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Puerto Ricans' Access to Health Care

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The shift toward cost containment in health policy over the past decade has had negative consequences for the most vulnerable populations in the country, namely, ethnic minorities, the poor, and the uninsured. The Puerto Rican population is significantly affected by this shift, yet little is known of their health care usage. This study investigates the extent to which Puerto Ricans' health care use is determined by the relationship between predisposing variables, enabling variables, need, and other contextual variables and probes the implications of the findings for health policy. The adult Puerto Rican subsample (n = 1598) of the Hispanic Health and Nutrition Examination Survey conducted by the National Center for Health Statistics between 1982 and 1984 is analyzed. The regression results show that gender, language, health insurance, regular source of care, and health status are significant predictors of the dependent variable, Puerto Ricans' last visit to a health care provider.

For Latinos, lack of access to health care is a critical problem that appears to have been greatly exacerbated during the past decade.[1] Shifts in health policy led to a number of trends in health care nationally that have had negative consequences for the most vulnerable populations in the United States. Key developments include a greater use of coinsurance and deductibles in private health insurance plans, increased out-of-pocket medical care costs, more widespread utilization of hospital preadmission screenings, an increase in ambulatory surgery, and the rapid growth of emergency care centers.

This article examines the determinants of Puerto Ricans' access to health care in the United States based on the conceptual framework developed by Aday and Andersen.[2] While much research has been conducted on the ability of the general population and Mexican-Americans in the Southwest to procure and use health care services,[3] there is a dearth of such information about Puerto Ricans. Multiple explanations have been offered for this scarcity. When researchers include more than one Latino group, they tend to subsume all of them into one monolithic class,[4] which overlooks important geographic, socioeconomic, and cultural differences among various Latino subgroups. Furthermore, this precludes the analysis of differential use of and barriers to health services utilization among them as well as its concomitant impact on the communities these groups represent.

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— Ralph Rivera

Clearly, the need to understand the health care patterns of Puerto Rican usage is crucial. Puerto Ricans have been found to be in poorer health compared with other Latino subgroups.[5] While a large percentage of this population is poor and has a low educational level,[6] relatively little is known about their use of health care services and the barriers they face in obtaining it. Given these characteristics, Puerto Ricans may be the population most adversely affected by inequities in these areas.

Most of the limited number of studies on Puerto Ricans and health care use small, often nonprobability samples that seriously undermine generalizations and meaningful comparisons.[7] Still other research that includes Puerto Ricans is based on surveys not specifically developed for this population.[8] Here again, Puerto Ricans represent a minor percentage because the samples include numbers of ethnic groups in proportion to their representation in the general population and the sample Puerto Rican population itself tends to be small. While these studies have made important contributions in terms of descriptive information and statistics, they do not provide answers to more complex questions that can be investigated through use of a multivariate model.

There have been many conceptual and empirical attempts in the past thirty years to develop models and frameworks of health care utilization. The general objective of the models has been to "provide some order to and understanding of the discrete and sometimes bewildering patterns and trends observed in such use."[9] However, efforts to address the unique health care–seeking habits of Latinos in general, and Puerto Ricans in particular, have been hampered by inadequate and inappropriate theoretical models. For example, the folk medicine model has, perhaps for too long, focused attention on Latinos' use of herbal remedies, curanderos, and spiritualists even when some empirical evidence suggests it is a relatively minor element of Latino and Puerto Rican health practices. While the social desirability factor must certainly be taken into consideration when Latinos are participating in research, the Hispanic Health and Nutrition Examination Survey found that only 2.4 percent of all Latinos and 1.3 percent of Puerto Ricans reported consulting folk healers.[10] According to Hayes-Bautista, the "cultural deficit" model has also been improperly applied to Latinos. He states that "this model has focused on attempts to create a dichotomy between Anglo culture and Latino culture... totally ignoring the tremendous vitality, heterogeneity, and dynamism of the various Latino subpopulation cultures."[11] Another inappropriate conceptualization treats the Latino population as if it were virtually identical with the black population, ignoring two critical facts: Latinos are racially mixed, and nearly half the Latino population are immigrants or, in the case of Puerto Ricans, migrants. Even those models which recognize these realities are often based on the experiences of European immigrant groups, failing to acknowledge that migration from Puerto Rico and immigration from Mexico and the rest of Latin America are structurally different.[12]

Policies and programs in the health field contain implicit assumptions about people, their needs, and their behaviors. Emerging demographic data suggest that the Latino population must be treated as sui generis, reflecting immense heterogeneity in terms of national origin, socioeconomic status, and education, and the rapid shift from a rural to a predominately urban population. Furthermore, appropriate theoretical models of Latino health care use would have to address both the macro level — society and community — and the micro level — individual and family. Since such integrated research models of the Latino population and subpopulations have yet to be developed, I employ the well-known Aday and Andersen framework to examine Puerto Rican health care behavior.

Theoretical Model

The most widely used health systems model, developed by Ronald Andersen in 1968, is known as the behavioral model of health services utilization. The original model focused on the individual determinants of health care usage and has been empirically assessed in a number of studies with considerable success.[13] The model was expanded, first by Andersen and Newman,[14] then by Aday and Andersen,[15] who incorporated suggestions that emerged from the extensive application of the model. Because it encompasses numerous variables at differing levels of analysis and provides both a conceptual and a methodological framework for the study of health care, the Aday and Andersen model has the potential to shed light on the health care–seeking behavior of Puerto Ricans.

In this conceptual framework, health care use is explained as a function of the characteristics of the population and contextual factors, including characteristics of the delivery system and consumer satisfaction. Characteristics of the population can be classified into three components: predisposing, enabling, and need. Predisposing variables, which allude to an individual's propensity to seek services, are characteristics that exist prior to the incidence of a specific illness episode, such as age, gender, and marital status. Enabling factors, such as income, health insurance, and type of regular source of care, allow individuals to address a health care need. The need component proposes that health care use is directly related to an individual's health status. Contextual factors of the framework include characteristics of the health delivery system such as "entry" (factors that either facilitate or hinder entrance to the medical care system) and "structure" (how a patient is treated after entry). Consumer satisfaction, which refers to a patient's satisfaction with the medical care received, is the final determinant of health care utilization considered in the analysis.

Methodology

The data, compiled between 1982 and 1984 by the Hispanic Health and Nutrition Examination Survey (HHANES) conducted by the National Center for Health Statistics, covered the health and nutritional status of three Latino groups: Mexican-Americans in five southwestern states, Puerto Ricans in the metropolitan New York area, including parts of Connecticut and New Jersey, and Cuban Americans in Dade County, Florida.[16] Detailed descriptions of the HHANES's complex multistage cluster sampling design have been published elsewhere.[17] My analysis, focused on the Puerto Rican sample (n = 1,598), includes subjects between the ages of eighteen and seventy-four. The first sample included approximately 59 percent of the U.S. Puerto Rican population reported in the 1980 census and about 90 percent of the Puerto Rican population in the Greater New York area. Therefore it was possible to make direct statistical inferences for the latter group.[18]

The HHANES measured the dependent variable, health care utilization, as the recency of a last visit to a clinic, health center, doctor's office, or other health care facility. It covered the time spans of (1) less than one month; (2) one month to less than six months; (3) six months to less than one year; (4) one year to less than five years; (5) five or more years; (6) never.

The *predisposing variables* included the sociodemographic variables age, gender, and marital status. Language, also considered a predisposing variable, was measured by two

options, language spoken and language preferred. These were coded as (1) Spanish only; (2) mostly Spanish, some English; (3) Spanish and English about equally; (4) mostly English, some Spanish; and (5) English only. I constructed a language score by averaging the two language items.

The *enabling variables* included annual family income, regular source of care, and health insurance coverage. Having an established source, as well as type of provider, has proved to be a critical variable in health care–seeking behavior.[19] It was measured by a score that combined these two items. The first asked participants whether there is a particular clinic, health center, doctor's office, or other place they usually go to if sick or in need of advice about their health. Those who answered yes to this item were asked which type they frequented. If these people reported that their usual place of care is a doctor's office, a private clinic, an HMO, or a prepaid group, they receive a score of 4 on this variable. If they reported that their source is a community, neighborhood, family health center, or hospital outpatient clinic, they were assigned a score of 3 on the variable. If they reported as their regular source a hospital emergency room, a migrant, company, or school clinic, or any other clinic or other place of care, they were scored 2. Finally, all participants who reported that they did not have a usual place of care received a score of 1. Health insurance coverage included any private health plan that paid any part of a hospital, doctor's, or surgeon's bill (yes = 0; no = 1).

The *need variable*, health status, was measured by the participants' subjective perception of their health, namely, (1) excellent; (2) very good; (3) good; (4) fair; and (5) poor. Other contextual factors included in the analysis were organizational barriers measured by responses to questions as to whether the respondents encountered difficulty in accessing medical care because of any of the following: (1) cost; (2) provider did not speak Spanish; (3) inconvenient hours; (4) long wait for an appointment; or (5) long wait to be seen in an office or clinic (yes = 0; no = 1). Finally, consumer satisfaction with care was measured by asking respondents their degree of satisfaction with the care they had received at their last visit: (1) very satisfied; (2) somewhat satisfied; and (3) not at all satisfied.

Using sample weights, I computed frequencies for all the variables in the framework for the Puerto Rican sample. I used regression analyses to investigate the contributions of the predisposing, enabling, need, contextual, and satisfaction with care variables to health care utilization. Because the HHANES sampling design is complex, I chose for my analyses the *Standard Errors of Regressions Coefficients from Sample Survey Data*,[20] whose sample weights produce correct population estimates. Moreover, it takes the HHANES design into account and adjusts the variances accordingly.

Table 1 shows the distribution of the predisposing variables (gender, marital status, age, and language) and enabling variables (annual family income, regular source of care, and health insurance) among the sample. Table 2 shows the percentage distribution for the need, contextual (organizational barriers), satisfaction with care, and dependent variables (health care utilization).

Predisposing Characteristics

Puerto Ricans in the sample, a young overall population with a high percentage of women, have a number of predisposing characteristics that affect their utilization of health care services. Schur and colleagues found that Puerto Rican adults aged 55–64 were more apt than those aged 19–54 and the over-65 group to seek care, and that women were more disposed than men to seeing a physician.[21]

Table 1

Predisposing and Enabling Variables

Predisposing Variables	Percentage
Gender	
Men	39.3
Women	60.7
Marital Status	
Married	48.2
Widowed/divorced/separated	25.1
Never married	26.6
Age	
18–30	34.3
31–40	19.3
41–50	19.1
51–74	27.3
Language	
Spanish only	17.7
Mostly Spanish, some English	26.9
Spanish, English equally	38.9
Mostly English, some Spanish	13.7
English only	2.7
Enabling Variables	
Annual Family Income	
Less than $10,000	44.6
$10,000–$19,999	31.5
$20,000–$29,999	11.1
$30,000 or more	12.9
Regular Source of Care	
Doctor's office, private clinic, HMO, or PPG	45.8
Community, neighborhood, or family health center or hospital outpatient	30.0
Hospital emergency room, migrant, company, or school clinic, or any other facility	3.6
No regular source of care	20.6
Health Insurance	
Yes	48.1
No	51.9

Other sample characteristics reveal potential barriers to utilization. A substantial literature devoted to language as a major barrier to access and suitable health services for Latinos,[22] has found that it is associated with lower health care usage for those who only speak Spanish,[23] which is indeed the dominant language for most of the participants. Almost 45 percent reported their language as "Spanish only" or "mostly Spanish, some English."

Table 2

Need, Contextual, and Dependent Variables

Need Variable	Percentage
Health Status	
Excellent	13.9
Very good	16.8
Good	32.1
Fair	29.6
Poor	7.6
Contextual Variables	
Organizational Barriers	
Yes	34.0
No	66.0
Satisfaction with Care	
Very satisfied	75.5
Somewhat satisfied	16.3
Not at all satisfied	8.2
Dependent Variable	
Last Health Care Visit	
Less than one month	26.4
One month to less than six months	30.2
Six months to less than one year	17.9
One year to less than five years	20.8
Five or more years	4.4
Never	0.3

Enabling Characteristics

The sample's ability to obtain health services is affected by a number of enabling characteristics as well. Empirical evidence shows that the poor tend to make fewer health care visits than the affluent despite their generally worse health and greater likelihood of chronic or serious illness.[24] Almost 45 percent of the respondents report an annual family income of $10,000 or less, which is expected to hinder their health care use. Having a regular source of care proves to be a good predictor of health care use,[25] and more than 45 percent of the sample reported that they visited a doctor's office, private clinic, HMO, or prepaid group (score of 4). Moreover, while various studies have found that Puerto Ricans overutilize hospital emergency rooms,[26] which for many are a principal point of entry to the medical system,[27] relatively few in this sample assert that they regularly visit emergency rooms. Less than 4 percent stated that they use either a hospital emergency room, migrant, company, or school clinic, or any other facility (score of 2) to obtain regular care.

Lack of health insurance has been found to reduce an individual's access to health care. According to one study, Puerto Ricans with such coverage were 50 percent more likely than their uninsured counterparts to consult a physician.[28] Forty-eight percent of the sample reported having private health insurance coverage.

Need

Medical need is a strong predictor of health care utilization, and the sample subjects were more apt to report their health as fair or poor (37%) than excellent or very good (30%). This suggests that a significant number of these people need health care services, so that this variable is expected to play a critical role in Puerto Ricans' use of medical services.

Contextual Variables: Organizational Barriers and Patient Satisfaction

Entry, in Aday and Andersen's framework, alludes to gaining entrance to the health care system and the organizational barriers that hinder access to it. Barriers that may adversely affect Puerto Ricans' entry and are therefore considered in the study are costs of care, availability of Spanish-speaking staff, inconvenient office hours, long wait for appointments, and long wait before being seen. (The distance of the health facility from home and availability of transportation is another consideration.) Puerto Ricans are more likely to incur medical expenses, yet less likely than other Latino subgroups to pay bills out of pocket, suggesting that cost of care is not a barrier for the subject group.[29] Various studies have documented the impact of the lack of Spanish-speaking personnel on Latino health care utilization.[30] Moreover, inconvenient office hours and long appointment and office waiting time tend to influence where people go for care, how often they go, and their degree of satisfaction with the care they eventually receive.[31] Dutton found that particular organizational barriers such as limited hours, long lead times for appointments, and long office waiting times are more prevalent in settings used primarily by the poor, and are therefore expected to influence Puerto Rican health care use.[32] More than one-third of the sample reported encountering an organizational barrier to health care.

Patient satisfaction with health care is often cited as a measure of the quality of medical care and a variable that may affect health care usage. Some research on this variable indicates that Latinos, of all racial/ethnic groups studied, are the most dissatisfied with the cost of medical care, appointment and office waiting time, and interaction with providers.[33] However, more than 75 percent of the participants reported that they were satisfied with the health care they had received.

Results

Table 3 presents the regression coefficients and standard errors for the health care utilization variable. In the table, the adjusted R^2 shows that the group of independent variables in the regression equation explain 16.3 percent of the total variance in "last health care visit." This percentage is comparable to that found in numerous other multivariate studies on health care utilization using large samples and powerful statistical techniques.[34] Therefore, the model has some value to the extent that it delineates interrelationships and the relative importance of the different potential determinants of Puerto Rican health care use.

As for the particular influences of the independent variables for the sample, Table 3 shows that the *predisposing variables*, gender (–.177; $p < .0007$) and language (.077; $p < .0001$) significantly predict levels of the dependent variable, as do the *enabling variables*, regular source of care (–.238; $p < .0001$) and health insurance (–.060; $p < .03$), and

Table 3

Regression Analyses of Predisposing, Enabling, Need, and Contextual Variables

Predisposing Variables	b[a]	SE[b]
Age	–.036	.003
Gender	–.177*	.069
Marital status	.041	.072
Language	.077*	.041
Enabling Variables		
Annual family income	–.0003	.005
Regular source of care	–.238*	.030
Health insurance	–.060**	.082
Need Variable		
Health status	–.144*	.033
Contextual Variables		
Barriers to care	.033	.074
Satisfaction with care	–.014	.056
Adjusted R^2	.163	
F	24.25	
P	<.001	

[a]Weighted regression coefficients.
[b]Adjusted standard errors.

*Significant at p <.001.
**Significant at p <.05.

the *need variable*, health status (–.144; p < .001). Annual family income is a poor predictor of health care use by Puerto Ricans and does not produce any perceptible effect on the dependent variable. In addition, age, marital status, organizational barriers, and satisfaction with care show no substantial influence on Puerto Rican health care use. In summary, for the subject population, the predisposing variables gender and language, the enabling variables regular source of care and health insurance, and the need variable health status are all associated with a relatively recent health care visit. Therefore, they are the most important determinants of Puerto Ricans' usage of health care.

Discussion

The regression analysis shows that gender and primary language significantly influence Puerto Rican health care utilization, but that age and marital status do not. Gender is the second strongest predictor of use in the model. Consistent with the literature,[35] the regression results indicate that Puerto Rican women tend to have visited a facility more recently than their male counterparts.

Furthermore, as Puerto Ricans' English language orientation increases, so does the recency of last health care visits. The fact that English-speaking Puerto Ricans tend to have been to a health facility more recently than their Spanish-speaking counterparts indicates that language is a barrier which hinders Puerto Ricans from obtaining health services. Given that the Puerto Rican community of New York City is more than one hundred years old and that there are more than 1.5 million Puerto Ricans in the Greater New York City area, this is a somewhat surprising finding, but it suggests that recent arrivals from the island may be contributing to lack of health care use.

The regression results show that status of health is another strong predictor of this group's health care usage. As Puerto Ricans' perceived status of health declines, their last visit to a health service is more recent. The regression results also indicate that Puerto Ricans' health care use does not vary significantly with annual family income. Surprisingly, it is a poor predictor of use and produces no perceptible effect on the dependent variable.

Moreover, the regression results reveal that health care utilization among Puerto Ricans does vary significantly with the presence and type of regular source of care. The regression shows that a regular source was the strongest predictor of health care use by Puerto Ricans. As their regular source score increases, so does their usage of health services. Therefore, Puerto Ricans whose usual source of care is a doctor's office, private clinic, HMO, or prepaid group (a score of 4) show more recent visits for health services.

Finally, the regression shows that health insurance is significantly associated with last health care visit, but not in the manner hypothesized. People not covered by private health insurance had more recent health care visits. There are at least two possible explanations for this finding. First, it is possible that the large number of public hospitals and health facilities in the Greater New York City area have made health care available even for the uninsured. Other studies have documented that a greater proportion of New York City Puerto Ricans seek services at public than at private hospitals.[36] Second, the Puerto Rican population is the most likely of all racial/ethnic groups to have Medicaid as their sole health coverage.[37] This program probably facilitates their access to health care.

Policy and Program Implications

Two of the enabling variables found in my study to have a significant impact on Puerto Ricans' health care utilization, regular source of care and health insurance coverage, can indeed be leveraged by health planners and policymakers. Thus, efforts at increasing the availability of a usual source of care for Puerto Ricans might be effective in increasing access to regular health services as well as preventive care.

As noted above, the results also show that Puerto Ricans without private health insurance have visited a health care facility more recently than those who are insured. One of the possible explanations is the uninsured population's wide Medicaid coverage. If this is accurate, any policy change that tightens Medicaid eligibility criteria would undoubtedly have detrimental consequences for Puerto Ricans.

As for the role of gender in Puerto Rican health care use, the fact that women are more prone to take advantage of health services suggests several issues: (1) the role that women have in access issues vis-à-vis men; (2) the role that women as single heads of households play in determining need for family health care; (3) the importance of improving access for Puerto Ricans; and (4) including the family as a health care unit

may encourage the use of preventive health care over single service delivery. Health planners and administrators should consider specific outreach efforts targeted at Puerto Rican men and seek to provide culturally sensitive health care services.

Finally, since English-speaking Puerto Ricans tend to have visited a health care more recently than their Spanish-speaking counterparts, language must be considered a barrier that hinders access to health services, especially for newcomers from Puerto Rico. This would argue for health policymakers, planners, and administrators to develop more effective strategies aimed at recruiting and hiring Puerto Ricans and other Spanish-speaking personnel, particularly physicians, nurses, and administrators, for all health care systems.

To sum up, this study indicates the need to focus on the specificity of Puerto Ricans in terms of their access to health care and the types of intervening variables that must be taken into account to provide more effective and direct health services. ❧

Notes

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29. Ibid.

30. See, for example, Barrera, "Mexican-American Mental Health Service Utilization"; Roberts and Lee, "Medical Care Use by Mexican-Americans."

31. See, for example, Andersen et al., "Access to Medical Care among the Hispanic Population of the Southwestern United States"; D. B. Dutton, "Financial, Organizational and Professional Factors Affecting Health Care Utilization," *Social Science and Medicine* 23, no. 7 (1986): 721–735; and J. A. Kasper and M. L. Berk, "Waiting Times in Different Medical Settings: Appointment Waits and Office Waits," Data Preview 6, *National Health Care Expenditures Study*, DHHS Pub. No. (PHS) 81-3296 (Washington, D.C.: National Center for Health Services Research, 1981).

32. Dutton, "Financial, Organizational, and Professional Factors."

33. Andersen et al., "Access to Medical Care among the Hispanic Population."

34. D. Mechanic, "Correlates of Physician Utilization: Why Do Major Multivariate Studies of Physician Utilization Find Trivial Psychosocial and Organizational Effects?" *Journal of Health and Social Behavior* 20 (1979): 387–396.

35. Trevino and Moss, "Health Indicators."
36. Alers, "Puerto Ricans and Health."

37. Trevino and Moss, "Health Insurance Coverage and Physician Visits."

"What happens behind U.S. Puerto Ricans' closed doors cannot be disassociated from what happens in the 'mean streets' which Piri Thomas has so vividly described. The so-called new morbidities resulting from drugs, sex, violence, depression, and stress have had a differential impact on this community."

— Annette B. Ramírez de Arellano