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ORIGINAL ARTICLE

Health professional perceptions regarding healthcare provision to immigrants in Catalonia

Rebeca Terraza-Núñez · M. Luisa Vázquez · Ingrid Vargas · Tona Lizana

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Abstract
Objectives To analyse health personnel perceptions regarding the provision of care to immigrant population.
Methods An exploratory and descriptive qualitative study was carried out by means of semi-structured individual interviews and focus groups to a theoretical sample of informants: Healthcare managers (19) and health professionals (46) from primary and secondary care. Narrative content analysis was conducted, segmented by informants' groups and themes. The area of study was five regions (*comarcas*) of Catalonia (Spain).
Results Having to provide healthcare to immigrants generates feelings of distress, overload and exhaustion in health professionals, particularly in primary care personnel. However, problems faced in providing care were identified both by professionals and managers. Communication barriers emerged as the main problem. Other problems were attributed to specific characteristics of immigrants, their inappropriate use of services and professionals' attitudes. Structural and organizational deficiencies of the health system also emerged.
Conclusions For health professionals in Catalonia to provide care of quality to immigrants, interventions that reduce communication barriers and improve their cultural competences are requested. In addition, structural changes are needed to adapt the Catalonian health care system to the new circumstances.

Keywords Immigration · Health · Health personnel perceptions · Health services

Introduction

Spain has only recently become a country of immigration, experiencing a rapid increase in the non-native population, from 2.5% of the total population in 2001 to 12.2% in 2009 (Instituto Nacional de Estadística 2010). In Catalonia, one of the Spanish regions where this phenomenon has been strongest, it reached 15.9% of the population in 2009 (Instituto Nacional de Estadística 2010), although unevenly distributed [4–21% of the population depending on the region (*comarca*)]. The three non EU-15 majority groups come from Morocco, Romania and Latin American countries (Ecuador, Bolivia, Colombia and Peru) (Institut d'Estadística de Catalunya 2010).

Healthcare needs of the immigrant population change with time of residence in the host country (Stronks et al. 2001). From problems relating to country of origin and the immigration journey, they move on to adaptation related problems, to finally converge on the health problems of the native population. In spite of that, studies available show differences in the use of health services as well as an inappropriate access to health care (Jiménez-Rubio and Hernández-Quevedo 2010; Cots et al. 2007).

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R. Terraza-Núñez (✉) · M. L. Vázquez · I. Vargas
Health Policy and Health Services Research Group, Health Policy Research Unit, Consortium for Health Care and Social Services of Catalonia, Av. Tibidabo 21, 08022 Barcelona, Spain
e-mail: rterraza@consorci.org

T. Lizana
Immigration and Health Plan, Directorate of Planning and Evaluation, Catalonian Department of Health, Barcelona, Spain

The new situation represents new challenges for the health system, but also for its professionals who face new circumstances in the provision of care. The analysis of the provision of health care to immigrants from providers' point of view is in its infancy. Most research has been conducted in countries with longer immigration tradition such as US, Canada, UK and The Netherlands, mainly with nursing professionals and relating to the provision of care to specific immigrants' groups It provides, however, a first insight of the difficulties faced by health professionals in providing care to immigrants (Kamath et al. 2003; Hultsjö and Hjelm 2005): communication—language, informal translators—and cultural barriers—differing cultural beliefs and practice, unexpected behaviours shown by patients or relatives—limited cultural competency of health care staff, and to lesser extent, professionals' perceptions and attitudes. According to these studies, these difficulties would limit the establishment of an appropriate patient–doctor relationship (Kamath et al. 2003), exchange of information between staff and patient (Hultsjö and Hjelm 2005), and it would result in a loss of effectiveness in their practice as well as a lowering of job satisfaction (Kamath et al. 2003).

In Spain, available studies refer to immigrants and concentrate in describing their health status and health determinants regarding infectious diseases (HIV, TB) (Sanz and Blasco 2007; Sanz-Pelaez et al. 2006), mental health (Llacer et al. 2009; Bones et al. 2010), reproductive health (Gispert 2008; Rio et al. 2010) and occupational health (García et al. 2009; Porthe et al. 2009); the pattern of use and consumption of resources, services utilization in comparison with Spanish population (Regidor et al. 2009; Hernández-Quevedo and Jiménez-Rubio 2009) and the determinants of health services utilization (Rodríguez et al. 2008; Carrasco-Garrido et al. 2007). Very few studies have been conducted on immigrant's opinions on the quality of or access to health services (Garaikoetxea 2007; Instituto de Salud Pública 2004; Terraza-Núñez et al. 2010). Providers' opinions and perceptions regarding the provision of care to immigrants and their needs for support have received scant analysis (Esteva et al. 2006; García et al. 2006; Plaza et al. 2008; Vázquez et al. 2009). Those studies are limited to certain professionals—nursing professionals (Plaza et al. 2008) or family doctors (García et al. 2006; Esteva et al. 2006)—and mainly analyse their opinions on immigrants' characteristics that influence access to and the provision of care (Esteva et al. 2006; García et al. 2006; Plaza et al. 2008). No comprehensive analysis of health personnel feelings and perceptions regarding the provision of care to the immigrants has so far been conducted.

The objective of this paper is to analyse the health personnel perceptions regarding the provision of health care to the immigrant population in Catalonia.

Methods

Study design

An exploratory and descriptive qualitative study was carried out (Fernández de Sanmamed 2006). A qualitative approach was chosen in order to uncover those areas and processes not open or amenable to quantitative research to gain an in-depth view of what happens and why, from the point of view of the social actors (Pope and Mays 2000).

The study area encompassed five regions (*comarcas*), Barcelonès, Cerdanya, Montsià, Selva and Urgell of Catalonia. These were chosen because they represent different Health Regions, have a proportion of immigrants in the population slightly above the Catalonia's mean, have different predominant nationalities, and include rural and urban areas (Fig. 1).

Sample

Theoretical sampling (Patton 1990) was used to select contexts (health facilities) and informants. First, in each area the primary health centre serving a higher proportion of the selected immigrant collective was chosen. Then, the following criteria were applied to select informants: (a) health care managers from primary and secondary care, (b) health professionals from primary and secondary care with different job profiles, different ages and of both sexes. In each area, informants were invited to participate by a contact person. The final sample size was reached by saturation (Fernández de Sanmamed 2006). Detailed description of the final sample is presented in Tables 1 and 2. The areas that participated in the study do not differ from the rest of Catalonia's areas in socio-demographic characteristics or economic level (Institut d'Estadística de Catalunya 2010).

Data collection

Individual semi-structured interviews, with a topic guide, were conducted in order to elicit informants' perspectives and opinions regarding the provision of healthcare to immigrant population. The topic guide included, among others: opinions on the immigrant population in the area—changes over time, health status, access to healthcare and knowledge of the healthcare system; and on health care provision to immigrants (problems, facilitating factors, differences between immigrants' groups and with native population, follow-up). Focus groups segmented by groups of informants were conducted, after the individual interviews and with different informants, to complement the data. The individual interviews took place in healthcare facilities, whereas focus groups were conducted elsewhere;

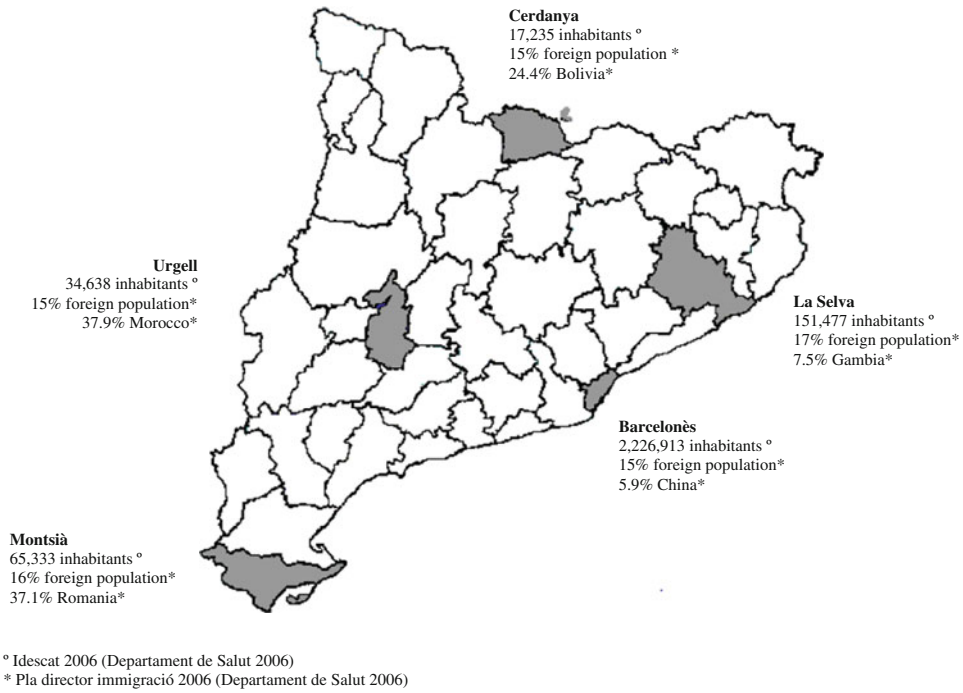

Fig. 1 Study areas in Catalonia, Spain (Catalonia, 2007)

Table 1 Professionals' characteristics of informants (Catalonia, 2007)

Type of interviewee	*N* (II)	*N* (FG[a])
Healthcare managers		
Primary care		
Centre coordinators	4	2
Secondary care		
Managers	4	
Clinical directors	5	4
Health professionals		
Primary care		
Family doctors	6	2
Nurses	1	2
Paediatricians	5	
Midwifes	4	
User services	5	1
Secondary care		
Emergency doctors	7	1
Nurses	6	2
Obstetric doctors	2	
Social workers	1	1
Total	49	15

Source: Author's own

II Individual interview, *FG* focus group

[a] Total no. of groups = 3

Table 2 Socio-demographic characteristics of informants (Catalonia, 2007)

Variables	Number of informants
Sex	
Male	18
Female	31
Age[a]	
30–45	22
46–55	22
56–65	2
Years of experience[b]	
0–5	24
6–10	10
11–20	13

Source: Author's own

[a] Age is missing for three interviewees

[b] Years of experience is missing for two interviewees

both lasted between 60 and 90 min and were audio-recorded and fully transcribed. All regions were represented in one group and four out of five in the others. The interviewer was a member of the research team. In the focus group participated are a moderator and one or two observers; all of the members belonging to the research team. Data were collected from January to October 2007.

Data analysis and quality of data

A narrative content analysis (Patton 1990) was conducted with support of the software Atlas-ti 5.0. Data were segmented by informants' groups and themes, with a mix generation of categories from the topic guide and those

emerging from the data. Data analysis was mainly inductive. Themes were identified, coded, and re-coded to identify common patterns by looking at regularities, convergences and divergences in data, through a process of constant comparisons. In order to ensure the quality of the information, triangulation of results took place by comparing data from different sources (informants, technical and scientific literature) and groups of informants (managers and professionals). In addition, three researchers with different background and in-depth knowledge of the context participated in the analysis.

Results

Experience in providing care to immigrant population

From health personnel discourses emerged the perception of immigration as a dynamic process. On the one hand, due to a rapid and remarkable increase over a short period of time and, on the other, to the continuous change regarding countries of origin, sex distribution and family situation: "in recent years there has been an avalanche" (primary care professional). Having to provide health care to immigrants generates in most health professionals feelings of distress, overload and exhaustion, "we live it as a fairly exhausting experience (primary care professional), "It means working with a little more discomfort, more nervous, you feel more uneasy" (specialized care professional). Those feelings emerged more strongly in the discourses of primary care personnel than in those working in secondary care.

While some attribute those feelings to the increase in the size of population to be served, other relate them to problems faced in providing care to immigrants: longer time per visit needed, uncertainty about the results, increase in diagnostic tests in front of uncertainty, interferences in the development of tasks and confrontation with patients. However, a few informants expressed a change in their own attitudes, considering that their prior worries had not been confirmed by experience. Some professionals, mainly from primary care, faced providing health care to immigrants as a professional challenge.

Factors influencing health care provision

Informants identified a number of factors that have a negative influence in the provision of care to the immigrant population, which refer to three main areas: difficulties in communication, immigrant population's characteristics and use of services, and healthcare system organization and professionals' attitudes.

Difficulties in communicating

Communication barriers, especially during medical attention, emerged from the informants' discourses as an important problem that is attenuated but does not disappear when language is not a barrier. Thus, communication problems are attributed first to language barriers "the language, we do not understand them, they do not understand us" (primary care professional), due to lack of knowledge of the official languages of Catalonia, Spanish and Catalan, particularly among Arab and Chinese patients and different use of language in Spanish-speaking groups; second, to socio-cultural barriers due to low educational and high illiteracy rates which hamper the utilization of written materials, and to cultural factors, mainly among Moroccans, such as established gender roles which impede direct communication with women and deter them from learning the local language.

Difficulties attributed to immigrant population

Informants associate some difficulties in delivering healthcare to specific characteristics of immigrants such as cultural and religious practices, adaptation to local rules and working and living conditions (Table 3).

Different cultural values, beliefs and practices are perceived as a problem by health personnel, but not by managers and administrative personnel. Differences are attributed to a number of factors: health culture in the country of origin such as low preventative care or the prevalence of folk medicine, issues relating to gender roles such as the limited autonomy of Muslim women or the demand of a doctor of the same sex as the patient, and religious practices, for example, fasting during Ramadan. However, opinions vary from considering cultural practices a risk for patient security and professional's career, to viewing those practices as a source of learning.

Informants from specialized care, mainly nurses, perceive as limited the adoption of hospital hygiene rules by immigrants. They consider it a problem having "to force women to have a shower" or dealing with families bringing food to the patients, or patients receiving too many visitors, etc.

Both primary and specialized care informants consider precarious working and employment conditions—temporary contracts, perceived or actual absence of workers' rights—and seasonal labour to be the underlying causes of an inadequate use of services as well as of an increase in work accidents. In addition, primary care informants relate them to absences from or delays in out-patient appointments, losses in continuity of care and doctor–patient conflicts regarding to sick leaves during the Ramadan. Some primary care informants perceive an increase in

Table 3 Examples of quotations of problems in the provision of care relating to immigrants' characteristics and use of services (Catalonia 2007)

Category of analysis	Examples of quotations of the informants
Characteristics of immigrants	
Cultural and religious practices	"they come from countries without access, where the (health care) coverage is minimal" (primary care professional)
	"if they are-Sub Saharans, you know, they believe that an X-ray will kill them" (specialized care professional)
	"bad hygiene, they smell badly, they consider that they will become ill if they bade themselves" (primary care professional)
	"they know that if they go to the hospital there will be a male physician, not a female physician" (specialized care professional)
	"Chinese give to their newborns a sort of water prepared at home… they give them a series of things that could revert into problems for you" (specialized care professional)
Adaptation to local rules	"Arabs bring food into rooms and leave everything a little bit dirtier" (specialized care professional)
	"the paper of a sandwich appears there, all these things are difficulties" (specialized care professional)
	"Maghreb women wear a scarf in the delivery room, There are people who do not tolerate this and they (Maghreb women) do not want to remove it" (specialized care professional)
Working and living conditions	"he will come at 9 pm to the emergency service and he will tell you: I work" (primary care professional)
	"this people goes to the doctor at 7 p.m, 8 p.m because their boss does not allow them to go to the doctor" (primary care professional)
	"parasites, scabies, … because they live under very complicated situations" (specialized care professional)
	"they came with dermatological problems, these are classic poverty problems" (primary care professional)
Service utilization	
Attitudes and behaviour	"to begin, you will devote me twenty minutes because I have come, gosh!. I can not devote twenty minutes because you want a check up" (primary care professional)
	"(they say) you are racist because you left her come in before me" (specialized care professional)
	"this is a history that Moroccans know very well, you make me wait because I am Moroccan, and you do not bring it to mi because…" (specialized care manager)
Volume	"Probably they (immigrants) consume less than the native population" (primary care manager)
	"I have not seen many changes, maybe an increase, quotation marks, of emergency services visits" (specialized care professional)
Adequacy	"the woman does not speak Spanish, he works all day, he tell her, wait until I finish my work, and then they come to the emergency service as it was a normal consultation" (primary care professional)
	"they understand that they have a problem, that has to be solve, now" (primary care manager)
	"they come with little things" (specialized care professional)

Source: Authors' own

poverty related conditions (scabies, ringworm, tuberculosis) that they associate with immigrants' poor living conditions—overcrowding, unhealthy environments…—rather than to any condition inherent in being an immigrant per se.

Primary and secondary care informants coincide in establishing differences between immigrant groups' attitudes and behaviours in the use of health services: they consider Moroccans to be aggressive, Sub-Saharans passive, and Latin Americans demanding.

While immigrants' overuse of services is a general perception, some interviewees perceive no difference with or even lower use than the native population. Regarding the reasons for the consultation, they perceive that immigrants utilize emergency services for problems that do not warrant it; "the fast way is the emergency service, but this does not mean that they have urgent conditions, is the easy access" (primary care professional); and primary care services for social problems which they are not trained to deal with.

Informants relate the inadequate use of health services to misconceptions and the low level of knowledge regarding the Spanish healthcare system, language barriers, fear and distrust due to immigrants' irregular situation, and the perceived need for an immediate response to their health problems.

Difficulties related to health care system

At the provider level, informants perceive an inadequacy of resources that translates into understaffing, insufficient consultation time per patient to tackle communication problems and the hospital's failure to adapt resources to immigrant patients' needs. In addition, organizational problems are also identified such as inaccessible primary

Table 4 Examples of quotations of problems in the provision of care relating to health care system (Catalonia 2007)

Category of analysis	Examples of quotations of the informants
Health providers organization and coordination	"in primary care doors are always closed, it only provides care with a appointment, in contrast, emergency doors are always open" (specialized care professional)
	"ward resources depend on the number of hospitals beds and not on the social problems and the implications of hospitalization for each patient" (specialized care professional
	"Look! We have done this, and you bring it to her (the manager), and she just leaves it there" (specialized care professional)
	"XXXX (NGO) does not know that they can access directly, they say—go to the emergency services of the hospital where they will attend you—but here we also have emergency service" (primary care manager)
	"patients should be shared (among health care levels), everyone was very careful—do not take them to me" (specialized care professional)
Health department	"Solutions arrive late, very late, while changes are very fast, it should be more agile" (primary care manager)
	"I do not know of any administration capable of generating regulations for what might eventually happen" (specialized care manager)
	"Resources before and now are the same, but if we talk to politicians they will say that there has been an important increase of resources,… we know that is not like that" (specialized care manager)
	"It says that in case of emergency care can be provided, but a person who has got tuberculosis, syphilis (…), needs to be treated… the Administration has to provide normative answers." (specialized care professional)
Professionals' attitudes	"Some colleagues think that it is up to them (immigrants, to overcome problems)" (specialized care professional)
	"At the beginning, there was little reticence against this kind of patients" (specialized care manager)
	"There are professionals who are more accessible or who are more sympathetic and others who don't, this is also an access barrier" (primary care professional)
	"doctor's readiness to understand a person is uncontrollable, it depends on the doctor: I do not understand, I do not know what he wants and you get rid of him (the patient), without making any effort"(primary care manager)
	"Doctors are not sensible to the subject, because we felt tricked, because they take a lot of our time" (specialized care professional)

Source: Author's own

care opening times for immigrant workers, limited intra- and inter-institutional coordination which hampers patients' follow-up, and scarce support from managerial teams to health personnel needs and initiatives. Another difficulty is the absence of coordination with other institutions in the region, schools, city council and NGOs (non-governmental organization), that favours the inappropriate utilization of health resources (Table 4).

Informants attribute the inadequacy of resources to an absence of suitable planning on the side of the health authority (Department of Health), as well as to its slowness in adapting the health system (physical and human resources, regulations and clinical instruments) to the "sudden" increase in population size and specific needs of immigrants' population. Insufficient economic resources allocation and regulation, slowness in providing the personal healthcare card and lack of control of misuses are highlighted as problems related to the Health Authority, mainly by managers.

Informants reported a change in attitude over time. This included changing from an interest in providing occasional care to immigrants to developing negative attitudes towards immigrants. They attributed them to their own stereotypes and misconceptions (increase in workload, perceived immigrants' lack of interest in adopting country culture, rules and language) and the perception of a lack of competence to face the process of providing care to the immigrant population, different health and cultural beliefs and behaviours. "At professional level there is not too much sensitivity about this subject we feel a little defrauded" (specialized care professional). However, they also felt that negative attitudes improved again with time, when perceived problems were dealt with.

Discussion

The results allow for a detailed analysis of the perception of health professionals regarding the provision of healthcare to immigrants in Catalonia. When considering the results, it should be taken into account that the study focuses solely on health professionals that work in areas

with a good presence of immigrant population. Their opinions might differ from those working in areas where the immigrant population is less represented.

Health personnel perceptions and opinions regarding the provision of care to immigrants seem to be conditioned by (a) a sudden increment in this population size, (b) own prejudices and conceptions and (c) actual experience in providing care.

Informants agreed on the remarkable increase in the number of immigrants seeking health care, which seems to be a good reflection of reality, considering that foreign population in Catalonia has tripled in the last 6 years (Instituto Nacional de Estadística 2010). It contrasts with some authors' association of this perception to the difficulties generated in the process of care (Kamath et al. 2003), rather than to the increase in population size. These difficulties are, however, perceived in the provision of care to immigrants and translates into feelings of work overload, anxiety and frustration with the results of the care process that have been described by professionals in other contexts (Ohmans et al. 1996), and also widely associated with an inadequacy of resources (Vázquez et al. 2009).

Among the different perceived difficulties in providing care to immigrants, the problems of communication were prominent. This fits in with the results of other studies which consider this difficulty the most urgent, obvious, straightforward and frequently mentioned area in which interventions are needed (Health Canada 2008; Pottie 2007). It is remarkable, however, that its causes are mainly attributed to immigrants' (language, cultural differences and attitudes) or healthcare system characteristics, inadequacy of resources, and reflect a one-way conception of the process of communication. Communication is not only influenced by language differences, but also by professionals' understanding of health values as well as the beliefs and behaviours of immigrant patients (Betancourt et al. 2002). These elements, however, turned up in the informants' discourses only as a risk for healthcare and not as an influence on their communication with patients. Other problems related to communication barriers described in countries with a longer tradition of immigration as a decrease in care quality, reduced use of resources and worse health results (Health Canada 2008), did not emerge or only weak in the informants' discourse. Available studies showing differences in services access and utilization among immigrants and natives (Junyent et al. 2006; Cots et al. 2007) do not explore its relation with communication barriers.

Cultural, health and religious values, beliefs and practice of the immigrants are generally perceived as a difficulty in providing care to immigrants. Different cultural values and beliefs also emerge to explain hygiene behaviours as well as behaviours and attitudes in front of the professionals which they considered to be inadequate. However, not all informants perceive cultural factors as a threat to healthcare provision. Some consider cultural practices to be innocuous or even beneficial and to which their daily practice could be adapted with small organizational efforts. On the one hand, this divergence in opinions seems to reflect different professionals' attitudes towards immigrant patients—also noted by the informants—that might influence the care process, enhancing or relieving structural and communication barriers (Health Canada 2008). On the other hand, the association of negatively perceived behaviours in the use of services to cultural factors such as the request of a professional of the same sex, points towards professionals' insufficient information of Patient Rights (Generalitat de Catalunya.Departament de Sanitat i Seguretat Social 2002). This fact together with a loss of perspective in relation to native population behaviour—elderly use of health services as social meeting point or hygienic habits—could again be reflecting negative attitudes or prejudices in front of immigrants. Available international literature shows that using the culture argument to explain differences in health services utilization is inappropriate, since these rather correlate to language barriers, complexity of access and costs (Leduc and Proulx 2004). In Spain, despite the fact that the right to free access to care is granted for documented immigrants and undocumented immigrants that are registered with the city council, preliminary research results of Buron et al. (2009) seem to indicate that some providers are inappropriately requesting payments from immigrants. In addition, for immigrants living in rural areas, access to tests or specialized care could be hindered by costs of transportation (Terraza-Núñez et al. 2010).

Immigrants' precarious working and employment conditions are considered to affect health and health services utilization—increased accident rates, higher use of emergency services—and loss of continuity of care, attributed to job seasonality, but also the use of emergency services as regular source of care. While the former coincides with immigrant workers perception, the later has been so far insufficiently studied (Porthe et al. 2009).

In this regard, informants also relate difficulties in providing care to immigrants' pattern of utilization (volume and type of services). On the one hand, they perceive an over utilization of services. However, the scarce studies on immigrants' healthcare utilization in Spain are inconclusive regarding differences with native population (Cots et al. 2007; Junyent et al. 2006; Carrasco-Garrido et al. 2007). A study (Carrasco-Garrido et al. 2007) based on the National Health Survey does not detect different patterns except for immigrants' higher rates of hospitalization and lower pharmaceuticals consumption but without adjusting for variables of need; therefore, similar rates of utilization

could actually reflect inequities in the use of services, as it was shown in other countries (Health Canada 2008).

On the other hand, immigrants' use of the "emergency door" as entry to the healthcare system has been described by national and international studies (Cots et al. 2007). In spite of the fact that it has not been sufficiently analyzed, existing studies point towards causes similar to those mentioned here: access barriers to primary care such as precarious working and employment conditions, better accessibility (opening times, schedules) and perceived higher resolution capacity of emergency services (Instituto de Salud Pública 2004). Again, these two last factors have also been associated with native population preferences for emergency services (Pasarín et al. 2006).

Health system structural and organizational deficiencies emerged as an important group of factors that contribute to hinder care provision to the immigrants. Inadequacy of resources, poor professionals' working conditions and limited cultural competence emerged strongly in the results. The former reflect old health system deficiencies that have been described in other studies (saturation, excess of demand, insufficient time per patient) (Vázquez et al. 2009; Instituto de Salud Pública 2004).

The results show the problems perceived by the health personnel when providing care to immigrants—communication, limited cultural competences and own prejudices and attitudes—that require specific interventions. It also points out structural and organizational deficiencies of the health system: insufficiency of resources and rigidity to adjust to users' needs. Such a situation requires a comprehensive approach with specific interventions directed on the first place, to the health personnel, but also to the immigrants and the health system, for the short- and mid-term. Interventions on health personnel should encompass specific training on cultural competence to understand immigrants' healthcare demands and to prevent cultural barriers. In the short-term, continuous education tailored to respond to professionals' current needs should be provided. On the mid-term, medical specialities and postgraduate training should be adapted to include the provision of care to immigrants' needs, as well as, to a culturally diverse population. Second, information programmes for immigrants to facilitate the appropriate use of the health services, and health promotion programmes, both adapted to immigrants needs—migration stage, cultural and socio-economic characteristics, and literacy rates—should be implemented. Third, specific interventions on the health system to address communicational barriers should include translated materials, translation services and cultural mediators, adapted to the specific needs of different health personnel and predominant immigrant group in the region, ensuring an agile access. In addition, health system policies should ensure that resources and organization are adapted to the size and needs of the population to be served—services supply, opening times and mechanisms to improve coordination and continuity of care.

These interventions are generally contemplated in the Spanish and Catalonian Immigration and Citizenship Plans (Terraza-Núñez et al. 2009; Vázquez et al. 2010), and in the Immigration and Health Master Plan of Catalonia (Departament de Salut 2006; Terraza-Núñez et al. 2009; Vázquez et al. 2010). However, if the problems are to be solved in the short-term and the system to be transformed into a culturally competent health care system, those interventions need to be effectively implemented and carefully monitored under the strong leadership of the Health Department. In addition, the results have indicated several problems that need further research to elucidate its potential influence on immigrants' access to care of quality.

Conflict of interest The authors declare that they have no competing interests.

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