Does Being an Immigrant Make a Difference in Seeking Physician Services?

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Abstract: The current study investigated the effects of immigration status, acculturation, and health beliefs on the use of preventive and non-preventive visits, through use of a nationally representative sample of U.S.-born and foreign-born adults. U.S.-born adults were found to have significantly more preventive and non-preventive visits than immigrants. The effects on predicting preventive visits of education, having a usual source of care, and having other public insurance were stronger among immigrants than among the U.S.-born. Health confidence and believing in the need for health insurance significantly predicted the numbers of both preventive and non-preventive visits among the U.S.-born but correlated little with either type of visit among immigrants. Among immigrant adults, acculturation affected only the number of preventive visits. The lower utilization of both preventive and non-preventive care among immigrants may be associated with a combination of better health and more limited enabling resources.

Key words: Disparities, immigrants' health, physician visits, preventive services.

Immigration is at the forefront of political debates because of its impact on virtually every industry, including health care. As the demographic makeup of the U.S. changes because of immigration, additional research is warranted to understand the patterns and predictors of medical care visits among immigrants, or those people who are not U.S. citizens at birth. According to 2000 Census estimates, about 11% of the total U.S. population is foreign-born.[1]

A limited amount of evidence suggests that immigrants use health services less frequently than their U.S.-born counterparts. Using the 1998 and 2001 National Health Interview Survey (NHIS), researchers found that foreign-born elderly people were more likely than U.S.-born elderly people to be unvaccinated against pneumococcal infection.[2] Other research has shown that immigrants are less likely than U.S.-born people to seek cancer screening.[3] Likely limiting health services utilization, health insurance coverage is less common among the foreign-born. Prior research indicates that immigrant children have a higher uninsurance rate and worse access to both regular and emergency care than U.S.-born children.[4] Similarly, foreign-born elderly are less likely

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than U.S.-born elderly to have insurance.[5] Finally, *per capita* health care expenditures are 55% lower among the foreign-born than among the U.S.-born.[6]

Additional research is needed to elucidate differences in medical care utilization and the correlates of utilization among the foreign and U.S.-born. Immigrants may hold culturally-specific health beliefs and attitudes about Western medicine that influence their use of services. For example, an earlier study found that foreign-born Latinas were more likely than their U.S.-born counterparts to believe that certain behaviors, including early initiation of sexual intercourse and having sex during menstruation, were risk factors for cervical cancer.[7] These beliefs were associated with lower likelihood of receiving a Pap smear.

To better understand differences in medical care seeking between U.S.-born people and immigrants, the research team for this study investigated their use of preventive and non-preventive care. Specific objectives of the current study were:

1) to establish whether there are differences in preventive and non-preventive visits between U.S.-born and immigrant adults in 2002;
2) to demonstrate whether the factors that contribute to preventive and non-preventive visits differ between U.S.-born and immigrant adults;
3) to estimate the effects of acculturation, measured as length of stay in the U.S. and English proficiency, on preventive and non-preventive visits; and
4) to identify whether the magnitude of the impact of health beliefs on preventive and non-preventive visits differs between U.S.-born and immigrant adults.

Methods

Data. The data source was the 2002 Medical Expenditure Panel Survey (MEPS), a nationally representative survey of the civilian non-institutionalized U.S. population (response rate = 64.7%) conducted by the Agency for Healthcare Research and Quality (AHRQ).[8] The MEPS sampling frame was drawn from respondents to the NHIS, with African Americans and Hispanics oversampled. Two components of the MEPS, the household and office-based provider visits files, were used. The household component contains detailed information on sociodemographic characteristics, health, access to care, health care utilization and expenditures, health insurance, and satisfaction with care at both the person and the household levels. Person-level data were used in the current study. The total sample size for MEPS 2002 is 39,165. Adults 18 years of age or older were included in the current study (N=27,744).

Key variables. The dependent variables, the numbers of preventive and non-preventive visits, were derived from the MEPS Office-Based Provider Visits file. To ensure homogeneity of the visits, only visits during which the patient saw a physician were included. To distinguish preventive from non-preventive visits, a variable designating the primary reason for a visit was used. If the primary reason for a visit was a general checkup, immunizations or shots, or a vision exam, the visit was designated as preventive. All other primary reasons, such as diagnosis, treatment, and emergency, were classified as non-preventive.

The behavioral variables of main interest were acculturation and health beliefs.

Acculturation among immigrant adults was found to be reflected by length of stay in the U.S. and English proficiency;[9–11] these variables were used as proxy for acculturation. Length of stay in the U.S. was dichotomized into fewer than 10 years versus 10 or more. English proficiency was dichotomized as the subject being comfortable speaking English (*yes* or *no*). Two binary variables were used to assess subjects' beliefs regarding the need for health insurance and health confidence. *Health insurance dis-utility* was measured by asking individuals if they agreed or disagreed that they did not need health insurance. *Health confidence* was measured by asking individuals if they could overcome illness without medical help. Reponses to each variable were dichotomized into *agree* and *disagree or neutral.*

Other independent variables were selected based on previous studies of medical care utilization and Andersen's widely used behavioral model.[12] Sociodemographic characteristics were age, gender, race, Hispanic ethnicity, Metropolitan Statistical Area (MSA) designation, education, and income. Because less than 5% of subjects of Hispanic ethnicity were non-White, the current study did not consider the interaction of race and ethnicity. The detailed categories for each variable can be found in Table 1. Two important enabling factors, insurance and whether a subject had a usual source of care, were also included. Four binary variables (0 and 1) were created for insurance status: private, Medicare, Medicaid, and other public. If all four insurance variables had the value of 0, the subject was uninsured. Short-Form (SF-12) scores were used to describe a subject's physical and mental health status.[13] In addition, chronic conditions, such as cancer and diabetes, were obtained from the MEPS Medical Condition File and included in the analysis. The conditions are listed in Table 1.

Analyses. First, bivariate analyses were performed to compare the numbers of preventive and non-preventive visits, respectively, between U.S.-born and immigrant adults. In addition, subject characteristics were compared between U.S.-born and immigrant adults. Because bivariate analyses can provide only the raw differences, multivariate analyses were conducted to identify the independent effects of the predictors of the number of visits.

Four negative binomial regressions were performed for the numbers of preventive and non-preventive visits, respectively, by nativity. The negative binomial model is appropriate for count data, such as the number of visits, with a large dispersion and a large proportion of zeroes.[14] To understand fully how each predictor independently affected preventive and non-preventive visits differently for U.S.-born and immigrant adults, the research team compared the parameter estimates for the independent variables between the U.S.-born and immigrant samples in the regressions of preventive and non-preventive visits. To provide nationally representative estimates, the complex sampling design of the MEPS was taken into consideration in all the analyses using the primary sampling units, strata, and person weights. The statistical software STATA® (StataCorp, College Station, TX) was used to conduct analyses.

Results

In the MEPS 2002, about 15% of U.S. adults were foreign-born. U.S.-born adults were found to have significantly more preventive (1.19 vs. 0.86) and non-preventive visits

Table 1.

DESCRIPTIVE STATISTICS: U.S. ADULTS 18 YEARS AND OLDER, 2002 (N=27,744)[a]

	Immigrants (14.94%)	U.S. born (85.06%)	*p* value
Average # of preventive visits	.86	1.19	<.01
Average # of non-preventive visits	1.91	2.74	<.01
Average age (in years)	43.10	45.83	<.01
Male	49.23	47.86	<.01
Female	50.77	52.14	.10
Race			
White	68.09	84.89	<.01
Black	6.49	12.13	<.01
American Indian/ Alaska Native	.45	.88	.03
Asian	23.18	.79	<.01
Native Hawaiian/ Pacific Islander	1.00	.15	<.01
Multiple Races	.79	1.15	.08
Non-Hispanic	53.77	93.81	<.01
Hispanic	46.23	6.19	<.01
Non-MSA	5.61	21.07	<.01
MSA	94.39	78.93	<.01
Education			
<High school	36.64	16.35	<.01
High school	33.38	52.89	<.01
College +	30.00	30.77	.48
Income			
<$10K	30.78	25.07	<.01
$10–20K	22.30	20.06	.02
$20–50K	32.74	37.13	<.01
$50K+	14.19	17.74	<.01
Insurance			
Private	58.03	74.93	<.01
Medicare	12.96	20.82	<.01
Medicaid	11.50	8.35	<.01
Other public	1.12	1.61	.06
No usual source of care	36.11	19.82	<.01
Have usual source of care	63.89	80.18	<.01
Comfortable speaking English	71.96	99.80	<.01
Uncomfortable speaking English	28.04	.20	<.01
Years of stay in the U.S.: ≥10 yrs	72.34	—	—
Years of stay in the U.S.: <10 yrs	27.66	—	—

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Table 1 (continued).

	Immigrants (14.94%)	U.S. born (85.06%)	*p* value
Health insurance disutility (agree)	12.03	8.51	<.01
Health insurance disutility (disagree or neutral)	87.97	91.49	<.01
Health confidence (agree)	17.17	22.30	<.01
Health confidence (disagree or neutral)	82.83	77.70	<.01
SF-12: physical	45.61	45.47	.73
SF-12: mental	46.83	47.47	.11
Cancer	3.07	6.06	<.01
Diabetes	6.05	6.77	.11
Emphysema	1.61	5.23	<.01
High cholesterol	6.25	10.58	<.01
HIV/AIDS	.10	.13	.65
Hypertension	13.16	18.99	<.01
Ischemic heart disease	1.33	2.78	<.01
Stroke	.65	1.24	<.01
Arthritis	6.11	10.42	<.01
Asthma	2.05	4.84	<.01
Gallbladder disease	.72	.94	.27
Stomach ulcer	2.21	5.86	<.01
Back problem	10.10	13.02	<.01
Alzheimer's disease	.53	.77	.11
Depression	8.10	15.96	<.01
Other conditions	35.76	33.27	<.01

[a]Nationally representative estimates are shown. Except for average numbers of visits, age, and SF-12 scores, all numbers are percentages.

(2.74 vs. 1.91) than immigrant adults. Table 1 reports descriptive statistics for the sample. Compared with the U.S.-born, immigrants on average were significantly younger, more likely to be male, more likely to reside in MSAs, and less educated. About 23% of immigrant adults were Asians and 46% were Hispanics. In contrast, only 0.79% of U.S.-born adults were Asians and 6.19% were Hispanics. In addition, in comparison with the U.S.-born, immigrant adults had significantly lower incomes, were less likely to have insurance, were more likely to have Medicaid if they had insurance, and were less likely to have a usual source of care.

Approximately 28% of immigrant adults were uncomfortable speaking English and about three quarters had been in the U.S. for 10 years or longer. A significantly higher proportion of immigrants than U.S.-born believed that they did not need health insurance (12.03% vs. 8.51%). However, a significantly greater proportion of U.S.-born

people than of immigrants believed that they could overcome illness without medical help (22.30% vs. 17.17%). No statistically significant differences were found in physical and mental component scores of the SF-12. For specific chronic conditions, no significant differences in prevalence were found for diabetes, HIV/AIDS, stomach ulcer, or Alzheimer's disease. However, for the other 11 chronic conditions, the U.S.-born had significantly higher prevalence rates.

Table 2 reports the multivariate analysis results. For all four regressions, the overdispersion parameter was significantly different from 0 ($p<.01$) using the likelihood ratio test, indicating the appropriateness of using the negative binomial model instead of a Poisson model. In predicting the number of preventive visits, age, gender, education,

Table 2.

RESULTS FROM MULTIVARIATE ANALYSES[a]

	Number of preventive visits		Number of non-preventive visits	
	Immigrants	**U.S. born**	**Immigrants**	**U.S. born**
Age	**.016**	**.018**	.005	.000
Male	—	—	—	—
Female	**.461**	**.420**	**.359**	**.350**
Race				
White	—	—	—	—
Black	−.035	−.043	−.249	**−.270**
American Indian/ Alaska Native	−.059	.016	−.904	−.079
Asian	−.022	−.032	−.239	.136
Native Hawaiian/ Pacific Islander	**−.874**	.007	−.463	.404
Multiple races	.181	−.138	.245	.007
Non-Hispanic	—	—	—	—
Hispanic	−.126	−.073	.004	−.094
Non-MSA	—	—	—	—
MSA	.096	.026	−.050	**.129**
Education				
<High school	—	—	—	—
High school	**.366**	.020	.113	.054
College +	**.400**	**.155**	**.255**	**.235**
Income				
<$10K	—	—	—	—
$10–20K	**−.341**	−.079	**−.222**	−.088
$20–50K	−.052	−.045	−.140	.066
$50K+	−.252	.059	−.068	**.106**

(Continued on p. 386)

Table 2 (continued).

	Number of preventive visits		Number of non-preventive visits	
	Immigrants	**U.S. born**	**Immigrants**	**U.S. born**
Insurance				
Private	**.335**	**.264**	**.356**	**.317**
Medicare	**.411**	**.310**	**.313**	**.242**
Medicaid	**.491**	**.319**	**.413**	**.488**
Other public	.067	**.266**	**.509**	.204
No usual source of care	—	—	—	—
Have usual source of care	**1.095**	**.769**	**.725**	**.547**
Comfortable speaking English	—	—	—	—
Uncomfortable speaking English	−.051	−.425	−.046	**−.424**
Years of stay in the U.S.: ≥10 yrs	—	—	—	—
Years of stay in the U.S.: <10 yrs	**−.240**		−.048	
Health insurance disutility (agree)	−.101	**−.215**	**−.397**	**−.215**
Health insurance disutility (disagree or neutral)	—	—	—	—
Health confidence (agree)	−.110	**−.185**	−.121	**−.207**
Health confidence (disagree or neutral)	—	—	—	—
SF-12: physical	**−.017**	**−.013**	**−.036**	**−.030**
SF-12: mental	−.001	−.002	**−.011**	**−.010**
Cancer	**.556**	**.417**	**1.395**	**.823**
Diabetes	**.536**	**.414**	**.820**	**.278**
Emphysema	**.643**	.093	**.885**	**.453**
High cholesterol	**.434**	**.227**	**.389**	**.094**
HIV/AIDS	.612	**.910**	.336	**.913**
Hypertension	**.352**	**.275**	**.605**	**.369**
Ischemic heart disease	.109	**.146**	.443	**.208**
Stroke	**−.515**	**.228**	−.380	.175
Arthritis	.225	**.144**	**.359**	**.198**
Asthma	−.005	**.307**	**.473**	**.254**
Gallbladder disease	−.236	.148	**1.115**	**.680**
Stomach ulcer	.126	**.167**	**.718**	**.333**
Back problem	**.395**	.033	**1.359**	**.485**
Alzheimer's disease	**−.698**	.048	.195	**−.369**
Depression	**.315**	**.136**	**.855**	**.640**
Other conditions	**.410**	**.124**	**1.310**	**.500**

[a]Results from the multivariate negative binomial regression. The dependent variables were the numbers of preventive and non-preventive visits. Nationally representative estimates are provided. Bold fonts indicate statistical significance at $\alpha = .05$.

insurance status, having a usual source of care, and the SF-12 physical component score were significant for both U.S.-born and immigrant adults. More specifically, being older, being female, having college or higher degrees, having insurance, having a usual source of care, and having worse physical health were associated with more preventive visits, controlling for other independent variables. However, in terms of their *magnitude*, education and having a usual source of care had significantly larger ($p<.05$) effects on the number of preventive visits among immigrant adults than among their U.S.-born counterparts. Significant among immigrants but not the U.S.-born in predicting fewer preventive visits were being a Pacific Islander and having an annual personal income level of $10,000–20,000. Additionally, being in the U.S. for less than 10 years predicted fewer preventive visits among immigrants. Having other public insurance (e.g., state programs) was significantly associated with more preventive visits only among the U.S.-born. Health beliefs (i.e., health insurance dis-utility and health confidence, defined above) did not predict preventive visits among immigrant adults. In contrast, among the U.S.-born, health beliefs were associated with fewer preventive visits.

For non-preventive visits, the common significant predictors of more visits for both foreign-born and U.S.-born adults were being female, having college or higher degrees, having insurance, having a usual source of care, and having worse overall physical and mental component scores. Similar to the effect in predicting preventive visits among immigrants but not among the U.S.-born, an annual personal income level of $10,000–20,000 was associated with fewer non-preventive visits. Additionally, having other public insurance was associated with more non-preventive visits only among immigrants.

Factors that were significant in predicting non-preventive visits among the U.S.-born but not immigrants were being Black (fewer visits), residing in MSAs (more visits), and annual personal income greater than $50,000 (more visits). Interestingly, English proficiency was significant in predicting more non-preventive visits among the U.S.-born but not among immigrants. Length of stay in the U.S. among immigrants was not found to be a significant predictor of non-preventive visits. Among both U.S.-born adults and their immigrant counterparts, health insurance dis-utility was significantly associated with fewer non-preventive visits; health confidence was significantly associated with fewer non-preventive visits only among the U.S.-born.

Discussion

As discussed in the introduction, previous research suggests that immigrants use less medical care than the U.S.-born. To characterize more clearly the patterns of physician visits among foreign and U.S.-born adults, the current study distinguished preventive and non-preventive care.

The effects of education, having a usual source of care and having other public insurance in predicting preventive visits were stronger among the foreign-born than the U.S.-born. It is interesting to note that an annual personal income of $10,000–20,000 among immigrants predicted fewer preventive and non-preventive visits, whereas this was not found among the U.S.-born. One possible explanation for this finding is that U.S.-born individuals with lower incomes may possess more additional financial

resources, such as personal or family savings, than their immigrant counterparts, which enable them to utilize health services despite low incomes. A second explanation is that poorer U.S.-born persons have access to publicly-funded health services to which immigrants lack access or which they opt not to use.

One key finding was that the effect of health beliefs appeared to differ for the U.S.-born and immigrants. Health insurance dis-utility and health confidence significantly reduced the number of both preventive and non-preventive visits among the U.S.-born but had little effect among immigrants. English proficiency was not found to be significant in predicting preventive or non-preventive visits among immigrants. Previous studies have demonstrated that English proficiency is a significant predictor of patients' better knowledge and understanding of medical conditions,[15 17] insurance coverage,[18] proper medication dosing,[19] utilization of mammograms,[20] and a shorter length of hospital stay.[21] On the other hand, studies have also found that if interpreter services are utilized, patients with little English proficiency are more likely be inquisitive about their care[22] and tend to use more preventive services than when the services were not provided.[23] It is possible that the non-significant finding from the current study regarding the effect of English proficiency is due to the lack of control concerning whether interpreter services were provided.

Among the mutable factors that could change individuals' care-seeking behavior, insurance and usual source of care greatly contribute to immigrants' propensity to seek preventive and non-preventive care.[12] Although federal policy provides emergency Medicaid services to immigrants, this policy seems inadequate to address immigrants' ambulatory care needs.[4] Furthermore, others have argued that the 1996 welfare reform legislation further limited immigrants' health benefits in the U.S. and contributed to underutilization among the foreign-born.[6] If access to non-preventive care is restricted among immigrants, it is reasonable to postulate that this need-service gap is even bigger for more discretionary preventive care. Because proper utilization of preventive services can lead to future lowered utilization and expenditures for non-preventive services, and because about three quarters of immigrants have stayed in the U.S. for more than 10 years, it seems efficient and beneficial to prioritize the provision of preventive care to immigrants in public funding of medical care.

There are several limitations to the current study. First, some visits may include both preventive and non-preventive care. The current study used only the main reason for a visit as the classifying variable for visits. Second, the MEPS does not have data to establish citizenship or permanent resident status. Some immigrant adults may have entered the U.S. when they were children. Although the current study classified them as immigrants, we would expect that their behavior would be very similar to that of U.S.-born adults. Third, acculturation is a multidimensional concept. The current study used only length of stay in the U.S. and English proficiency as proxies. Fourth, cultural differences among immigrants from different places of origin were not captured by the current study due to small sample sizes. Lastly, some preventive visits may have occurred at sites outside office-based physicians' clinics, such as community health centers.

The lower utilization of preventive and non-preventive care among immigrant adults than among their U.S.-born counterparts has two key policy implications. First,

immigrant adults' access to and utilization of medical care are more limited than those of the U.S.-born. Because a significant proportion of immigrants belong to racial and ethnic minority groups, the differences between the U.S.-born and immigrant people may contribute substantially to health care disparities observed in the U.S. Second, the majority of immigrants studied had stayed in the U.S. for longer than 10 years. If these individuals are eventually naturalized, providing them adequate preventive care now may reduce their future utilization of non-preventive care.

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