Author's response to reviews

Title: Significant differences in the use of healthcare resources of native-born and foreign-born in Spain.

Authors:

PILAR CARRASCO-GARRIDO (pilar.carrasco@urjc.es)
RODRIGO JIMÉNEZ-GARCÍA (rodrigo.jimenez@urjc.es)
VALENTÍN HERNÁNDEZ-BARRERA (valentin.hernandez@urjc.es)
ANA LÓPEZ DE ANDRÉS (ana.lopez@urjc.es)
ÁNGEL GIL DE MIGUEL (angel.gil@urjc.es)

Version: 3 Date: 20 February 2009

Author's response to reviews: see over
Reviewer's report
Title: Significant differences in the use of healthcare resources of native-born and foreign-born in Spain.
Version: 2 Date: 26 October 2008
Reviewer: Brian Gushulak
Reviewer's report:
Major Compulsory Revisions
None Noted

Minor Essential Revisions
There are three issues that I think deserve comment in either the comments or discussion.

1. While the numbers of migrants from the EU, Canada and the USA are low and would not have been expected to have influenced the analytical outcome, it would be useful to note why those individuals are assumed to have migrated to Spain for non economic reasons. The logic may be based on the assumption that they share similar health characteristics with the host Spanish population or that many in these cohorts are retired and will not be working, but as intra EU migration increases there may be differences in health care utilization and health characteristics between member states that may influence demands for service.

These comments have been included in the discussion section
I agree with this comment. It is true that future investigation will need to consider the differences in health care utilization and health characteristics between member states that may influence demands for service. But in the 2006 survey the proportion of migrants from the EU, Canada and the USA was very small and in a preliminary analysis (age adjusted) we found a similar health profile and use of health services to the indigenous population so we decided to analyze the as a single group.
We can explain this circumstance if we bear in mind that the immigrant population, coming mainly from European Union countries, tends to be made up of people who are establishing their final residence in our country.

2. A second issue that deserves some comment in regards to emergency room utilization is the process of acculturation and adaption. It would be important to know how the duration of residence in Spain influenced utilization patterns. New arrivals may be more likely to use emergency room services that those who have lived in the country for years, for example.

I fully agree that the duration of residence in Spain variable, which unfortunately is not currently included in the ENSE06, will be useful in order to more precisely determine immigrants’ use of health resources including ER These comments have been included in the discussion section as a limitation.

3. The issue of language, translation and cultural competency of those administering the questionnaires should probably be noted in the discussion of the limitations of the study. While many of the migrants originated from Latin America and probably used Spanish as their native tongue, the same may not be
true for those from Africa. This can be particularly important in surveys using either open ended questions or medical terminology in a multicultural context.

THE FOLLOWING COMMENT HAS BEEN ADDED TO THE LIMITATIONS:
The fact that the questionnaire was written in Spanish makes it easier for the Latin American population, as well as for immigrants who have been in Spain for a long time, to answer the questions. Therefore, over representation of the Latin American population is likely to occur.

Discretionary Revisions
None noted
Level of interest: An article whose findings are important to those with closely related research interests
Quality of written English: Needs some language corrections before being published
Statistical review: No, the manuscript does not need to be seen by a statistician.
Declaration of competing interests: 'I declare that I have no competing interests'
Brian Gushulak MD
Singapore
October 25, 2008
Reviewer's report
Title: Significant differences in the use of healthcare resources of native-born and foreign-born in Spain.
Version: 2 Date: 20 January 2009
Reviewer: Andrea Buron
Reviewer's report:

MAJOR COMPULSORY REVISIONS

Background:
1. Some potential readers might not be acquainted with how access to the Spanish public healthcare system is gained. Therefore, a brief introduction on the functioning of the system and the relation of access to the healthcare system with the municipal register rather than with a residence permit would be helpful.

ADDED TO THE INTRODUCTION, AND MENTIONED IN THE DISCUSSION:

The Spanish National Health System attends both legal and illegal immigrants. Theoretically a valid identity documents (healthcare card) is necessary to be attended yet the truth is that immigrants who lack this document and remain in the country as illegal aliens are also attended by the health system. It is important to note that in order to receive the healthcare card the only requisite is a registration certificate from the municipal register.

Methods:
2. The definition of economic immigrants remains insufficiently explained for me. I think the authors should clarify which was the criteria for defining immigrants, if nationality, country of birth, or both. I suppose both were used, since it says “The autochthonous population of the study includes the population born in Spain and those whose citizenship corresponds to one of the E.U. countries, the United States or Canada.” Thus, I understand that immigrants would be those neither born in Spain nor with USA/Can/EU nationality.

Questions like “What is your nationality?” and “What is the country of your nationality?” were used to define the economic immigrant variable. Based on these answers, individuals whose nationality did not correspond to the European Union (EU), United States (USA) or Canada, were defined as economic immigrants. This included individuals from both sexes, 16 or older, residing in family houses in Spain when the survey took place. The indigenous population of the study included individuals who were born in Spain and individuals whose nationality corresponded to a country within the EU, the USA or Canada.

THIS INFORMATION HAS BEEN ADDED TO THE METHODS SECTION

3. Furthermore, the inclusion of the new countries recently incorporated to EU, such as Romania (2007), Poland (2004) and Bulgaria (2007), deserves justification because these countries are economically disadvantaged compared to Spain. I believe that misclassification is taking place if people coming from Romania for example are considered autochthonous, and thus there could be an underestimation of the real differences between immigrants and autochthonous.
It is true that this should be justified. It is mentioned as a limitation. These are countries that are economically less favored than Spain, although it is difficult to quantify this influence, as both Bulgaria and Romania were incorporated on January 1st, 2007. Therefore, individuals having these nationalities were not considered EU-citizens while the study was being carried out.

4. The results of some other questions asked in the SNHS-06 have not been analysed, e.g.: the distribution of healthcare contacts into primary and specialized care, the reason for the medical consultation, if the person needed medical care and did not get it (and the reason for it), possession of health care card and kind of health care insurance (public/private), reason for hospitalization, and for visiting an emergency service, “waiting time” questions (waiting list for any procedure, waiting time since the demand of medical attention, waiting time in the waiting room). There might be insufficient data for these variables or no interest to analyse them, or perhaps interest in studying them later; however explanation for not studying them should at least be mentioned.

These are truly interesting variables. These data are being analyzed as the objective of a posterior, and more detailed, study about the use of certain healthcare services. This has been added to the discussion.

Results:

5. When describing the results on table 3, the OR of 0.76 for physical exercise is not mentioned; immigrants significantly do less exercise in leisure time than the autochthonous study population does. The authors write “even though the immigrant population shows significantly lower values in the consumption of alcohol and tobacco, they nonetheless perceive their health condition as worse”: alcohol and tobacco are not the only, nor the most important determinants of perceived health. The table shows a significantly lesser physical activity that perhaps relates to less leisure time. Other factors not mentioned are worse environment both at home and/or at work. All this belongs, however, to the discussion section.

This information will be added to the results and will be commented on in the discussion (two new references are added as commented later).

Discussion:

6. I believe the immigrant population studied in the ENS is still not representative regarding not only the total percentage but also the origin distribution, and more information should be given on this. The total percentage of foreign-borns living in Spain by January 2007 provided by the National Statistic Institute (INE) is 11.6%, far over the 4.9% in the study sample. As for the country or area of birth, the authors say that 64.5% coming from Latin America “reflects more adequately the real immigrant population in Spain”, but the same sources (INE) state that less than 40% from the immigrants were born in Central and South America (this includes people with Spanish nationality, exclusion of these would result in an even smaller percentage). I believe an overrepresentation of these origins (the Spanish-speaking ones) is taking place in the selection of the study population, which should be commented and discussed by the authors, as well as it consequences over the results.
THE FOLLOWING COMMENT HAS BEEN ADDED TO THE DISCUSSION:

The fact that the questionnaire was written in Spanish makes it easier for the Latin American population, as well as for immigrants who have been in Spain for a long time, to answer the questions. Therefore, greater representation of the Latin American population is likely to occur.


7. I do not fully understand the point of the second paragraph of the discussion section, specially the last sentence “However, these differences are not significant because the population of our study is young and consequently there are no immigrants receiving a retirement pension as yet.”

This sentence is confusing. It has been deleted.

8. The sentence “do not show worse health conditions in the immigrant population of the study as the illnesses reported are similar to the autochthonous population” somehow exposes an expectation of bad health for immigrants, when actually they rather show better health conditions in most of the studies done in Spain as well as in other countries (“healthy immigrant effect”, also mentioned by the authors later).

This sentence has been replaced by the expression: According to the results obtained with the ENSE-06 regarding comorbidity in both populations, immigrant individuals declare that they suffer diseases similar to those suffered by the indigenous population.

9. When explaining why economic immigrants might present better health conditions (age and sex adjusted) another possible explanation could be that they do not go to the doctor as often, or they did so only since arrival to Spain, and therefore did not have the same chance to be diagnosed of any disease, since the question regards diagnosed illnesses and requires prior visit to the doctor.

The following comment has been added to the discussion: However, we must bear in mind that social and economic differences increase vulnerability against health problems, while limiting access to and the use of healthcare resources. Therefore, they may not have had the same probability of being diagnosed.

10. Again, much attention is played onto tobacco and alcohol but none on exercise, which presents worse results for immigrants. If immigrants respond that they do less exercise, the negative consequences would be not only directly because of the absence of exercise but also indirectly because it could be due to an overload of formal and informal working hours, as well as less awareness of its beneficial effect.

MENTIONED IN THE DISCUSSION (TWO NEW DIFFERENCES HAVE BEEN ADDED)

As for physical activity our results show that immigrants register significantly lower levels. According to a study conducted by Dawson et al. in Sweden using data from the Swedish Survey of Living Conditions, in which the immigrant population reported engaging in lower levels of physical activity than the local Swedish population. The negative consequences of these circumstances are evident and, it should not be forgotten that various studies have demonstrated the importance of socioeconomic factors (work overload, income) and cultural factors (less awareness about its beneficial effect) as determinant factors for physical activity.


11. In the first paragraph on page 9, “This greater frequentation may be due to the ease of access and availability of hospital emergency services and lack of knowledge of the protocols to be followed to access healthcare services by the immigrant population, or to certain similarities in the immigrants’ manner of accessing healthcare services in their native countries, but is not due to a worse health condition than the autochthonous population.” The potential access barriers to primary care could be commented as it affects emergency department frequentation.

THE FOLLOWING COMMENT HAS BEEN INCLUDED IN THE DISCUSSION: “However, the possible existence of cultural, idiomatic and organizational barriers to primary health care services has to be taken into account.”

12. Regarding the limitations, I believe the followings could be added: · Response rate bias to the survey (immigrants have more chance of not answering the questionnaire than the autochthons) for two reasons: negative to answer (language; fear) as well as absence, i.e. not being at home at the time the interviewer arrives (longer work days or shifts than the autochthonous population). The questionnaire was only passed in Spanish (with the consequence of selection and over-representation of immigrants with longer stays, probably more integrated to the home society and coming from Spanish-speaking countries.) · Lack of “length of stay” in the questionnaire (mentioned in the conclusions but should also go to limitations) · The variable “possession of health card” and/or “type of health insurance” should be available in the questionnaire. Since it has not been analyzed it should be explained why and/or mentioned in the limitations section. · The previously commented fact that the survey seems to be not representative enough of the immigrant population should also be mentioned in this section.

The following limitations have also been added:

Lastly, the initial response rate to the SNHS was 65%, so the existence of possible non-response bias should thus be considered as this rate is influenced by the country of origin variable [54]. This analysis has included the assessment of access to accommodations and the lack thereof. The percentage of inability to answer has also been taken into account. These differences can probably be explained by the lack of Spanish-language knowledge of certain EU members and non-EU members.

The fact that the questionnaire was written in Spanish makes it easier for the Latin American population, as well as for immigrants who have been in Spain for a long time, to answer the questions.

Conclusions

13. I do not completely follow why the authors say “although they have usage percentages of emergency and hospitalization services that are higher than those of the Spanish population, they do not show excessive or inadequate use of other health resources.” Is it because they have adjusted to comorbidity (which by the way is medical-diagnosed)? Wouldn’t it be better to use the questions regarding reason for being hospitalized or reason for attending the emergency department?
Despite the fact that immigrant population shows higher percentages of ER attendance and hospitalization than the indigenous population, with respect to the use of other healthcare resources, their usage of resources such as drugs, influenza vaccinations or visits to the dentist is lower.

MINOR ESSENTIAL REVISIONS

Background:

1. The first sentence “Significant growth in immigration in Spain occurred at the end of the nineties.” lacks a reference, which could be reference 2 or another specific entrance of the INE that states the growth in ciphers during this time period.

THE FOLLOWING REFERENCE HAS BEEN ADDED


2. The last sentence of the third paragraph deserves a reference as well.

THE FOLLOWING REFERENCE HAS BEEN ADDED


Results:

3. It would be helpful to have a table comparing the distribution of some variables among the immigrant and autochthonous study population with the distribution of the real population of Spain following official sources for the same period, in order to assess representativeness: age, sex and the region of origin. Comparison with another survey (the Spanish National Immigrant Survey) is made in the discussion section, but contrasting this data with register data from official sources would be convenient.

A table has been added comparing our population with the population included in the Spanish National Immigrant Survey

Discussion:

4. The sentences “The presence of language, cultural and administrative barriers etc. lead to social and economic deficiencies that produce greater vulnerability. These circumstances together with the lack of social and family support, xenophobia and other factors may contribute to this poor perception of health” need a reference too.

THE FOLLOWING REFERENCE HAS BEEN ADDED
5. The overall comparison of the results of several articles could be done differentiating the ones based on questionnaires/surveys from the ones based on registries, since there are some similarities regarding methodology that could be affecting the results. **This has been specified in the discussion in cases where this was not reflected.**

6. Several things regarding the argument about higher immigrant fertility and obtaining higher hospital emergency services frequentation and hospitalization rates because of that: “This difference in hospitalization may be determined by the age and the greater fertility rate of the immigrant population”:
   - Would it be possible to exclude all women who have been in emergency department and/or hospitalized due to obstetric reasons, and see if the difference remains?
   - Would it be conceivable to argue that immigrant pregnant women arrive in a later and worse stage of the disease and thus have to be hospitalized?
   - Wouldn’t it also be likely that because immigrant women do not follow as often primary care control and revisions as the autochthonous women do, they end up being hospitalized for worse conditions?

   These questions, really interesting from a public health point of view, could be subject to a specific study about health profiles and usage of resources by immigrant women residing in Spain.

   In any case the reason for the consultation, as well as the percentage of births by indigenous women versus births by immigrant women, has also been added to the results section.

7. When explaining fewer dentist visits: could another reason be being visited in the home country since in many cases it’s much cheaper?

   Although this may, in fact, be an explanation, unfortunately it cannot be ascertained from the available data.

Through all the text:

8. The variable regarding if the respondent is immigrant or autochthonous is regarded as “country of origin” when indeed it is not country what is shown but the grouping of all possible countries into two. I suggest using another name (e.g. just “origin”).

   We agree with the reviewer and “country of origin” has been replaced by “origin” throughout the the text.

9. Also, and due to the grouping of the countries made, I think it is not correct to speak of Spanish people if people coming from EU as well as USA and Canada are included in the same group, even if their proportion is small. An alternative name should be found (suggestion: Spanish and not economic immigrants” as opposed to “economic immigrants”.

   We agree with the reviewer and the text has been modified following this suggestion.
DISCRETIONARY REVISIONS

Methods:
1. I believe that at the end of the 5th paragraph, “monthly income in Euros in the home” should be “monthly (…) at home”.
   We agree with the reviewer and the text has been modified following this suggestion.

Results:
2. Although not incorrect, “preventive medicine” sounds better and is used more frequently than “preventative medicine”.
   We agree with the reviewer and the text has been modified following this suggestion.

Level of interest: An article of importance in its field
Quality of written English: Acceptable
Statistical review: No, the manuscript does not need to be seen by a statistician.
Declaration of competing interests:
I declare that I have no competing interests