

# Health and Well-being of Immigrants: *The Healthy Migrant Phenomenon*

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## Introduction

A growing body of literature describes what has come to be known as the 'healthy migrant' phenomenon – the fact that, on a variety of measures, immigrants to the United States,<sup>1-5</sup> Canada,<sup>6,7</sup> Australia,<sup>8</sup> and Western Europe<sup>9,10</sup> are often healthier than native-born residents in their new countries of residence. Over time, however, the migrant health advantage diminishes dramatically.

Health status is the sum of a complex set of variables, with wide variability within and across groups. Nevertheless, researchers have noted some interesting trends in comparisons of the health status of US- and foreign-born residents. While immigrants to the United States do have higher rates of some infectious diseases than native-born residents, on measures of health risk factors, chronic conditions, and mortality they are generally better off. Singh and Siahpush<sup>3</sup> used data from the National Longitudinal Mortality Study (1979–1989) and found that immigrant men and women had significantly lower risks of mortality than their US-born counterparts. Jasso et al.<sup>5</sup> pooled National Health Interview Survey data between 1991 and 1996 and examined chronic conditions by year since immigration and by age of immigrants; they found that prevalence rates of chronic conditions for immigrants were much lower than those for the US-born. Similarly, Muennig and Fahs<sup>4</sup> compared hospital utilization and mortality rates of foreign-born and US-born residents in New York City, and concluded that immigrants were healthier and had significantly longer life

expectancies than natives. They estimated that the over-all cost of providing hospital-based care to the foreign-born residents in New York would be US\$611 million less than care for an equivalent number of US-born persons in 1996. Dey and Lucas<sup>11</sup> calculated adjusted odds ratios of selected chronic diseases using National Health Survey data on over 196 000 respondents from 1997 to 2002, and found that foreign-born residents had lower levels of obesity, hypertension, diabetes, cardiovascular disease, and serious psychological distress than US-born residents. Other researchers have suggested that superior health may be one of the reasons for lower healthcare expenditures by immigrants, even when they are covered by health insurance.<sup>12</sup> Mohanty et al.<sup>12</sup> linked 1998 medical expenditure data to 21 241 records from the 1996–1997 National Health Interview Survey and found that the per capita health expenditures of immigrants were 55% less than those of US-born individuals, even after controlling for health insurance coverage. They note that their findings debunk the commonly held myth that immigrants consume large amounts of scarce health resources.

Kandula et al.<sup>13</sup> performed a comprehensive review of the literature published on the health of immigrants between 1996 and 2003, and summarized findings on the ten 'Leading Health Indicators' defined as goals for 'Healthy People 2010.' They reviewed literature on the health of foreign-born residents, and when data by place of birth were unavailable, they included studies of Latinos in the US. They caution that some comparisons of immi-

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grants and the native-born yield contradictory or mixed results (for example, comparative studies of physical activity, sexual activity, injury, and violence), and on measures of levels of immunization and access to care, US-born residents do better. However, immigrants had superior health outcomes on measures of obesity, smoking, alcohol, and drug abuse, and each of these indicators worsened with increasing time in the US. Similarly, in a review of the national literature for which comparative data are available, Fennelly<sup>14</sup> found that foreign-born residents did better than the US-born residents on 12 of the 14 goals specified by the Minnesota Department of Health to eliminate health disparities. These included infant mortality, breast and cervical cancer, sexually transmitted diseases, HIV, heart disease, diabetes, teen pregnancy, unintentional injury, suicide, homicide, motor vehicle accidents, tobacco use, and alcohol use. The exception is immunization rates of foreign-born children. Under age 3 years had lower rates of Hib and hepatitis B vaccinations than US-born children. The comparative rates of HIV and AIDS are not available, according to the HIV/AIDS Bureau of the Health Research and Services Administration of the US Department of Health and Human Services;<sup>15</sup> comparative data on motor vehicle accidents were not found, although it is likely that foreign-born residents have lower motor vehicle mortality rates because they are less likely to use motor vehicles. This is the case for US Hispanics compared to non-Hispanic whites, although data are not available distinguishing US- and foreign-born Hispanics.<sup>16</sup>

Although not all Latinos are foreign born, studies of Latino health add to our understanding of changes in health status as individuals become more acculturated to US society. Lara et al.<sup>17</sup> conducted an extensive review of the literature and found that on some measures acculturation had a negative, a positive, or no effect on health, but that it exerted a positive effect on use of health services and self-perceptions of health. (This effect is likely to be attenuated in more recent studies because of the increase in numbers of undocumented Latinos who are ineligible for all but emergency services). The authors go on to conclude that 'the strongest evidence points toward a negative effect of acculturation on health behaviors overall, particularly those related to substance abuse, diet and birth outcomes (low birth-weight and prematurity) - among Latinos living in the United States.' It is the focus of attention on these increasingly negative outcomes and disparities between Hispanics and non-Hispanic whites (for example) that prevents many health providers from

recognizing the initial health advantage of immigrants.

One area in which immigrants may not enjoy health advantages is in the incidence of depression or other mental health conditions. Research comparing the mental health of immigrants and native-born adults leads to ambiguous conclusions. Some studies show more mental health problems among immigrants, while other suggest that they are less likely to suffer from mental health conditions. Hyman,<sup>6</sup> for example, cites studies demonstrating that Mexican immigrants have significantly lower rates of post-traumatic stress disorder (PTSD) and depression than US-born Mexicans. This may not be the case for other groups of immigrants. A number of researchers suggest, for example, that refugees are at high risk for mental health problems as a result of exposure to deprivation, violence, and forced migration.<sup>18</sup>

The healthy migrant phenomenon has also been observed in Western Europe<sup>9,10,19</sup> and Canada.<sup>6</sup> Hyman, of Health Canada, for example, conducted an extensive review of the literature on immigration and health and concluded that 'in Canada national health survey data show that recent immigrants, particularly from non-European countries, are in better health than their Canadian-born counterparts.'

The superior health of immigrants seems particularly counter-intuitive because of the poor health conditions in many of their countries of origin, and because of recent public attention to well-documented and significant health disparities between majority and minority populations in the United States. Two factors are operating to produce these contradictions. First, immigrants who leave their home countries tend to be healthier than those who remain at home.<sup>5</sup> Second, after migration to the US they experience a decline in health status over time, i.e. a marked deterioration in some indicators of immigrant health after settlement, and with each successive generation (see, for example Harris,<sup>20</sup> CAMS,<sup>21</sup> Hernandez,<sup>22</sup> LaVeist,<sup>23</sup> Razum et al.<sup>9</sup>). In what Rumbaut<sup>24</sup> calls the 'paradox of assimilation,' length of time in the US is positively correlated with increases in low birth weight infants,<sup>2,25</sup> adolescent risk behaviors,<sup>20,26</sup> cancer,<sup>27</sup> anxiety and depression,<sup>28</sup> and general mortality.<sup>3,4</sup>

Another reason for public misperceptions regarding immigrant health stems from disproportionate attention to serious, but low incidence and well-publicized conditions that affect immigrants, such as tuberculosis and other infectious diseases. Refugees represent a subgroup of immigrants who are at par-

ticularly high risk of tuberculosis (TB).<sup>6</sup> Although rates for immigrants are higher than for US-born individuals, tuberculosis case rates for both groups have dropped dramatically since 1992 as a result of increases in the proportion of patients who receive and complete treatment regimens.<sup>29</sup> The highest tuberculosis rates are found among immigrants to the US from Central and South America and the Caribbean and Western Pacific countries.<sup>29</sup>

### Explanations of the Healthy Migrant Effect

As mentioned earlier, Jasso et al.<sup>5</sup> argue that migration is selective on health, namely that individuals who migrate are a self-selected group who are much healthier than individuals in their home countries. Subsequent declines in health with time in the US can be seen as a natural 'regression to the mean.' The gradual changes from immigrant health advantages to disparities has been ascribed to 'acculturation' to an American lifestyle, raising the question of what acculturation actually means, and how it affects health. The research literature includes many different measures of acculturation, including English language proficiency, country of origin, time in the US, or scores on a variety of acculturation scales.

Noh and Kaspar<sup>30</sup> give a broad explanation of the loss of migrant health advantage that includes widely varying implicit definitions of acculturation:

The more 'they' become like 'us,' immigrants and immigrant children fail to maintain their initial health advantages. The process is poorly understood, but may be the result of the adoption of our poor health behaviors and life styles, leaving behind resources (social networks, cultural practices, employment in their field of training, etc.), and ways in which the settlement process wears down hardiness and resilience.<sup>30</sup>

Researchers such as Hunt et al.<sup>31</sup> call for greater measurement precision. They point out that many studies of acculturation suffer from inadequate definitions of the construct, and – what is worse – simplistic and largely untested notions of 'traditional' culture as negative (in the literature on Hispanic health, which is their focus, this is manifested in assumptions regarding the negative effects of machismo and traditional gender roles) or positive (as in assumptions regarding the positive effects of religiosity or strong family values on health outcomes). The authors suggest that such untested

assumptions may result from acceptance of cultural stereotypes:

In reading through this body of literature one is continually struck by the juxtaposition of careful psychometric measurements, on the one hand, and such free-wheeling, meanderings about the supposed effect of unexamined cultural traits, on the other. Can the granting of such interpretive license in an otherwise rigorous genre be an indication of insidious acceptance of cultural stereotypes?<sup>31</sup>

### Additional explanations of the loss of the migrant health advantage

#### Poverty

Vague hypotheses regarding the 'protective effects of culture' divert attention from inequalities in health access and healthcare, and the ways in which poverty leads to health risks and barriers to care among both immigrants and native-born minorities, through inadequate housing, stresses that lead to mental health problems, and adoption of unhealthy diets.

Such disparities are particularly pronounced among immigrants. Sixteen percent of foreign-born and 11% of US-born residents in the United States were living below the poverty line in 2002.<sup>32</sup> The percentage of immigrants in poverty varies greatly by national origin group and educational levels, but regardless of national origin, noncitizens are much more likely than citizens to be poor, even though they are equally likely to participate in the labor force.<sup>33</sup> Poverty levels differ for immigrants of different origins and legal statuses, and immigrants are over-represented in both high-skilled and low-skilled jobs. The largest group – Hispanic immigrants – have very high labor force participation rates, but many are relegated to low-paying jobs that offer few or no benefits. In contrast with Latinos, most Southeast Asians, Africans, Russians, and Eastern Europeans initially came to the US as refugees, or as immigrants sponsored by family members who were refugees or asylees. For these individuals the trauma of forced evacuation may make it difficult to find or maintain employment, and government bureaucratic delays in establishing eligibility for benefits may exacerbate or even cause poverty.

#### Housing

One consequence of poverty is poor housing, and the lack of adequate and affordable housing has

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important implications for immigrant health, since over half of severely crowded households in the US are inhabited by foreign-born residents.<sup>34</sup> Although inadequate housing can contribute to stress and illness for all low-income residents, immigrants are especially vulnerable because of barriers of language, large family size, and their concentration in ethnic enclaves. Housing is linked to health in a variety of ways. Substandard housing can be a direct cause of accidents and physical ailments, as well as an indirect source of health problems related to barriers to receipt of services, and a barrier to stable employment and schooling. In a recent study of children in homeless shelters in New York City, McLean et al.<sup>35</sup> found that half of the children had symptoms consistent with asthma. They attribute this extremely high incidence to both environmental risks and to the social disruption caused when families are isolated from transportation, friends, schools, and medical services. A public health nurse in a Minnesota study described the ways in which lack of stable housing can limit access to education and health or social services.

If children do not reside in one long-term location, going to school becomes an issue. Moving from place to place makes it more difficult to access services that may be available, such as ESL classes. Having a command of the English language is key to being able to access opportunities which may lead to a more stable life. If you don't have access to affordable housing, everything else becomes more difficult.<sup>14</sup>

Evans and Wells<sup>36</sup> have reviewed a number of studies affirming an association between housing and mental health in the general population, and Magaña and Hovey<sup>37</sup> have described similar links among Latino farm workers in the Midwest. In the latter study, 'rigid work demands and poor housing conditions' were associated with high levels of anxiety.

Undocumented residents and refugees have particular difficulties establishing the credit history necessary to be able to sign a lease or qualify for a mortgage. Migrant workers who travel seasonally also face special obstacles to securing affordable short-term leases. Furthermore, the fact that immigrants in general have larger families and lower incomes than do US-born adults makes it difficult for them to find suitable, affordable housing. Immigrants are also particularly susceptible to housing discrimination, either because they are unaware of their rights, or because they fear reprisals for report-

ing substandard housing conditions or exploitation by landlords.

#### Acculturative stress

For immigrants and refugees alike, mental health problems can be caused or aggravated by the stresses of adaptation to an unfamiliar society. Depression is a common problem, especially among the elderly and the poor. Problems of job loss, unemployment and underemployment, language barriers, isolation, discrimination, and the Americanization and alienation of children are only a few of the causes of what has been termed 'acculturative stress.'

Refugees undergo health screening before being admitted to the United States, but mental health screening is often inadequate. Nationally, many refugee health programs do not perform routine mental health screening. Vergara et al.<sup>38</sup> surveyed nine large metropolitan refugee health programs across the US and found that only one-third performed mental status examinations, although over two-thirds offered some mental health services. A provider in Minnesota has noted that:

The mental status exam that is used was actually developed to screen for dementia and delirium, not mental health issues. It is so culturally based as to be useless for immigrant populations. Items include counting backwards from 100 by 7s, spelling 'world' backwards, drawing a clock with hands, defining some sayings like 'A bird in hand is worth 2 in the bush,' and completing analogies such as 'eye is to seeing as ear is to ••' (Councilman R: personal communication. 2004).

The stigma of acknowledging mental health problems poses a significant barrier to help seeking on the part of some groups of immigrants. In some cultures, psychological problems – if they are recognized at all – are attributed to somatic ills.

#### Nutrition

Changes in diet are frequently mentioned as behaviors that account for some of the loss of initial health advantages among immigrants who remain in the US. A prepublication report of work by Akresh<sup>39</sup> describes the deteriorating nutritional status of US immigrants over time. She found that 39% of a sample of 6637 foreign-born adults reported increased consumption of junk food and meat, higher body mass indices (BMI) and decreased consumption of healthy foods, such as fruits, vegetables, fish, and rice since arrival in the US.

Acculturation to an unhealthy American diet is associated with obesity, diabetes, and cancer.<sup>40</sup> Mazur et al.<sup>41</sup> discuss the ways in which time in the US increases the risk of obesity and chronic disease among Mexican-American adults because of increased consumption of fat, decreased consumption of fiber, and reduced physical activity. They describe the generally more nutritious diet of first-generation Hispanics as 'culture-based protection against adverse health effects normally associated with low income.' Similarly, Fishman et al.<sup>42</sup> found that Latino migrant children were less likely to eat junk food or to skip meals than their nonmigrant peers, but that over time these differences disappeared.

### Substance abuse

Several studies have shown that rates of smoking and substance abuse among the foreign-born increase over time. For example, Gfroerer and Tan<sup>43</sup> analyzed data from the National Household Survey of Drug Abuse and found lower rates of tobacco, alcohol, and illicit drug use among immigrant youth, but increasing rates with greater time in the US. They speculate that 'acculturation' increases exposure to peers, adults, and mass media that could influence a youth's propensity to use substances.

### Access to care

Barriers to access to healthcare in the US have been strongly implicated as a source of increasing health disparities between immigrants and native-born residents. Riedel<sup>44</sup> notes that access is a problem facing all vulnerable populations in the United States, and one which health policy makers, administrators, and consumers have decried for over 30 years. The problems are particularly acute for the foreign born. In 1996, Congress passed a comprehensive welfare bill known as 'The Personal Responsibility and Work Opportunity Reconciliation Act of 1996' (PRWORA). Under the provisions of PRWORA, public assistance was denied to most legal immigrants for 5 years or until they attain citizenship. Some states enacted legislation permitting some groups of immigrants, such as refugees, time-limited access to benefits.<sup>45</sup> Nevertheless, as a consequence of federal and state welfare reform, there have been major reductions in legal immigrants' use of social and health benefit programs across the United States.<sup>46</sup> These declines coincide with increases in poverty among the children of immigrants, many of whom were born in the United States.<sup>47</sup> Poor citizens in the US are twice as likely as poor noncitizens to

have health insurance.<sup>48</sup> Recognizing this, a large number of providers have called for changes in federal and state policies regarding welfare and health benefits for immigrants.

The Kaiser Commission<sup>33</sup> reports that in 1999, 'of the 9.8 million low-income non-citizens, almost 59% had no health insurance in 1999 and only 15 percent received Medicaid' (compared with 30% uninsured low-income citizens and 28% with Medicaid).

Low levels of insurance coverage for immigrants are mainly the result of two factors. First, although foreign-born residents have high rates of labor force participation, they are over-represented in jobs that do not provide health insurance. Second, federal and state legislative changes tied to Welfare Reform have resulted in severe restrictions on immigrant eligibility for Medicaid and other benefits. Restrictions are most severe for undocumented immigrants, largely Latinos.<sup>46</sup> Since September 11, 2001, exclusion of immigrants from access to healthcare has grown worse. In 2005, 80 bills were proposed in 20 states to cut immigrants' access to services or to require divulging their visa status to providers.<sup>49</sup> Although many of these proposals were not adopted, a surge of new restrictive bills has followed. As of this writing, Congress is considering legislation that would make unauthorized presence in the US or assistance to undocumented individuals a felony.

Not all of the increase in negative health outcomes among immigrants who remain in the US can be ascribed to limited access to care; there are a number of immeasurable variables in comparisons of health outcomes for immigrants, including an unknown number of individuals who enter the US and subsequently return to their home countries.<sup>5</sup> Furthermore, income and access to healthcare increase over time in the US, and both of these variables are important determinants of positive health.<sup>5</sup> In their review of the literature on acculturation and health, Lara et al.<sup>15</sup> found several studies showing that more-acclimated Latinos have greater access to services and higher rates of use of health services, but still demonstrate higher rates of substance abuse, poor nutrition, and worse birth outcomes than Latinos who have lived in the country for a shorter period of time. The paradoxical finding that some health indicators worsen in spite of increased access to healthcare suggests that the effects of acculturation on health cannot be explained by simple bivariate associations. Observing the same phenomenon in Canada, McDonald and Kennedy<sup>7</sup> speculate that with increased use of the health system recent immigrants may become more likely to be diagnosed with chronic conditions, although they note that available

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data do not support this hypothesis. Alternatively, it may be that immigrants' self-definitions of what constitutes 'good health' change over time in the country. Another likely explanation is that the effects of access on health interact with other characteristics of poverty and vary for particular groups. Finch et al.<sup>50</sup> for example, analyzed survey data from 1000 adult migrant farm workers in California and found that acculturation led to lower self-ratings of health among the most acculturated farm workers. They hypothesize that these individuals may be more vested in American society, and thus more vulnerable to the stresses of adaptation and language, or - alternatively - that the more highly acculturated individuals were demonstrating the negative health effects of longer periods of exposure to stressful and harmful conditions.

### Recommendations for Providers

What can healthcare providers do to maintain the initial advantages of first-generation immigrants and prevent the subsequent deterioration of their health? In the following section, we present a series of recommendations based upon the literature summarized in this chapter.

1. Help to dispel myths regarding the inferior health of the foreign born, and to publicly acknowledge to immigrants and US-born colleagues the positive practices that account for the healthy migrant phenomenon.
2. Effective, holistic care requires attention to the ways in which poverty reduces the health and life chances for all categories of patients. Conscientious providers need to be good listeners, and to be attentive to problems related to employment, education, childrearing, housing, and discrimination. Healthcare that does not take these external factors into account will be ineffectual.
3. Some barriers to healthcare and treatment can be overcome with the assistance of trained, qualified, bicultural interpreters. In addition to the obvious importance of interpreters in facilitating effective communication, these staff members can be effective 'cultural translators' for both providers and patients. Although the US Department of Health and Human Services requires agencies receiving federal funds to provide assistance to clients with limited English proficiency, such policies are unevenly implemented.<sup>33</sup>
4. Seek out opportunities for cross-cultural training for yourself and your colleagues. Begin by recognizing the limitations of Western medical models of health, and the educational benefits of exposure to alternate ways of conceptualizing the causes and treatment of disease. Study the backgrounds, culture, and traditions of your patients. Educate yourself regarding conditions in your patients' home countries, and the kinds of trauma to which some may have been subjected. Never underestimate the challenges of being a *consumer* of care (in the Western sense), and of seeking help in an unfamiliar environment. Recognize that many of your patients are likely to be unfamiliar with appointment systems, health insurance regulations, compliance with medical recommendations, and standard use of medications. Maintain an open mind regarding alternative health beliefs and treatments that may be more familiar to some of your patients. To the extent possible, make accommodations for different ideas of modesty and gender roles.
5. Regulations regarding eligibility for services for various categories of immigrants are extraordinarily complex and commonly misunderstood by patients and providers alike. Take steps to insure that your clients are not denied services to which they are eligible, or reluctant to come in for care because of the belief that their confidentiality and security will be violated. Take it upon yourself to educate your provider colleagues regarding the complexities of eligibility and barriers that they pose to immigrants.
6. Remember that there is more diversity within any national origin group than between any two groups of immigrants, or between immigrants and nonimmigrants. Avoid making assumptions or generalizations about the beliefs, needs, or characteristics of your immigrant clients. At the same time, providers serving immigrants need to be conscious of the stresses associated with migration and acculturation to a new environment.
7. Consider what you can do to help dispel the myths about immigrants that are prevalent among many native-born citizens and elected officials. Misperceptions and xenophobia contribute to acculturative stress and also drive many of the policies that have severely curtailed access to healthcare and social benefits among immigrants in the United States.

8. Help other providers and healthcare administrators understand that working with immigrant patients requires *additional time* to follow the recommendations outlined above: careful listening, improved communication, development of trust, careful and accurate interpretation, and assistance navigating an unfamiliar healthcare system.

## Conclusion

The general public, and even many healthcare providers, share a common misperception regarding immigrant health. The marked health disparities between Hispanics and non-Hispanics, for example, obscure the fact that, on many measures, first-generation immigrants arrive in the US in better health than native-born Americans. As described in the present paper, it is postimmigration experiences and poverty that lead to tangible stresses and risk factors that compromise health and well-being.

The notion that poverty and discrimination impede access to care and affect health status is not new. There is a substantial and growing literature demonstrating the extent to which poor Americans have reduced access to care and poor health outcomes. In addition to the recommendations for individual providers, the present research leads to a clear set of logical public policy recommendations that are, unfortunately, unlikely to be implemented. As Rank<sup>51</sup> has noted, the high prevalence of poverty in the United States is the result of a lack of national will to address the issue, rather than a lack of resources. His general statement that 'blaming the poor for poverty "lets us off the hook"' is particularly relevant to the foreign born. For immigrants, the effects of poverty are compounded by discriminatory legislation mandating reductions to and denial of access even for many legal immigrants. The problems are especially acute for Latinos. Although Latino immigrants generally have very high rates of labor force participation, many of these workers are in low-wage jobs that do not offer benefits. Nationally, for example, the Hispanic uninsured rate is the highest of any racial or ethnic group.<sup>27</sup>

The policy implications of the healthy migrant phenomenon are significant. First, it belies the arguments of some antiimmigrant groups that immigrants pose a health threat to Americans. Second, it illustrates that the most economically sound policies would be to invest in services to maintain the good health of this important and growing segment of the population, rather than to continue to cut benefits

and create barriers to preventive care. To do otherwise will prove far more costly in the long run.

## References

1. Neria J. Maternal child health risks of women from Latin America. vol. 2003: APHA The Maternal and Child Health Community Leadership Institute; 2000.
2. Fuentes-Afflick E, Hessol NA, Perez-Stable E. Testing the epidemiologic paradox of low birth weight in Latinos. *Arch Pediatr Adolesc Med* 1999; 153:147-153.
3. Singh GK, Siahpush M. All-cause and cause-specific mortality of immigrants and native born in the United States. *Am J Public Health* 2001; 91(3):392-399.
4. Muennig P, Fahs M. Health status and hospital utilization among immigrants to New York City. *Prevent Med* 2002; 35:225-231.
5. Jasso G, Massey DS, Rosenzweig MR, et al. Immigrant health: selectivity and acculturation. In: Anderson NB, Bulatao RA, Cohen B, eds. *Critical perspectives on racial and ethnic differences in health in late life*. vol Panel on Race, ethnicity, and health in later life, National Research Council: National Academy Press; 2004.
6. Hyman I. *Immigration and health*. Ottawa: Health Canada; 2001.
7. McDonald JT, Kennedy S. Insights into the 'healthy immigrant effect': health status and health service use of immigrants to Canada. *Social SciMed* 2004; 59:1613-1627.
8. Australian Institute of Health and Welfare: *Australia's Health 2000*. Canberra: 2000.
9. Razum O, Zeeb H, Rohrmann. The 'healthy migrant effect' - not merely a fallacy of inaccurate denominator figures. *Internat J Epidemiol* 2000; 21:199-200.
10. Toma L. *Immigration phenomenon and right to health in Italy*. Metropolis Conference, Rotterdam, 2001.
11. Dey AN, Lucas J. Physical and mental health characteristics of USS- and foreign-born adults: United States, 1998-2003. *Advance Data from Vital Health Statistics*, 369.
12. Mohanty S, Woolhandler S, Himmelstein D, et al. Health care expenditures of immigrants in the United States: A nationally representative analysis. *Am J Public Health* 2005; 95(8):1431-1438.
13. Kandula NR, Kersey M, Lurie N. Assuring the health of immigrants: what the leading health indicators tell us. *Annual Review of Public Health*. Available: <http://arjournals.annualreviews.org/floyd.lib.umn.edu/doi/abs/10.1146%2Fannurev.publhealth.25.101802.123107> 2004; 25:357-376.
14. Fennelly K. Listening to the experts: provider recommendations on the health needs of immigrants and refugees. *J Cultural Diversity* 2006 (forthcoming).
15. US Department of Health and Human Services. *Foreign-born populations in the US: HIV/AIDS. Reports and Statistics*; September, 2003
16. Braver E. Race, Hispanic origin, and socioeconomic status in relation to motor vehicle occupant death rates and risk factors among adults. *Acc Anal Prev* 2003; 35(3):295-309.
17. Lara M, Gamboa C, Kahramanian MI, et al. Acculturation and Latino health in the United States: A review of the literature and the sociopolitical context. *Ann Rev Public Health* 2005; 26:367-397.
18. Palinkas LA, Pickwell SM, Brandstein K, et al. The journey to wellness: stages of refugee health promotion and disease prevention. *J Immigrant Health* 2003; 5(1):19-28.
19. Swerdlow AJ. Mortality and cancer incidence in Vietnamese refugees in England and Wales: a follow-up study. *Internat J Epidemiol* 1991; 20:13-10.
20. Harris KM. The health status and risk behaviors of adolescents in immigrant families. In: Hernandez DJ, ed. *Children of immigrants*. Washington, DC: National Academy Press, 1999:286-315.

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21. Chinese American Medical Society (CAMS). *Cancers in Asian-Americans and Pacific Islanders: migrant studies*. Chinese American Medical Society; 1999.
22. Hernandez DJ. Children of immigrants: health, adjustment and public finance. In: Hernandez DJ, ed. *Children of immigrants*. Washington, DC: National Academy Press; 1999:1-17.
23. LaVeist T. Race, Ethnicity, and health: a public health Reader. New York: Jossey-Bass; 2002.
24. Rumbaut R. Paradoxes of assimilation. *Sociological Perspectives* 1997; 40(3):483-511.
25. Peak C, Weeks J. Does community context influence reproductive outcomes of Mexican-origin women in San Diego, California? *J Immigrant Health* 2002; 4:3.
26. Hernandez DaEC. *From generation to generation: the health and well-being of children in immigrant families*. Washington, DC: National Academy Press; 1998.
27. Institute of Medicine BoHSPH: unequal treatment: confronting racial and ethnic disparities in health care. Washington, DC: National Academy Press; 2002.
28. Finch BK, Vega WA. Acculturation stress, social support, and self-rated health among Latinos in California. *J Immigrant Health* 2003; 5(3):109-117.
29. Centers for Disease Control and Prevention. Tuberculosis morbidity among US-born and foreign-born populations: United States, 2000. *MMWR* 2002; 51(5):101-110.
30. Noh S, Kaspar V. *Diversity and immigrant health*. Toronto: University of Toronto; 2003.
31. Hunt LM, Schneider S, Comer B. Should 'acculturation' be a variable in health research? A critical review of research on US Hispanics. *Social Sci Med* 2004; 59:973-986.
32. Martin P, Midgley E. Immigration: shaping and reshaping America. *Population Bulletin* 2003; 58(2).
33. Kaiser Commission on Medicaid and the Uninsured: *Immigrants' Health Care Coverage and Access*. Kaiser Foundation; 2003.
34. Myers D, Baer W, Choi S-Y. The changing problem of overcrowded housing. *J Amer Planning Assoc* 1996; 62(Winter):66-84.
35. McLean DE, Bowen S, Drezner K, et al. Asthma among homeless children. *Arch Pediatr Adolesc Med* 2004; 158:244-249.
36. Evans GW, Wells NM, Moch A. Housing and mental health: a review of the evidence and a methodological and conceptual critique. *J Social Issues* 2003; 59(3):475.
37. Magaña CG, Hovey JD. Psychosocial stressors associated with Mexican migrant farmworkers in the Midwest United States. *J Immigrant Health* 2003; 5(2):75-86.
38. Vergara AE, Miller JM, Martin DR, et al. A survey of refugee health assessments in the United States. *J Immigrant Health* 2003; 5(2):67-73.
39. Lynn A. *Many new immigrants to the US change diets - and not for the better*. Urbana-Champaign: News Bureau University of Illinois; 2006.
40. Li FP. *Cancers in Asian Americans and Pacific Islanders: migrant studies*. Asian American Pacific Island Journal of Health 1998; 6(2):123-129.
41. Mazur RE, Marquis GS, Jensen HH. Diet and food insufficiency among Hispanic youths: acculturation and socioeconomic factors in the third national health and nutrition examination survey. *Am J Clin Nutrition* 2003; 78(6):1120-1127.
42. Fishman A, Pearson K, Reicks K. Gathering food and nutrition information from migrant farmworker children through in-depth interviews. *J Extension* 1999; 33:5.
43. Gfroerer JC, Tan LL. Substance use among foreign-born youths in the United States: does the length of residence matter? *Am J Public Health* 2003; 93(11):1892-1895.
44. Riedel RL. *Access to health care*. In: Loue S, ed. *Handbook of immigrant health*. New York: Plenum Press; 1998: 101-124.
45. Tumlin KC, Zimmerman W, Ost J. State snapshots of public benefits for immigrants: a supplemental report to patchwork policies. Washington, DC: The Urban Institute; 1999.
46. Fix M, Passel JS. *The scope and impact of welfare reform's immigrant provisions*. Washington, DC: The Urban Institute; 2002.
47. Van Hook J. Poverty grows among children of immigrants in US. *Migration Information Source* 2003(12-1-03). On-line journal.
48. Capps R, Ku LK, Fix M, et al. *How are immigrants faring after welfare reform?* Washington, DC: The Urban Institute; 2002.
49. Bernstien N. Recourse grows slim for immigrants who fall ill. *The New York Times*, March 3, 2006.
50. Finch BK, Frank R, Vega WA. Acculturation and acculturation stress: a social-epidemiological approach to Mexican migrant farmworkers' health (1). *International Migration Review* UR. Available: [http://infotrac.galegroup.com/itw/infomark/869/607/79201616w5?url=rc1\\_ITOF\\_0\\_A123580532&dyn=4!ar\\_fmt?sw\\_aep=mnaumcl](http://infotrac.galegroup.com/itw/infomark/869/607/79201616w5?url=rc1_ITOF_0_A123580532&dyn=4!ar_fmt?sw_aep=mnaumcl) 2004; 38(1): 236
51. Rank MR. *One nation, underprivileged: why American poverty affects us all*. New York: Oxford University Press; 2004.