointment six months from now...that the excuse is still COVID"* (CP1).

Beyond wait times, another prominent factor that emerged was that related to technology, specifically regarding Catalonia's mobile health application La Meva Salut (LMS) and telephonic services of primary care clinics. While LMS allows system users to manage processes like viewing health records and scheduling appointments, some informants explained how LMS did not work on their mobile devices. And in attempting to communicate with clinics telephonically, informants described, *"sometimes [the clinics] don't pick up the phone...so I have to go in person...it would be nice to call because...at times when I can't...[when] everything hurts...but knowing they don't answer the phone I go [in-person]"* (CR2). This increase in use of telemedicine was described as a consequence of the COVID-19 pandemic, informants explaining how they now need to call to make an appointment: *"before...one could...see the doctor without needing to call"* (CR6) and now *"no one will attend to you if you don't call [ahead]"* (CR7).

Saying that, for informants for which LMS and digital communication did function, telemedicine was seen as a facilitator, one informant expressing, *"[it] gives you a Plan B...[though] your appointment is in five months...if you have a question you can call or send an email...last week I sent an email...they answered me the next day...which I think is very efficient"* (CP1). Furthermore, while attending in-person appointments was physically difficult for some, most informants did positively comment on the proximity of primary care clinics in their respective neighborhoods in considering factors related to the location of services.

3.2 Factors influencing access related to the study population

Regarding population characteristics, factors that emerged were influenced by the complex relationship between one's administrative status, labor conditions, and health in addition to factors related to knowledge and technology.

For example, one of the greatest barriers to access discussed was the economic burden at paying for associated medical costs, informants stating, *"the medication is very expensive, I can't afford it"* (CR4), *"it affected us economically, especially since we don't have stable work"* (CR6) and *"I have a very small pension and all of the medication was an extra expense"* (CR3). Another important cost was that of the transportation to attend or return from medical appointments, especially when public or ambulance transportation was less available (i.e. during nights and weekends when urgent care at primary clinics were closed). One informant explained, *"the [metro] card that I could afford was the one of 10 [trips]...which I used quickly going to and coming from the hospital...when I didn't have any [trips] left...I walked back...which was far...for not having the [metro] card"* (CR2).

This economic burden was driven by multiple factors. For one, even if physically able, informants without a legal residence permit did not have access to the formal economy, forcing them to find work in the more precarious informal economy. Informants who didn't work at all discussed their condition as the reason why, and spoke of the difficulty in obtaining a disability card or inability to ask for medical leave because of their administrative status. One informant lost an informal job because of hospitalization. Another informant (in commenting on the interplay between labor prospects, transportation costs, and the distance to specialty care) whose child had a chronic condition described, *"we have not had the fortune that both parents work at the same time, because one of us always has to take care of the child...to take him out of school and take him to treatments...in many occasions one must prioritize [his] health and unfortunately that means turning down labor opportunities"* (CR6).

In these ways, informants highlighted how their administrative status and health condition negatively impacted their labor prospects, which in turn negatively influenced their economic resources, which in turn cyclically affected their health.

Facilitators alleviating economic burdens were the current government subsidy that reduced the price of a metro ticket by half, and assistance from social and community networks in covering the cost of medication or the metro card. Informants described, *“the Red Cross helps me with my medicine, because right now, I don’t have any money”* (CR5).

Beyond the economic burden, another prominent barrier to access discussed impacted by one’s administrative status was the difficulty in obtaining the IHC: *“Before it was easy (...) now it’s complicated...you can’t obtain the IHC without registration...it seems every year they change the law regarding foreigners”* (CR7). Almost all discussed the difficulty in finding a landlord willing to rent to and support the *empadronamiento* process of someone without a legal residence permit and stable job in the formal economy, which is necessary in order to apply for the IHC. Without the IHC, or while waiting for its arrival, informants discussed being denied access to primary care services.

While primary care clinics did provide information on the requirements necessary in order to obtain the IHC, *empadronamiento* was described as being made easier only when a landlord was helpful, or else a friend or family member assisted with the registration process. One informant explained, *“I had the luck of being able to register myself at an acquaintance’s house...the IHC arrived at their house, they called me and I went to retrieve it”* (CP1).

Furthermore, as reflected in the *empadronamiento* process, factors relating to informants’ knowledge and understanding of their rights to health care and how the SNHS functions, especially upon arrival, equally emerged. While primary care clinics also offered information about navigating the system when solicited (as with *empadronamiento*), most informants discussed how the main facilitator to increasing their understanding of the SNHS still came from their social network and community services. Informants expressed, *“[through the] Red Cross...City Hall, SAIER [Migrant and Refugee Attention Service]...we have situated ourselves more and more with the topic of health in Spain”* (CR6).

These community services additionally served as a facilitator to access when considering factors related to technology, informants explaining *“[NGOs] teach us how to operate a computer...how to enter [LMS]...how you have to manage a process online”* (CR3). Otherwise, digital literacy emerged as a barrier to access in the interplay between factors related to knowledge and technology, where informants with self-expressed low levels of digital literacy choose to go personally to clinics to schedule appointments, request results, or else ask questions.

3.3 Perceived quality of attention

A final topic that emerged during the interviews related to the quality of care received. Regarding the technical quality (i.e. the structure of the health system and process of accessing and utilizing health services) [25], informants overall positively described medical attention provided. This was primarily due to their perception of the knowledge of medical personnel, for the availability of resources, for treatments or solutions given, the flexibility of scheduling appointments in primary care based on school or work schedules, the integration of the system and the various levels of care, the derivation from within the system itself to other services, and the quality of medical care in Spain (especially compared to their home countries). Also, though medical attention was perceived as *“better in person”* (CR1) overall,

informants explained telemedicine, when accessible, “*seems to be a good idea*” (CR6), especially when it was difficult to make requests or attend appointments in-person.

However, some challenges arose regarding misdiagnosis or discrepancies in medical opinions, the interruption (or lack of) treatment due to a change (or vacancy) in personnel, not being prescribed medication, and being denied treatment for not yet possessing the IHC or a Spanish identity card.

Regarding interpersonal quality, most informants commented on the fair treatment given by medical staff, describing head doctors and specialists as “*attentive [and] caring*” (CR5). However, some informants perceived that fair treatment by medical staff was a “*lottery*” (CR7) more than a guarantee and not all treat patients amiably. When denied an ambulance, one informant described, “*unfortunately, in that moment...the person on the other end of the line was not the most suitable to understand the situation...it was the first and last time we called*” (CR6). Another informant discussed, “*I have the impression that doctors here in Spain...are not empathetic...here they are distant...impersonal...the head doctors are assholes. I don't like them but they're who I was assigned, I can't choose. So I have to tolerate them...*” (CP1).

Some informants related poor interpersonal treatment to perceived discrimination. One informant expressed, “*it's not the health system, it's the workers...they look at you badly...they need to humanize [the workers] more...they think that one comes to take away their pension and cheat the system...but we're good people, who for difficult circumstances had to leave...I don't know if the Catalan is cold of heart...but they treat you badly...[and it] worsens your health*” (CP2). And although linguistic factors (as native Spanish-speaking informants explained medical staff spoke to them in Spanish) were otherwise not seen as a barrier, one informant did describe, “*between them...they speak in Catalan...we felt strange...in one moment I felt discriminated against...because I thought...why do they speak in their language...when they know how to speak Spanish...it was as if they were keeping secrets*” (CR6). For non-native Spanish speakers, an informant described, “*when they hear that you speak [Spanish], they treat you well. When you don't, no*” (CR7).

The pandemic was described as highlighting factors related to both technical and interpersonal quality. For example, though most of the informants that resided in Spain during COVID-19 (and had received a diagnosis prior) expressed how their treatment had continued relatively uninterrupted, some did comment on its impact on the way and frequency in which care and follow-up were provided: “*I think that, yes, [the pandemic] influenced that I wasn't looked at or that I didn't go to the clinic as I usually do to check the progression*” (CR3), resulting in a delay in treatment or additional diagnosis (a technical aspect). Regarding interpersonal quality, one informant explained, “*now, no...I don't know if it was because of the pandemic...the population that was prejudiced more...we need more medical attention...and there are very few medical professionals*” (CR3), discussing the interplay between perceived discrimination and a lack of sanitary personnel.

4. Discussion

To the best of our knowledge, this is the first study that comprehensively analyzes access to the SNHS and its influencing factors for vulnerable immigrants in Barcelona since legal rights were reinstated to those without a residence permit in 2018 [14-17]. Furthermore, it is one of the few identified studies on access that considers immigrant populations with a chronic disease, particularly since COVID-19 [21,22].

This investigation illustrates how barriers to access identified for the immigrant population in Catalonia and perceptions on quality of care prior to and after 2012 [14-17], which are similar to those evidence suggests exist throughout Spain and the EU as a whole [5-7;11-13], continue to persist even now after 2018, with some important distinctions. Furthermore, a topic that emerged in this study not widely present in existing evidence [14,15], was the extent to which assistance from outside of the health system (via community services and social relations) facilitated access to the SNHS.

4.1 Factors influencing access related to the health delivery system

One of the main persistent barriers that emerged in this study (as similarly highlighted in previous evidence [14,15,17]) were the extended periods of waiting that informants experienced, especially in emergency care and for diagnostic testing. These extended wait times resulted in the perceived deterioration of informants' health, either in the moment due to increasing levels of stress or pain while awaiting medical attention, or else due to the deterioration of one's condition while awaiting a necessary test in order to then receive treatment for a condition upon diagnosis or else continual care after a diagnosis.

Informants' use of emergency care seemed to have been driven by the difficulty in accessing primary care without, or while awaiting, the IHC - a factor also documented in prior evidence [14-17]. Yet distinct from former studies (that expressed a perceived insufficiency of primary care clinic daytime hours offered during the work week [14,15,17]) was the use of emergency care when urgent care was unavailable during nights and weekends. One of the main suggestions for improvement was an extension of hours in urgent care at primary clinics during these times.

However, also as in prior evidence [14-17], informants in this study highlighted the primary reason behind long wait times as the saturation of an insufficient number of sanitary personnel - consequence of lower wages compared to elsewhere in the EU and government cuts to health expenditures. Furthermore, informants expressed wait times could have potentially become worse since COVID-19, also as other research indicates [19-22]. It is relevant to note however, that informants otherwise didn't perceive the pandemic as a factor continuing to impact access today, as some studies have cautioned might occur, especially for populations with chronic disease [19-22].

Thus, though access has been legally guaranteed to all once more since 2018, system barriers perceived previously continue to emerge in the discourse on access. Based on these results, policies to improve access should focus on eliminating barriers by improving the number and working conditions of sanitary personnel and by increasing options for critical care during nights and weekends.

4.2 Factors influencing access related to the study population

Regarding the population, results from this study illustrate the continued difficulty immigrants face in obtaining the IHC, especially for those who didn't seem to know about the ability to register oneself without a fixed address [15-17]. However, in this study informants focused on the perceived sense of aversion on the landlord's part to support the process of *empadronamiento* (due to their vulnerable economic and legal status), more so than on

difficulties documented in prior evidence regarding the part of the process managed by the health system [14-17].

However, as in existing literature, immigrants' access in Barcelona is still impacted by the interplay between administrative status, labor permissions, and resulting economic conditions, reflected in the continued economic burden of paying for associated medical costs [14,15,17].

Saying that, the burden of the cost of transportation for informants in this study illustrates the factor from a new lens. Existing literature on factors related to transportation more greatly highlight the geographical and economic barriers faced for informants living in rural areas, indicating proximal distances to health services and economically accessible transportation in urban zones [14]. However, all informants in this study resided in Barcelona city and still discussed the impact of travel time on their labor prospects in addition to the cost of private transportation when public transportation was unavailable.

This impact on labor opportunities as a result of prioritizing care (or else informants' health condition itself) and the expressed flexibility because of precarious employment reflected in this study is also unique from prior research, where informants' precarious employment conditions meant they didn't seek attention during the work week [15,17]. This difference from existing evidence may be due to the fact that all informants' in this study had a chronic condition, distinct from other identified evidence, which necessitates ongoing care [14,15]. Furthermore, as one informant was the parent of a child with a chronic condition, needing to be the caretaker also influenced the prioritization of health over work.

Another aspect different in this study compared to existing research on immigrant access in Catalonia are results pertaining to telemedicine, as the utilization of digital services such as LMS were limited prior to the pandemic [14,15,17]. This study reflects similar results as identified literature around the world about barriers that emerged due to the transition to telemedicine, such as the digital divide [19-22]. It is important to note, however, that age and education seemed to play a role. For example, younger informants and those with higher education levels were more likely to comment on the efficiency of telemedicine, whereas the perceived increased shift to the digitalization of care appeared to act as a greater barrier for older informants and those with less education.

The last major distinction noted in this study compared to previous evidence was the different perspectives on barriers presented by potential linguistic or cultural differences. For example, in prior studies, maghreb women discussed needing to be accompanied by a male relative to medical appointments, and non-Spanish speakers perceived a lack of available translators [17]. As the study population in this investigation included very few informants from such demographics, these previous barriers could not be corroborated. Nevertheless, some informants still commented on the perception of experienced discrimination for their level of Spanish (for non-native speakers) or else Catalan. More research is thus needed to understand what access is like today for native speakers of other languages in order to better analyze potential cultural barriers.

While characteristics related to the population are often more difficult to improve through policy, in order to facilitate access to the SNHS for the most vulnerable it is important to keep in mind the impact one's administrative status can have on their labor conditions and thus economic situation, both of which interplay with access and health. Digital literacy and potential linguistic or cultural differences are also important to consider when analyzing factors that can either act as a barrier or a facilitator to access to care. Though the support provided by social networks and community services expressed in this

study certainly serves as a facilitator, it should not be the main way that barriers to access are overcome.

4.3 Perceived quality of attention

While quality wasn't originally designed into this study as a topic to explore, it emerged prominently in the discourse. This study highlights improvements in perceived technical quality since factors were last documented after the financial crisis [14]. After the crisis, evidence showed a deterioration in quality, primarily due to factors such as misdiagnosis and erroneous procedures, or else superficial examinations and treatments [14]. In this study, some informants still spoke of misdiagnosis, but otherwise highlighted positive aspects of technical quality such as the knowledge of health professionals and receiving correct treatment. However, the perception and impact of a lack of sufficient sanitary personnel is a persistent factor in this study as well as in that which exists [14].

Regarding interpersonal quality, this study illustrates the continued perception of sanitary personnel as unfriendly, a factor expressed in prior literature [14]. However, whereas in previous research informants described perceived poor treatment as a potential result of stress caused by oversaturation and the economic crisis [14], in this study, informants focused more on cultural aspects, such as perceived discrimination. As this resulted in some informants' aversion to accessing certain services (such as in psychiatry or in emergency care) due to the anticipation of receiving poor interpersonal treatment by sanitary personnel, this could cause a potential underuse of necessary care. As only these two mentioned qualitative studies exist on the quality of immigrant health care in Catalonia, it is a topic that deserves further investigation.

4.4 Limitations of the study

The investigative team recognizes certain limitations. For one, as almost all of the informants were native Spanish speakers, the research team feels more investigation needs to be conducted on what access is like for populations from other linguistic backgrounds. While the main researcher sought to include informants from different demographics, for reasons associated with the population's vulnerability, accessing non-Spanish speaking informants proved difficult. Unease at signing the informed consent, even when translated, at expressing oneself in a non-native tongue, and availability seemed to be the biggest barriers to participation. Furthermore, as this study was not stratified according to demographic factors (such as gender), future studies could provide a segmented analysis to understand potential demographic distinctions.

The fact that the main researcher had connections with collaborating institutions and personally knew some of the informants proved to be the biggest facilitator in accessing the population. However, the fact that all selected informants were involved in programs at the participating organizations could also mean potential bias - while vulnerable, they also have access to assistance. Thus, this study is not capturing perspectives from informants who might not be connected to networks of community aid.

Lastly, although the primary investigator thought that her gender might affect the level of information shared by informants, she did not feel this was the case in actuality. She recognizes that her personal relationship, gender, similar status as a migrant (albeit with

different resources), and connection to the collaborating institution could have influenced responses.

Nevertheless, despite these limitations, this is still the first study to analyze what access is like today for vulnerable migrants with chronic conditions living in the city of Barcelona.

5. Conclusion

This study provides evidence that barriers identified in previous studies on what access was like before and after 2012 continue to persist for the immigrant population in Barcelona, in spite of the reinstatement of rights in 2018. In order to reduce health inequalities and improve access (which is legally guaranteed), especially for the most vulnerable, policies must focus on minimizing and removing barriers to health services. Structurally, reduced wait times - potentially via the increase of medical staff or options for emergency care - would improve access for vulnerable populations, especially for those with chronic conditions. Additionally, eliminating the need to register oneself (or making knowledge more available about registering oneself without an address) in order to obtain the IHC would facilitate access for the non-native population of the city.

Population-wise, though potentially more challenging to change via policy, evidence from this study continues to highlight the need to consider how social determinants affect access to health. Barriers to formal labor - due to legal restrictions as well as physical limitations - often result in an increased economic burden of affording associated medical costs, which in turn worsens health. And the digitalization of care, which can streamline processes when it functions correctly, only improves - rather than hinders - access when it considers provisions for improving digital literacy.

While social services and community networks facilitate access to health services, in a truly accessible health system, support from outside of the system should not have to be the primary facilitator to accessing it. This study shows how structural barriers and the influence of social determinants must be recognized at the policy and health system level in order to truly provide equal access and reduce health inequalities for all.

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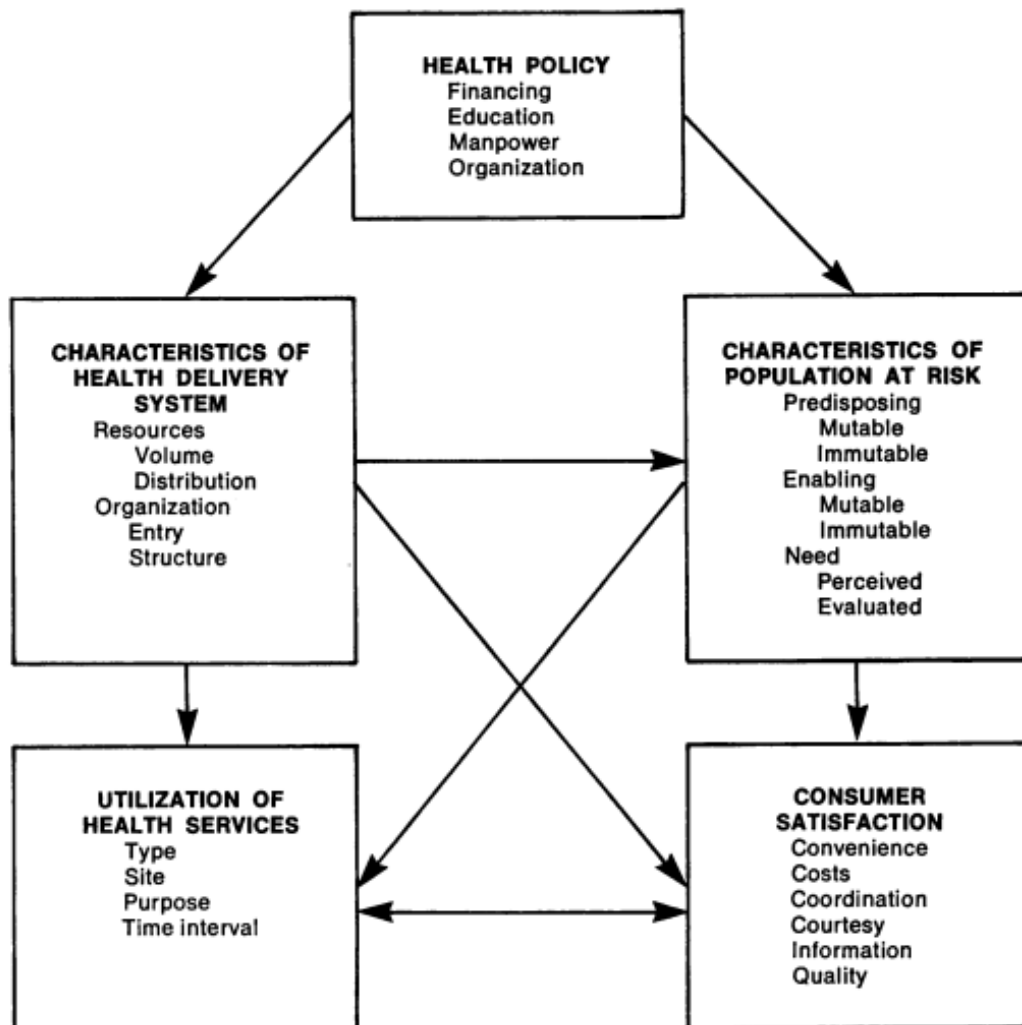
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Annex

Figure 1

Aday & Andersen's Framework for the Study of Access to Medical Care

Aday & Andersen



Framework for the study of access.

Table 1

Informant Characteristics

n = 10

Sex	Male		8
	Female		2
Nationality	Central & South America	<i>Colombia</i>	1
		<i>Ecuador</i>	1
		<i>El Salvador</i>	2
		<i>Peru</i>	2
		<i>Venezuela</i>	1
			7
	Sub-Saharan Africa		1
	Middle East & North Africa	<i>Equatorial Guinea</i>	1
			1
Caucus Region	<i>Morocco</i>	1	
	<i>Georgia</i>	1	
Age*	30 - 39		2
	40 - 49		1
	50 - 59		2
	60 - 69		5
Level of Education	None		1
	Primary		1
	Secondary		3
	Technical		3
	University		3
Residence Permit	Without permit		8
	Unspecified		2
Time of Residence (in years)	1 - 10		6
	11 - 20		2
	20+		2
Employment Status	Unemployed		4
	Informal/Irregular		5
	Retired		1
Chronic Condition**	Aural Condition		2
	Autoimmune Disease		1
	Cardiac Condition		3
	Diabetes		3
	Gastrointestinal Disease		2
	Neurological Condition		3
	Ocular Condition		2

*one of the informants was the father of a child with a chronic condition, age<18

**some informants had multiple conditions

Figure 2
Guía de Entrevista

Introducción: Presentaciones, explicar el proceso, completar asuntos logísticos, etc.

Información sociodemográfica:

Fecha: _____ Lugar de entrevista: _____
 Hora de inicio: _____ Finalización: _____
 Edad: _____ Sexo: _____ País de nacimiento: _____
 Nivel educativo/tipo de formación: _____ En que trabaja: _____
 Posesión de TSI: _____ Diagnóstico de patología crónica: _____
 Seguro privado de salud: _____ Tiempo de residencia: _____

<p>Experiencia en la utilización de los servicios de salud</p> <ul style="list-style-type: none"> - Estado de salud - Experiencia en los distintos niveles - Facilitadores vs. barreras - Atención no presencial - Sugerencias de mejora 	<p><i>Pedir a la persona que piense en las experiencias de los últimos 6 meses:</i></p> <ul style="list-style-type: none"> • ¿Cómo está su salud?, ¿Qué enfermedades padece? ¿Cuánto tiempo hace que está enfermo/a? ¿Dónde le diagnosticaron su enfermedad? • ¿Ha utilizado o intentado utilizar los servicios de salud (por este u otro motivo) en los últimos 6 meses? • ¿Cómo fue su experiencia con los servicios de salud? • ¿Cuándo acudió al médico general? ¿Cuándo acudió al especialista/urgencias/hospitalización? Describe experiencias. <p><i>Profundizar en las barreras y facilitadores, a medida que el usuario vaya narrando su experiencia con los servicios:</i></p> <ul style="list-style-type: none"> • ¿Qué le facilitó el uso de los servicios? ¿Cómo? ¿Por qué? • ¿Qué dificultades ha encontrado al intentar utilizar los servicios de salud? ¿Cómo? ¿Por qué? ¿Qué consecuencias tuvieron estas dificultades? ¿Cómo se sintió? ¿Qué hizo usted ante estas dificultades? <p>¿Qué habría que mejorar para poder acceder y hacer uso de los servicios? ¿Cómo? ¿Por qué?</p> <p>¿Durante los últimos 6 meses, ha usado (o intentado a usar) los servicios de salud de manera no presencial (consulta telefónica, video consulta, <i>la meva salut</i>, correo electrónico)? ¿Por qué problema de salud/enfermedad? ¿Qué profesional/es le atendió? ¿Para qué (solicitud de cita/pruebas, atención médica/enfermería, prescripción medicamentos, seguimiento, etc.)? ¿Qué lo facilitó? ¿Con</p>
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	<p>qué dificultades se encontró? ¿Qué opina de esta forma de atención? ¿Por qué? ¿Qué cree que se tendría que mejorar?</p>
<p>Factores que influyen en el acceso y la utilización de los servicios relacionados con los servicios de salud</p> <ul style="list-style-type: none"> - TSI/padrón - Ubicación, disponibilidad, coste - Transporte - Horario de atención - Trámites (solicitar citas, resultados) - Tiempo de espera - Coste de servicios - Información disponible 	<p><i>A partir de la experiencia del informante, en atención primaria y especializada, profundizar en su opinión sobre:</i></p> <p><i>Entrada</i></p> <ul style="list-style-type: none"> • ¿Cómo fue su experiencia obteniendo la Tarjeta Sanitaria (TSI)? ¿Empadronándose? ¿Qué lo facilitó? ¿Qué dificultades tuvo en este trámite? ¿Por qué? <p><i>Estructura</i></p> <ul style="list-style-type: none"> • ¿Piensa que hay suficientes recursos adecuados disponibles? ¿Por qué? ¿Qué piensa sobre la distancia a los servicios? ¿Ha tenido que usar algún medio de transporte para llegar (ambulancia, bus, etc.)? ¿Cómo es la experiencia usando este modo de transporte? • ¿Cómo ha sido su experiencia respecto a los costes externos (pagar medicamentos, el transporte, etc.)? <p><i>Organización</i></p> <ul style="list-style-type: none"> • ¿Cuál ha sido su experiencia respecto a los horarios de atención? • ¿Cómo ha sido su experiencia programando citas? ¿Cómo suele programar una cita? • ¿Qué opina de los tiempos de espera para tener una cita? ¿Para recibir los resultados? • ¿Qué información tenía sobre cómo acceder a los servicios de salud cuando llegó a Barcelona? ¿Cómo obtuvo información sobre el proceso? <p>¿Cuáles son los facilitadores y barreras? ¿Por qué? ¿Qué estrategias utilizó el informante para enfrentar estas dificultades? ¿Qué se podría mejorar? ¿Cómo?</p>
<p>Factores que influyen en el acceso y utilización de los servicios relacionados con los usuarios</p> <ul style="list-style-type: none"> - Recursos económicos - Condiciones laborales (y trabajo doméstico) - Idioma - Familia/cultura - Redes de apoyo 	<p><i>A partir de la experiencia del informante en atención primaria y especializada, profundizar en su opinión sobre:</i></p> <ul style="list-style-type: none"> • ¿Cómo ha sido su experiencia respecto a los recursos económicos disponibles para la atención (coste de desplazamiento, medicamento, etc.)? ¿Lo ha encontrado difícil poder pagar por los costes relacionados (medicamentos, etc.)? ¿Qué ha hecho frente a esta dificultad? • ¿Cómo su trabajo ha afectado el uso de los servicios de salud o viceversa? • ¿Pensando en el idioma, cómo ha afectado su uso y experiencia del uso de los servicios, o la comprensión del cuidado dado? • ¿Cómo afecta el uso de los servicios su situación familiar o cultural? (necesidad de acompañamiento)? • ¿Cómo se siente sobre su red o apoyo comunitario? ¿Cómo afecta el uso de los servicios de salud?

<ul style="list-style-type: none"> - Creencias/ miedos/ información sobre enfermedad - Percepción de necesidad 	<ul style="list-style-type: none"> • ¿Cómo explicaría su conocimiento sobre temas relacionados con los servicios de salud (derechos, conocimiento sobre el funcionamiento del sistema, de los servicios, fuentes de información, evolución por tiempo)? <p>¿Cuáles son los facilitadores y barreras? ¿Por qué? ¿Qué estrategias utilizó para enfrentar las dificultades? ¿Qué se podría mejorar? ¿Cómo?</p>
<p>Percepción de cambio en el uso tras la pandemia</p> <ul style="list-style-type: none"> - cambio en uso de servicios - TSI - Tiempo de espera, personal - Forma de utilizar 	<p><i>Si lleva más de 3 años en España...</i></p> <ul style="list-style-type: none"> • ¿Ha percibido algún cambio en el uso de los servicios de salud a partir de la pandemia? <p><i>Explorar si ha percibido cambios en:</i></p> <ul style="list-style-type: none"> • (Políticas): ¿Ha percibido un cambio respecto a los requisitos para obtener la TSI? • (Servicios): ¿Percibió un aumento en el tiempo de espera o la reducción personal, etc.? ¿Cómo? • (Usuarios): ¿Ha cambiado su forma de utilizar los servicios a partir de la pandemia? ¿Por qué? ¿Cómo? <p>¿En qué? ¿Por qué? ¿Cómo ha sido su experiencia? ¿Qué consecuencias ha tenido para su atención?</p>

Cierre: expresar agradecimiento, explicar proceso de análisis, preguntar si tiene algún último pensamiento que quiera compartir, etc.

Table 2

Factors influencing access to health care for immigrants with chronic disease in Barcelona

Category	Sub-category	Barrier	Facilitator
Health Delivery System	<i>Wait times</i>	<p><i>Long wait times to:</i> Receive results Receive calls Receive emergency care Receive specialty care Receive the IHC</p> <p>Primary care clinics closed nights and weekends Little time given during appointments</p>	<p><i>Short wait times for:</i> Scheduling appointments in primary care To receive a prescription and medication To receive results</p>
	<i>Resources</i>	Services overwhelmed and understaffed	Sufficient material resources
	<i>Associated costs</i>	-	Medicine relatively inexpensive Economic assistance Transportation subsidy
	<i>Technology</i>	LMS not functioning Difficulty connecting telephonically	LMS and online portals functioning and giving alternate options to in-person care
	<i>Distance and transportation</i>	Distance to specialty care Lack of transportation nights and weekends	Proximity of primary care centers Integrated public transportation system
	<i>Empadronamiento and obtaining the IHC</i>	Need to register address in order to obtain IHC	-
	<i>COVID-19</i>	Pandemic as an excuse for continued long wait times Potential reason behind insufficient staff	Continued treatment during pandemic
Population	<i>Associated costs</i>	Economic burden of covering cost of transportation and medication	Economic assistance from community services and social network
	<i>Empadronamiento and obtaining the IHC</i>	-	Assistance with process from community networks

<i>Distance and transportation</i>	Aversion to metro	-
<i>Knowledge of system and services</i>	Ignorance of rights upon arrival	Assistance navigating system provided by community networks
<i>Technology</i>	Digital literacy operating LMS, online portals, and telephones	Digital literacy in managing technology Educational classes offered by community services
<i>Work, status, and access</i>	Relationship between administrative status, legal right to work in formal economy, precarious employment in informal economy, inability to work for prioritizing health or else for condition itself, and thus unstable economic situation in being able to afford associated costs, causes increased levels of stress that then worsen condition	Self-employment, retirement, and having inconsistent working hours meant more flexibility in scheduling appointments Perception a stable job in the formal economy would provide more security and allow taking time off for health reasons
Quality	Receiving mistreatment Discrimination Not receiving the correct diagnosis Discrepancy between diagnosis Change in sanitary personnel delays treatment Denied ambulance Not being prescribed medication Incongruent system and information provided or acted upon	Illness treated Medical staff knowledgeable Amiability of medical staff Ease of receiving treatment upon access Orientation to system and derivation to services Ability to communicate in Spanish

Table 3

Additional quotes on factors influencing access to health services

Category	Sub-category	Barrier	Facilitator
Health Delivery System	Wait times	<i>"I went to the neurologist in August of last year...and the results...came out in...December...and during this time I grew much worse. I was desperate by the time I had the appointment, because I didn't understand [why it took so long] when I urgently needed treatment." (CP1)</i>	<i>"For the child [medical attention] moves quickly...depending on the type of exam or specialty, but in general [treatment] is quick." (CR6)</i>
	Resources	<i>"...in urgent care it's luck...at times you go when you feel okay and there are few people, at other times it's collapsed. Very bad, in my opinion (...) because there are few workers for the amount of people." (CR7)</i>	<i>"I think in [our hospital]... there are sufficient personnel to provide attention...[though] surely...in other cases they'd say differently." (CR6)</i>
	Technology	<i>"...at times [health professionals call] me at a moment when I am working...or after they said they would...at times in the metro when there is a lot of interference (...) and they don't leave me a message [if I miss the call]." (CR1)</i>	<i>"Last week I sent an email with four questions about my treatment...they responded...the next day in a well-written email, something I think is very efficient." (CP1)</i>
	Distance and transportation	<i>"It's bad at night because the metro doesn't run...you have to take a taxi." (CR7)</i>	<i>"The social worker...at the [hospital] helped us with a monthly stipend for transportation...by this means we've always been able to travel [to the hospital] by bus or metro." (CR6)</i>
	Empadronamiento and obtaining the IHC	<i>"Before it was easy (...) now it's complicated...you can't obtain the IHC without registration...it seems every year they change the law regarding foreigners" (CR7)</i>	-

Population	Associated costs and transportation	<i>"[it's difficult to pay for medicine] because right now I don't have a stable job...I barely have enough for rent..." (CR1)</i>	<i>"[The bus] works well for me because the same [metro] card that I have for being retired works, the one we don't have to pay for...and since I don't have much to do, I don't care about the hour." (CR3)</i>
	Knowledge of system and services	<i>"Here there is a lot of ignorance among us migrants...[SAIER] tells you that you have rights [to the health system] but they tell me that I don't (...) they don't give you information on this." (CP2)</i>	<i>"I went to a talk at Roquetes social services and it was there that they told us how to access health services." (CR2)</i>
	Work, status, and access	<i>"I began working in something regular for three or four months...but when I fell sick [and was hospitalized] I lost my job..." (CR1)</i>	<i>"Since I was a [self-employed] when I needed to go to the doctor...I never had an issue because I managed my schedule myself." (CR3)</i>
Quality		<i>"...[health professionals] treated me poorly...they don't see that one comes depressed, in pain, this doesn't interest them (...) this isn't our problem, the very workers in the [primary care clinic] told me that...I mean to say, it's not the health system but the employees...they aren't trained or maybe they are angry, because they treat you badly, they look down on you." (CP2)</i>	<i>"When I go to the [hospital] they treat me well...you see the difference between the [hospital] and the [primary care clinics]...when I have been hospitalized they have treated me well." (CP2)</i>
	COVID-19	<i>"...it's true that [now] when you schedule an appointment they postpone it for much longer...an average of a month...before it was less, three or two weeks." (CR3)</i>	<i>"I could go to the appointments the doctors had scheduled for me...always well protected and with a mask..." (CR2)</i>