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## Immigrants' Health Status and Use of Healthcare Services: A Review of French Research

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This study presents a review of French research on immigrants' health status and use of healthcare services over the last thirty years. Despite diverging results, notably due to the diversity of indicators used and the periods considered by the literature, this review reveals a number of disparities between the French and immigrant populations. Compared with the native French population, immigrants' health status has deteriorated over the last thirty years and disparities seem to be more important among first generation immigrants and women but also tend to vary according to country of origin. Likewise, a lower rate of use to office-based medical practices and prevention services among immigrants is noted.

Although the migration selection effect explains the better initial health status of immigrants, their more disadvantaged economic situation and loss of social connections in the host country contribute to their health status deterioration and their lower use of healthcare services.

These conclusions call for the implementation of adapted health policies aimed at improving access to healthcare for foreign born population, notably through prevention, the development of community actions, and the simplification of access to certain rights such as Universal Health Insurance (CMU) or State Medical Assistance (AME).

The immigrant population in France currently counts 6.7 million individuals (International Organisation for Migration, 2010). Given the importance of the social determinants of health (Marmot *et al.*, 2008), immigrants' health status and their access to healthcare has become a real public health issue due to the weakening effect of migration on socio-economic conditions.

The different initiatives deployed by the European Union is proof that the Member States are determined to shed light on this

situation. In 2007, immigrants' health status emerges as a major theme during the Portuguese presidency of the European Council (European Union JO, 2007) that was furthermore accompanied by the project *Assisting Migrants and Communities: Analysis of Social Determinants of Health and Health Inequalities* (Peiro and Roumyana, 2010), aimed at increasing exchanges on immigrants' health and use of healthcare services.

Despite these different initiatives, knowledge of immigrants' health status remains

limited in France, essentially due to the lack of information on the nationality and country of birth in the majority of national health surveys. Nevertheless, some studies show that the immigrant populations' health status and healthcare use are fundamentally different to those of the native population, due to self-selection phenomena related to migration, the economic situation of immigrants in the host country, the loss of social connections, informational barriers or discriminating attitudes from the healthcare sector. This study presents a

review of French research on the subject (Methods insert). It shows the existence of health and healthcare use inequalities between immigrant and French populations and draws up a global overview of the main determinants explaining these disparities.

### Disparities between immigrant and French populations in terms of health status and access to healthcare

#### In the last thirty years, immigrants' health status has become worse than that of the French ...

Consistently with some studies conducted in the United States, Canada or Spain (McDonald and Kennedy, 2004; Kennedy *et al.*, 2006; Hernandez-Quevedo and Jiménez Rubio, 2009), the first French studies dating back to the 1980's, underlined the better health status of immi-

grants. Immigrant men were shown to have a considerably higher life expectancy than French men due to an under-mortality rate after the age of 30 (Brahimi, 1980). This observation, based on the exploitation of the 1975 population census data, was subsequently confirmed by the results of several other studies (Wanner *et al.*, 1997; Bouvier-Colle *et al.*, 1985) backing-up the under-mortality rate of foreigners residing in France.

An analysis of causes of death between 1979 and 1991 showed that, forequivalent age, the life expectancy of an immigrant Moroccan male was higher than that of a native French male (Khlat and Courbage, 1995). These results are consistent with other studies revealing the better health status of foreigners (Mizrahi *et al.*, 1993; Khlat *et al.*, 1998). After controlling for age, foreigners have a better longevity than the population as a whole but also a lower incidence of invalidity (Mizrahi *et al.*, 1993). Self-reported morbidity rates in Moroccan immi-

grant households also appear particularly low before and after controlling for age, occupation and social category [Khlat *et al.*, 1998]. Self-reported illness is respectively 16% and 33% lower than among women and men in French households. This lower morbidity rate appears more marked among men in terms of cancers and cardiovascular diseases but the situation is more contrasted among women that present a lower morbidity rate for endocrinal and perinatal diseases (Khlat *et al.*, 1998).

#### ... which may indicate health status deterioration over the long term

Although the results of the first studies are consistent with international results, more recent French researches conducted since the year 2000 suggest a poorer health status among the immigrant population.

The exploitation of matched data from the Immigrants' retirement decision survey<sup>1</sup> and the Time-use survey<sup>2</sup> indicates that the subjective health status of immigrants is poorer than that of the population as a whole whatever the age and gender (Attias-Donfut and Tessier, 2005). Furthermore, after controlling for demographic characteristics and socioeconomic situations, results show that immigrants' health status tends to deteriorate the longer they stay in France. This is confirmed by the results of the Life History survey<sup>3</sup> (Lert *et al.*, 2007) that underlines a higher risk of functional limitation among women who immigrated during adolescence, and through the exploitation of data from the Trajectories and Origins survey<sup>4</sup> (Beauchemin *et al.*, 2010) according to which immigrants living in France for over thirty years self-report a poorer health.

A comparison of the Health, Healthcare and Insurance survey (ESPS) results, carried out in 2000-2002<sup>5</sup> with the results of the National Health Survey<sup>6</sup> carried out in 1980 and 1991, attest to the evolution

## METHODS

### Bibliographical research

The bibliographical research was conducted through systematically searching the BDSP and CINDOC data banks for the periods 1980-2011 and 1991-2011. Articles were identified by using the following key words: 'migrant, immigrant, foreigner' and 'healthcare access, use of healthcare, health inequalities, medical care, hospital care, medical consumption, non-take up, refusal, health status, morbidity, prevalence, incidence, epidemiology' and 'France'. In total, 787 articles were identified among which 435 dealt with access to healthcare and 352 health status. The authors and health economists selected 19 articles on the basis of the title, abstract, key words and publishing medium. This initial selection was completed by articles and reports not initially found by the systematic analysis and using international references.

### The different definitions of an immigrant

According to the National Institute of Statistics and Economic Research (INSEE), an immigrant is defined as 'a person who is born a foreigner and abroad, residing in France'<sup>a</sup>. However, the definition of the immigrant population can vary from study to study due to the diversity of tools used in the major French surveys, including or not the nationality and country of birth criteria.

Globally, three main typologies are used. The first and most commonly used, distinguishes foreign nationals from French nationals by nationality only. The second analysis level, which is more satisfactory, defines an immigrant according to two criteria: nationality and place of birth. It permits identifying foreign immigrants (individuals born a foreigner and abroad) and differentiating between the French by birth and naturalised immigrants (individuals born a foreigner that have acquired French nationality). Three population categories are then defined: French by birth, naturalised immigrants and foreign immigrants. A final typology, more rarely taken into consideration, is based on nationality criteria and the birthplace of respondents and that of their parents. It permits differentiating between the French population and first and second generation immigrant populations. First generation immigrants correspond to persons born a foreigner and abroad, independent of nationality and parental origins. Second generation immigrants correspond to persons born in France with at least one parent born a foreigner and abroad. The French population corresponds to persons born in France to French born parents.

<sup>a</sup> <http://www.insee.fr/fr/methodes/default.asp?page=definitions/immigre.htm>

<sup>1</sup> Enquête Passage à la retraite des immigrés.

<sup>2</sup> Enquête Emploi du temps.

<sup>3</sup> Enquête Histoire de vie.

<sup>4</sup> Enquête Trajectoires et origines.

<sup>5</sup> These data are matched with the permanent sample of National Health Insurance beneficiaries (Epas).

<sup>6</sup> Enquête décennale santé.

## CONTEXT

This literature review on immigrants' health status and access to healthcare in France fits within the framework of the thesis carried out by Caroline Berchet under the supervision of Florence Jusot at the Paris-Dauphine University Leda-Legos laboratory. This research is funded by the chair of Health, Risk, and Insurance and supported by IRDES within the framework of the EUNAM project (EU and North African Migrants: Health and Health Systems) that aims to establish a research network on the theme 'Health and Migration in Europe'. This edition of *Issues in Health Economics* is based on an article written for the *Bulletin épidémiologique hebdomadaire (BEH)* devoted to immigrants health and access to healthcare in France (17<sup>th</sup> January 2012 edition).

of immigrants' health status through time (Mizrahi and Mizrahi, 2008). Whatever the age and gender, foreigners appear to be in better health than the French in 1980 and 1990, with ageing retarded by 1.6 and 1.2 years respectively. In 2000-2002, foreigners conversely appear to be in poorer health than the French with premature ageing of 0.3 years. These results should nevertheless be interpreted with caution given that they have not been controlled for respondents' socioeconomic status. Finally, the same results based on the ESPS survey conducted in 2000-2002 (Mizrahi and Mizrahi, 2008) reveal that for an equivalent socio-demographic structure, the immigrant population reports a poorer health status than the French one.

The exploitation of data from the National Health survey conducted in 2002 and 2003 (Jusot *et al.*, 2009) confirms the poorer perceived health status of immigrants (whether foreigners or naturalised immigrant) even after controlling for demographic characteristics and socioeconomic conditions. Foreign immigrants, however, less frequently self-report chronic illness and activity limitations than the native population, all other things being equal. These result discrepancies according to the health indicators used can reflect self-reporting bias related to the immigrant profile: the lower self-reported chronic illness or activity limitation can be explained by a poorer understanding of health indicators or by a difference in health standards and expectations among

the immigrant population (Jusot *et al.*, 2009).

Finally, the results of the Trajectories and Origins survey (Beauchemin *et al.*, 2010) confirm the results obtained in previous studies revealing that for a given age, perceived health status is poorer among immigrant men and women residing in France. Nevertheless, after controlling for socioeconomic conditions, the lower health is only maintained among immigrant women.

The conclusions of comparative European studies are consistent with the results of recent French studies. The exploitation of SHARE (*Survey of Health Ageing and Retirement in Europe*) data shows that immigrants' health status is more deteriorated than that of the native populations in terms of perceived health and activity limitations in France, Germany, the Netherlands, Sweden and Switzerland (Solé-Auro and Crimmins, 2008). The comparison of immigrant mortality rates due to cardiovascular disease according to country of origin lead to similar conclusions by suggesting the over-mortality of immigrants (Bhopal *et al.*, 2011). The mortality rates among the different immigrant groups, with the exception of certain ethnic groups, is thus always higher than the mortality rate among the native population in France, Scotland, Denmark, England and Wales.

The inconsistency of results between the different French studies can in part be attributed to a modification in the entry conditions into the country and a less selective immigration. From 1974, the economic downturn contributed to altering the motives for immigration moving from an essentially employment-driven immigration to family reunification and political asylum (Perrin-Haynes, 2008). On the other hand it is possible that the definition of an immigrant is not exactly comparable between studies or within different periods of the same survey. Some cultural biases could also explain the discrepancies between results: perceived health status or the understanding of health indicators can appear heterogeneous according to the immigrant's origins. Finally, incoherent results from one study to the next one could be explained

by the variety of health indicators used. Studies suggesting a better health status among immigrant populations are based on objective health indicators such as mortality rates or the prevalence of certain diseases whereas recent studies are based on more subjective indicators such as perceived health status which reveal, in addition to illness, a malaise related to social isolation or difficult living conditions to which immigrants are more frequently exposed.

### Differences in health status between the two generations of migrants

Results of the successive ESPS survey editions conducted in 2006 and 2008 confirm the immigrant poorer perceived health status (Berchet and Jusot, 2009; Berchet and Jusot, 2010). If the difference between first and second generation immigrants is rarely taken into account in empirical literature (Lert *et al.*, 2007), it becomes pertinent if one takes the acculturation or assimilation process into consideration. This suggests that the adoption of the host country's cultural practices leads to a convergence between second generation immigrants' health status and that of the native population. Therefore, after controlling for age, first generation immigrants have a markedly poorer perceived health status, notably among the North African population and women. On the other hand, perceived health status among first and second generation immigrants from southern Europe does not differ from that of the French population (Berchet and Jusot, 2010).

### Disparities according to country of origin

Some studies reveal a diversity of health situations according to country of origin. Despite the heterogeneity of results obtained in the different studies, some trends can be underlined. On one hand, immigrants from northern Europe or sub-Saharan Africa benefit from a better health status than those originating from southern Europe and North Africa (Attias-Donfut and Tessier, 2005). Likewise immigrants from southern Europe and the Maghreb present a poorer health status than the French population (Jusot *et al.*, 2009), a result also confirmed among immi-

grant women (Berchet and Jusot, 2010). Similarly, for equivalent age and socio-economic characteristics, Portuguese immigrants more frequently self-report poorer health (Beauchemin *et al.*, 2010). On the other hand, immigrants from eastern Europe (Vaillant et Wolff, 2010) and South East Asia (Beauchemin *et al.*, 2010) more frequently self-report poorer health after controlling for cultural factors (such as language) [Vaillant and Wolff, 2010] and socio-economic conditions (Beauchemin *et al.*, 2010). Finally, European male immigrants more often suffer from activity limitations than men born in France to two French parents compared with non-European immigrants both before and after controlling for social status (Lert *et al.*, 2007).

Beyond the cultural and lifestyle habits in the country of origin, the diversity of immigrant health statuses according to country of origin can also be attributable to its long-term economic characteristics. In France, for instance, immigrants from wealthier countries present a better health status than those from poorer countries (Jusot *et al.*, 2009).

### Lower rate of access to office-based medical practices due to a disadvantaged economic and social situation...

Health inequalities related to migration are also confirmed by inequalities in healthcare use. The results of the different French studies are relatively consistent and support the idea that immigrant populations have a lower use of general practitioner (Mizrahi and Mizrahi, 2008; Dourgnon *et al.*, 2009; Berchet, 2011) and specialists (Attias-Donfut and Tessier, 2005; Dourgnon *et al.*, 2009; Berchet, 2011). For equivalent healthcare needs, consultation rates for general practitioners and specialists are lower among first generation immigrants whereas there is no difference in the consultation rates between second generation immigrants and the French population born from French parents. However, after controlling for socioeconomic conditions, the use of healthcare services among first generation immigrants is no more different from that of the French population. The lower use of health-

care services among the immigrant population is thus attributable to their socioeconomic situation in France (Dourgnon *et al.*, 2009; Berchet, 2011).

### ... and disparities in terms of prevention

Concerning access to preventive health services, French studies observe differences between the immigrant and French populations in terms of vaccination or screening.

Although immigrants report a higher overall vaccination rate than the French<sup>7</sup> population, for equivalent health care needs and socio-economic conditions, they self-report fewer hepatitis B vaccinations and fewer AIDS tests over the last twelve months (Dourgnon *et al.*, 2009). Vaccination rates for poliomyelitis and tetanus are also lower among Iberian and North African immigrants (Wanner *et al.*, 1995). On the other hand, no significant differences are observed for the flu vaccine except among North African male immigrants who present a higher vaccination

rate than native French men (Wanner *et al.*, 1995).

Although the majority of French women have already had a clinical breast examination and a cervical smear, the rate is lower among North African women (Wanner *et al.*, 1995). This result is corroborated by the conclusion of the study based on the Health, Inequalities and Social Ruptures survey<sup>8</sup> conducted in 2005. Foreign women living in the Ile de France region (Paris and suburbs area) self-report fewer cervical smear tests than French women born of French parents (Vallée *et al.*, 2011). On the other hand, the authors reveal no significant differences between French women born of French parents and second generation immigrant women.

<sup>7</sup> Vaccination against a certain number of diseases is recommended (yellow fever, typhoid, meningitis, etc.) before travelling to regions such as Africa, the Middle East or South America. Immigrants returning to their countries of origin are thus more likely to be vaccinated than the French population overall.

<sup>8</sup> Enquête Santé, inégalités et rupture sociales.

## DATA

### Data available in France

Main sources	Samples and definitions used
• <b>Immigrant Retirement Decisions</b> (Attias-Donfut and Tessier, 2005)	6 211 foreign immigrants
• <b>Life Histories<sup>a</sup></b> (Lert <i>et al.</i> , 2007)	6 156 French by birth 251 naturalised immigrants 387 foreign immigrants
• <b>Trajectories and Origins<sup>b</sup></b> (Beauchemin <i>et al.</i> , 2010)	3 781 individuals belonging to the majority population 8 456 foreign immigrants
• <b>ESPS*-EPAS** 2000/2002</b> (Mizrahi and Mizrahi, 2008)	6 756 French 296 foreigners
• <b>Decennial Health 2002/2003<sup>a</sup></b> (Jusot <i>et al.</i> , 2009; Dourgnon <i>et al.</i> , 2009)	22 891 French by birth 897 naturalised immigrants 1 399 foreign immigrants
• <b>ESPS* 2006</b> (Berchet et Jusot, 2010)	5 307 French born of French parents 564 first generation immigrants 654 second generation immigrants
• <b>ESPS* 2006/2008<sup>a</sup></b> (Berchet and Jusot, 2009; Berchet, 2011)	10 401 French born of French parents 2 264 first and second generation immigrants

<sup>a</sup> Different definitions of an immigrant can be used for multivariate analyses. Sample sizes can also vary according to the health indicator under consideration.

<sup>b</sup> Belonging to the majority population signifies all respondents residing in metropolitan France that are neither immigrants, natives of the French overseas territories (DOM) nor descendants of DOM natives.

\* Health, Healthcare and Insurance survey (ESPS).

\*\* Permanent sample of National Health Insurance beneficiaries.

## The main determinants of health inequalities related to migration

### The immigrant self-selection effect

Several hypotheses can be advanced to explain health inequalities related to migration. The first hypothesis suggests an immigrant self-selection effect whereby only the healthiest individuals are apt to migrate (Fennelly, 2007). A French study on Tunisian immigrants residing in the Languedoc-Roussillon region (Méjean *et al.*, 2007) indicates lower morbidity rates among the immigrant population compared with the Tunisian population residing in their country of origin, and also compared with the French population. The pertinence of this hypothesis is more apparent among the male population for whom migration is more generally motivated by economic reasons rather than family reunification.

A second selection process, described in the literature as the 'salmon effect', was then advanced to explain the better health of immigrants (Attias-Donfut and Wolff, 2005). This hypothesis supposes that ageing immigrants return to their country of origin on retirement, in cases of serious illness and at the end of their lives. According to the Immigrant Retirement Decisions survey, 34.6% of immigrants wish to return to their country of origin when they are older or to be buried. Preferences for burial in the country of origin notably concerns African or Middle-Eastern immigrants and appears to be largely influenced by religious affiliation and social or family attachments (Attias-Donfut and Wolff, 2005). The observed health gap in favour of immigrants could thus be an artefact resulting from the under-recording of mortality and morbidity rates.

### The protective effect of favourable lifestyle habits is attenuated

Another hypothesis suggests that favourable lifestyles and health behaviours in the country of origin have a protective effect on health. The first studies indicating a better health status among immigrants showed that cultural or dietary habits had

a protective effect on their health (Wanner *et al.*, 1995; Méjean *et al.*, 2007; Darmon and Khlat, 2001; Khlat and Darmon, 2003). Numerous studies indicate that low alcohol consumption or a rich diet in fruit and vegetables among certain foreign populations explains their better health status (Wanner *et al.*, 1995; Darmon and Khlat, 2000; Khlat and Darmon, 2003). According to the more recent French studies, the positive effect of a healthy lifestyle appears more modest if not contradicted: immigrants' deteriorated health status can be partially or entirely explained by poor lifestyle habits. Although first generation of migrant women less frequently report good health than native French women, introducing lifestyle habits in the analysis considerably reduces the differences; by 31% for North African women, 19.9% for women from all other source countries and 9.1% for South European women. The conclusions of estimates carried out on the male population are similar and suggest the importance of lifestyle habits in explaining the poor health status of migrant men (Berchet and Jusot, 2010).

### Socio-economic conditions contribute to health status deterioration

Although, on arrival, immigrants benefit from a better overall health status than the host population, some socioeconomic factors, or the loss of social connections, contribute to health deterioration which appears to vary with the length of time spent in the host country. This can be explained by a 'wear and tear' effect (Attias-Donfut and Tessier, 2005) related to more difficult working conditions or more precarious socioeconomic conditions (Mizrahi and Mizrahi, 2008; Jusot *et al.*, 2009; Berchet and Jusot, 2009; Berchet and Jusot, 2010). All the socioeconomic variables have a significant impact on the probability of self-reporting good health. Individuals with a low education level are less likely to report good health than individuals with a higher education level. The same applies for unskilled workers compared to executives, or economically inactive or unemployed individuals compared with individuals in employment. In this respect, compared with the French natives, immigrants' social status and labour market access are more limited (Insee, 2005) and the immigrant

unemployment rates in 2007 were twice as high (Perrin-Haynes, 2008). Moreover, after taking into account education level, gender, occupation and social category, the immigrant population are more often unemployed than the non-immigrant population suggesting either the non-transferability of human capital<sup>9</sup> accumulated abroad or the existence of labour market discrimination. The study based on the Trajectories and Origins survey suggests that first and second generation immigrants are more exposed to discrimination than the non-immigrant population (Beauchemin *et al.*, 2010).

Although socioeconomic conditions figure among the main social determinants of health (Marmot *et al.*, 2008), certain studies indicate that these factors have a higher impact on the health status of immigrant populations (Dunn and Dyck, 2010). French studies notably show that immigrants' socioeconomic conditions partially explain their poorer health status or lower use of general practitioner (Attias-Donfut and Tessier, 2005; Jusot *et al.*, 2009; Dourgnon *et al.*, 2009; Berchet, 2011). Differences in income and socio-professional category between the immigrant and native French populations respectively explain 42.5% and 16% of differences in perceived health status (Berchet and Jusot, 2009). To this can be added immigrants' difficult access to complementary health insurance despite the fact that it is considered as essential to maintain access to healthcare among the most underprivileged populations (Perronnin *et al.*, 2010). In France, 35% of foreign immigrants and 20% of naturalised immigrants do not have access to complementary health insurance against only 7% of the native French population (Dourgnon *et al.*, 2009). Finally, an unfavourable socioeconomic situation may be an explanatory factor in the higher rate of healthcare foregone among certain groups of immigrants, financial difficulties being one of the primary reasons for healthcare foregone (Beauchemin *et al.*, 2010).

<sup>9</sup> Human capital signifies all of an individual's accumulated aptitudes, talents, qualifications, and experiences that determine his ability to work or to produce for himself or others (Généreux J., Introduction à l'économie, Seuil, 2000).

### The loss of social connections induced by migration

Beyond the effects of material living conditions on health status, social exclusion or losing social connections contributes to the deterioration of immigrants' health status. Migration may imply high stress levels associated with integration into a new environment or the lack of social support (OMS, 2008). The impact of stress on health status, the lack of social support, or more precisely the lack of social capital has been widely documented (Folland, 2007; Putnam, 1993). These factors foster the diffusion of information on available medical resources, or on the health service network, for example, which *may* increase access to healthcare. The conclusions reached by French and international studies are consistent in suggesting the existence of inequalities in health and healthcare use related to social support (Berchet and Jusot, 2009; Berchet and Jusot, 2010; Zambrana *et al.*, 1994; Leclere *et al.*, 1994). More specifically, the social capital gap<sup>10</sup> between the immigrant and French populations explains 54% of observed health inequalities (Berchet and Jusot, 2009).

Furthermore, a poorer knowledge of the healthcare system or insufficient knowledge of the host country's language are obstacles to accessing healthcare and contribute to deteriorating immigrants' health status (Chaouchi *et al.*, 2006). Although these factors are not easily quantifiable, some research has shown that foreigners unable to speak the host country's language more frequently self-report poor health (Lert *et al.*, 2007), have a lower use of healthcare services and perceive more obstacles to access (Zambrana *et al.*, 1994; Leclere *et al.*, 1994).

Finally, the literature suggests disparities in health status and healthcare use resulting from the particular interaction between health professionals and immigrant patients (Balsa and McGuire, 2003). Doctors can adopt 'pure' discriminatory behaviours in the face of immigrants either due to national preferences or prejudices as to immigrants' ability to respect therapeutic indications (Carde, 2007). A third of State Medical Assistance<sup>11</sup> beneficiaries declare for example having been

subject to care refusal from health professionals (Boisguerin and Haury, 2008). Immigrants poor knowledge of the language, or differences in the cultural representations of disease and healthcare between the doctor and the patient, leads to symptom misinterpretation by patients and consequently to misdiagnoses and inappropriate treatments (Carde, 2007).

\* \* \*

Despite diverging results from one study to the next due to the diversity of the health indicators used and the periods studied, the more recent French studies suggest the existence of health inequalities due to migration and disparities according to country of origin. In addition, all studies concur on the fact that the immigrant population have a lower use of healthcare and health prevention services. Finally, the disadvantaged socioeconomic conditions to which immigrants are subject, their more difficult access to complementary health insurance and poorer social integration are the main factors explaining these inequalities in health status and access to healthcare.

These results call for the implementation of public health policies aimed at improving immigrant populations' health status and access to healthcare. The analysis of the determinants of health inequalities show that several types of action could be envisaged. On one hand, the setting up of adapted health prevention and education programmes would provide immigrants with the necessary means to better control their health and orient them more easily towards appropriate healthcare programmes. Given the protective role played by social connections on health status, the development of specific neighbourhood actions would seem pertinent in improving foreign immigrants' social integration and social support. Finally, as underlined by the National Council for Policies against Poverty and Social Exclusion and its recent recommendations of July 5<sup>th</sup> 2011, it is necessary to simplify the rights of access to State Medical Assistance<sup>12</sup> and Universal Health Insurance<sup>13</sup> so as

to favour health prevention and access to healthcare for all disadvantaged persons living in France.

Nevertheless, the heterogeneity of results obtained by the different studies show the necessity of developing tools to improve existing knowledge on the health of immigrants. The integration of nationality criteria, country of birth and origins, in the major national surveys is indispensable in understanding the mechanisms of socioeconomic deprivation that deteriorates immigrant populations' health status and access to healthcare. In this respect, it appears crucial for the implementation and evaluation of more efficient public policies that could target specific immigrant communities. ♦

<sup>10</sup>The social capital indicators used in this study are as follows: (i) Social participation indicating whether the respondent participates in group activities either within the framework of an association, sports club, cultural association, or political party etc. (ii) Social exclusion indicating whether the individual has durably suffered from social isolation during the course of his or her life.

<sup>11</sup> Aide médicale d'État (AME).

<sup>12</sup> Aide médicale d'État (AME).

<sup>13</sup> Couverture maladie universelle (CMU).

## 7 FURTHER INFORMATION

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