Differences in Access to Health Care Services Between Insured and Uninsured Adults With Diabetes in Mexico

José A. Pagán, phd[1,2,3]
Andrea Puig[2]

The prevalence of diabetes in Mexico has steadily increased in recent years, and this chronic condition is now the leading cause of death for those between ages 55 and 64 years (1,2). Health insurance coverage has been linked to improvements in the management of chronic health conditions because it increases access to health care services (3). The purpose of this study was to analyze the association between health insurance coverage and the use of conventional health care services, complementary and alternative medicine (CAM), and self-medication in a national sample of Mexican older adults with diabetes.

RESEARCH DESIGN AND METHODS

The Mexican Health and Aging Study (MHAS) ($n = 15,156$) is a nationally representative prospective panel study of adults born before 1951. The 2001 baseline data were collected from June 2001 to September 2001, and MHAS includes comprehensive information on health, health care utilization, and socioeconomic status (4). Of the sample of 2,131 individuals who reported having diabetes, we excluded 230 due to missing responses. Our final sample included 1,901 diabetic adults aged 50 years and older. There were no substantial differences in demographic characteristics between survey participants with missing and nonmissing responses.

We used logistic regression to analyze how health insurance status was related to the use of conventional health care (visiting a doctor), CAM (visiting a homeopath or folk healer), and self-medication (consulting a pharmacist). We also estimated negative binomial regressions to study whether health insurance was associated with the number of doctor visits and the number of visits to CAM providers. The reference period was the year before the interview date.

We assumed that health care utilization was determined by predisposing characteristics (age, sex, education, and indigenous ethnic background), enabling factors (health insurance, income, and assets), context (urban/rural residence), and comorbidities (high blood pressure, heart disease, stroke, arthritis, and vision problems) (5,6). We defined health insurance coverage as being insured by the Mexican Institute of Social Security, other government-sponsored insurance, or private insurance.

RESULTS

Based on weighted 2001 MHAS data, 39% of Mexican adults aged 50 years and older were uninsured and 16% had been diagnosed with diabetes (28% of them were uninsured). The mean age of the sample was 63 years, 60% were women, and 56% resided in urban areas with >100,000 inhabitants. About 57% reported having high blood pressure, 6% heart disease, 5% a stroke, 26% arthritis, and 50% vision problems. About 84% visited a doctor over the past year, 10% used CAM, and 9% used self-medication. Although MHAS did not ask respondents whether utilization was directly related to diabetes, the high incidence of diabetes and other health conditions suggests that utilization is most likely related to diabetes or its complications.

The logistic regression results show that health insurance is positively associated with visiting a doctor and negatively associated with the use of CAM and self-medication (Table 1). Insured adults were 43% (odds ratio [OR] = 1.43) more likely to have visited a doctor, 44% (OR = 0.56) less likely to have visited a CAM provider, and 66% (OR = 0.34) less likely be self medicated than uninsured adults. After controlling for predisposing characteristics, enabling factors, context, and comorbidities, the ORs decreased to 1.41 (doctor visits), 0.56 (CAM), and 0.46 (self-medication). The results remained statistically significant for self-medication, and they became borderline significant for CAM utilization. Assets and having high blood pressure were positively associated with visiting a doctor, and age and education were positively related to self-medication.

The negative binomial regression results show that health insurance is positively associated with conventional health care and negatively associated with CAM. After adjusting for confounders, the insured had 1.84 more expected doctor visits than the uninsured and 0.23 less expected visits to CAM providers than the uninsured. The insurance-related discrete changes in expected doctor visits were highly statistically significant, but the discrete changes in expected visits to CAM providers were insignificant.

Table 1—*Effect of health insurance coverage on the utilization of conventional health care, CAM, and self-medication by insurance status (insured = 1 vs. uninsured = 0)*

	Visited doctor	Visited CAM provider	Self-medicated	Number of doctor visits	Number of visits to CAM providers
	OR (95% CI)	OR (95% CI)	OR (95% CI)	DC (95% CI)	DC (95% CI)
Unadjusted	1.43 (0.88–2.35)	0.56 (0.32–0.99)*	0.34 (0.20–0.58)†	2.34 (0.95–3.72)†	−0.37 (−0.79 to 0.04)
Adjusted for demographic/ socioeconomic/contextual variables	1.45 (0.87–2.45)	0.58 (0.31–1.08)	0.46 (0.26–0.79)†	1.83 (0.46–3.20)†	−0.23 (−0.51 to 0.06)
Adjusted for demographic/ socioeconomic/contextual variables and comorbidities	1.41 (0.83–2.38)	0.56 (0.30–1.03)	0.46 (0.28–0.79)†	1.84 (0.47–3.2)†	−0.23 (−0.48 to 0.02)

*$P < 0.05$, †$P < 0.01$. DC, discrete change.

CONCLUSIONS — Using a nationally representative sample of Mexican adults with diabetes aged 50 years and over, we found that health insurance coverage was positively associated with the use of conventional health care and negatively associated with CAM and self-medication. Recent health policy initiatives have been put forth to expand health insurance coverage in Mexico (e.g., the Seguro Popular de Salud) (7). Greater knowledge about the differences in access to health care services between the uninsured and insured populations might help to assess how treatment costs will be met in the future, given the rapid growth in the prevalence of diabetes. This is an important issue, given that the economic cost of diabetes to the Mexican public health care system has been estimated at U.S. $317.6 million in 2003, and these costs are projected to increase by 26% in 2005 (8).

Health insurance coverage could play an important role in diabetes management. The finding that being insured is positively associated with the number of expected physician visits is encouraging because diabetes should be carefully monitored and managed to reduce its complications (9). Moreover, the result that being uninsured is associated with the use of self-medication and marginally associated with the use of CAM suggests that some of these practices are not only driven by lifestyle congruence and the lack of trust in medical care but also by the lack of access to conventional health care. This is an important concern because there are potential risks associated with the use of self-medication and CAM, particularly if physicians are not informed about their use by patients (10).

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