

Social Capital and Health Care Experiences Among Low-Income Individuals

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The concept of social capital emerged from work in the social sciences by Putnam and others who defined social capital as what originates from social networks and the reciprocity, trustworthiness, and civic engagement created by these networks.¹⁻⁷ Epidemiologists have applied these concepts to public health and have worked to illuminate cause-and-effect relationships.^{3,7,8} At the same time, community interventions and community psychology researchers have used similar concepts of community capacity, sense of community, and community control to explore how to facilitate health status improvements.

Researchers have found associations between high levels of community social capital and reduced all-cause mortality rates, better self-rated health, and lower levels of college binge drinking.^{3,9-11} These findings have led to the suggestion that social capital may play a role in mediating the relationship between income inequality and health.^{3,4,8,12,13}

One mechanism by which social capital may influence health, particularly in low-income communities, is its influence on people's use of health care services. Residents of a community with high social capital may provide one another with greater instrumental and psychosocial support than do residents of a community with low social capital, or the community's level of interconnectedness and trust may reduce barriers to care. To date, however, little research has examined the relationship of social capital to health service measures such as use of services, participation in care, or satisfaction with services.

In one of the few studies to date, community social capital independently predicted the level at which patients trusted physicians.¹⁴ In another study, conducted among homeless individuals with mental illness in 18 different communities, associations emerged between community social capital and greater service integration, increased access to housing assistance, and a higher probability of individuals

Objectives. We examined relationships between social capital and health service measures among low-income individuals and assessed the psychometric properties of a theory-based measure of social capital.

Methods. We conducted a statewide telephone survey of 1216 low-income New Mexico residents. Respondents reported on barriers to health care access, use of health care services, satisfaction with care, and quality of provider communication and answered questions focusing on social capital.

Results. The social capital measure demonstrated strong psychometric properties. Regression analyses showed that some but not all components of social capital were related to measures of health services; for example, social support was inversely related to barriers to care (odds ratio=0.73; 95% confidence interval=0.59, 0.92).

Conclusions. Social capital is a complex concept, with some elements appearing to be related to individuals' experiences with health services. More research is needed to refine social capital theory and to clarify the contributions of social capital versus structural factors (e.g., insurance coverage and income) to health care experiences. (*Am J Public Health*. 2008;98:330-336. doi:10.2105/AJPH.2006.086306)

obtaining suitable housing, although an association with clinical outcomes did not appear.¹⁵ The few studies conducted, however, leave unanswered the broader question of whether and how social capital is associated with access to, use of, and satisfaction with health services. Also, these studies have not examined the relative contributions of social capital and structural factors such as geographic and financial conditions, which exert important effects on health care access.

An additional, methodological difficulty in this field has been the lack of a consistent operationalization of the concept of social capital. Because unique measures of social capital have been applied in most published studies, between-study comparisons remain problematic. Also, the wide variation in measurement approaches makes interpretation of results difficult. Finally, because published studies rarely provide results from psychometric testing of their social capital measures, assessing the validity or reliability of these measures has remained difficult.

In this study, we sought to address the need for standard measures of social capital by creating theory-based measures and testing their psychometric properties in a large, statewide

sample of low-income individuals. We then used these measures to examine the association between social capital and individuals' health care experiences.

METHODS

We conducted a population-based, statewide telephone survey of low-income households throughout New Mexico to examine the psychometric properties of our social capital measures and to assess the relationships between these measures and respondents' reported experiences with respect to (1) barriers to health care access, (2) use of health services, (3) satisfaction with and ratings of care services, and (4) quality of communication by health care providers. Our study was part of a project evaluating the effects of a Medicaid managed care program on New Mexico's low-income population.¹⁶

Setting and Sampling Strategy

In 2000, New Mexico's population was approximately 1.8 million.¹⁷ About one third of the population lived in the metropolitan Albuquerque area, and about half lived in small towns or rural areas.¹⁸ From 1999

through 2001, 18.8% of the population lived in poverty, the highest rate of any state, and 23.2% of New Mexicans lacked health insurance coverage, again the highest rate in the country.^{19,20}

The sample frame for the survey, conducted between January and March 2001, included all New Mexico residents living in households meeting 2 criteria. First, the household had to have an operational telephone, and second, the household's total income had to be less than 185% of the federal poverty level (the income level at which New Mexico residents are eligible for Medicaid benefits).

To enhance our ability to reach low-income households, we initially selected all zip code areas in New Mexico where 20% or greater of the population lived below the federal poverty level (232 of the 453 zip code areas in New Mexico). Telephone prefixes within those zip code areas were determined, and numbers from those prefixes were dialed randomly. When a household was reached, we asked questions about family size and income to determine eligibility; we then interviewed (in either English or Spanish) the individual most knowledgeable about the household's health care situation.

Sample size calculations showed that, at an alpha level of 0.05 and a power of 0.90, a sample of 1191 was sufficient to demonstrate a difference of 0.10 in the proportion of individuals with a particular characteristic (e.g., private health insurance coverage) in a comparison of this characteristic between 2 subgroups of unequal size (e.g., Hispanic and non-Hispanic). A subgroup size ratio of 1.5 was used in these calculations.

Survey Instrument

The survey instrument included 70 items assessing respondents' health care experiences during the preceding 12 months, their perceptions of their health status, demographic variables, and selected health risk factors. Many of the items were derived from well-known, standardized instruments (e.g., the Behavioral Risk Factor Surveillance System survey, the Consumer Assessment of Health Plans Survey).^{21,22} Further survey details are available elsewhere,¹⁶ and copies of the survey instrument are available from the authors.

In addition, the survey included 12 items designed to assess 3 separate social capital constructs: social support, psychosocial interconnectedness, and community participation. The 4 items used to examine social support were as follows: (1) If a medical emergency arose in your home, would you be likely to call your neighbors for help? (2) If you needed a ride to the clinic, would you be likely to call a neighbor for a ride? (3) If you needed help filling out medical or social service forms, would you be likely to ask a neighbor for help? and (4) Within the past year, have you and neighbors helped each other often with small tasks, such as repair work or grocery shopping?

The following 4 items were used to assess psychosocial interconnectedness: (1) Would you say most people in this community can be trusted? (2) Would you say your community is a good place for kids to grow up? (3) Would you say you expect to live in this community for a long time? and (4) Would you say you regularly stop and talk with people in your community?

Finally, the 4 items used to assess community participation were as follows: (1) Would you say you can influence decisions that affect your community? (2) Would you say by working together with others in your community, you can influence decisions that affect your community? (3) Would you say people in your community have connections to people who can influence what happens in your community? and (4) Would you say if there is a problem in your community, people who live there can get it solved?

Of the 4 items assessing social support, 3 dealt with health care needs. The items designed to assess psychosocial interconnectedness included a question on trust derived from the epidemiological literature and questions on sense of community derived from the literature on community psychology.^{3,23} We used 2 questions from the public health intervention literature on perceived neighborhood control and 2 questions on neighborhood participation to measure community participation.²³ There were 4 possible response options (yes, no, don't know, refused) for each item. (Participants were not offered a set of responses; their responses were categorized by the surveyor.)

We used local Spanish speakers to develop a Spanish version of the survey through standard methods of translation and back translation. The interview was conducted in either Spanish or English according to respondents' preference. After pilot testing involving both in-person interviews and random-digit dialing telephone interviews, we modified the instrument to improve item clarity.

Data Analysis

We conducted the data analysis in 3 phases. In phase 1, we examined characteristics of the sample using univariate analysis. We dichotomized the following key sample demographic variables: age (younger than 65 years vs 65 years or older), ethnicity (Hispanic vs non-Hispanic), education (less than high school diploma vs high school diploma or more), insurance coverage status (coverage vs no coverage, Medicaid vs non-Medicaid), and area of residence (rural vs urban). We created the residency variable by dividing the number of rural residents by the total population within each US census zip code tabulation area in New Mexico.^{24,25} Residents living in a tabulation area in which more than 20% of individuals resided in rural areas were labeled "rural"; all other residents were designated "urban."

Phase 2 focused on determining the psychometric properties of our social capital measures. This phase proceeded in 4 steps: (1) a factor analysis of the 12 social capital survey items examining whether patterns of responses to individual questions were consistent with the theorized constructs described earlier (social support, psychosocial interconnectedness, and community participation); (2) calculation of Cronbach alpha coefficients and correlation coefficients for the responses within each factor as a measure of internal consistency reliability; (3) correlation analyses among the factors as an assessment of discriminant validity; and (4) random sample cross-validation.

The step 1 exploratory factor analysis focused on a matrix of tetrachoric correlations between each variable pair.^{26–30} We performed unweighted least squares analyses with oblique rotation at the initial stage, followed by analyses with orthogonal rotation for the final model. We retained items

in the final model if they had factor loadings of at least 0.5 and if they exhibited a difference of at least 0.2 from the primary to the secondary factor. In the final step (step 4), we divided the sample in half on the basis of computer-generated random numbers. We then compared factor analyses of the tetrachoric correlation matrix for the 2 halves of the sample.

Phase 3 assessed the relationships between social capital and measures of health care barriers, use of health care services, satisfaction with care, and quality of provider communication. We conducted logistic regression analyses controlling for demographic variables such as age, gender, ethnicity, area of residence, education level, and type of insurance coverage. We added the number of positive responses for the items from each social capital construct to create new predictor variables representing each construct in the regression. Similarly, we used factor analysis to identify groupings among survey items assessing reported health care experiences. We then used the factors resulting from this analysis as outcomes in the regression analyses.

To produce a single variable representing each factor in the regressions, we summed responses to individual items grouped within that factor and used the resulting sum as the variable to represent the factor in the regressions. This analysis produced 4 factors with groups of items representing barriers to health care access, use of health care services, satisfaction with care, and quality of provider communication. (Lists of the specific survey items included within each of these 4 factors are available from the authors.) Finally, we conducted comparable logistic regression analyses focusing on subgroups of special interest (i.e., subgroups among whom social capital might have a more pronounced influence on health care experiences): Hispanics, respondents residing in rural areas, women, and individuals with chronic illnesses (i.e., diabetes and hypertension).

RESULTS

Description of the Sample and Univariate Analysis

Of the residents from the 1592 eligible households contacted, 1216 completed the

TABLE 1—Characteristics of Low-Income Survey Respondents: New Mexico, 2001

	Sample (n = 1216), %
Older than 65 years ^a	16.3
Female gender	70.9
Married	44.0
Hispanic	49.0
High school graduate	74.7
Employed (either full or part time)	48.4
Health insurance coverage	
Private	23.1
Medicare	22.4
Medicaid	9.6
Other	9.9
None	35.0
Rural residence	58.5
Had diabetes	9.5
Had high blood pressure	26.2
Social capital	
Likely to call neighbors for help in medical emergency	51.8
Likely to call neighbor for ride to clinic	53.5
Likely to ask neighbor for help filling out forms	33.1
Helped each other with small tasks within the past year	47.5
Agree most people in community can be trusted	62.9
Community is good place for kids to grow up	75.6
Expect to live in community for a long time	72.5
Regularly stop and talk with people in community	77.2
Can influence decisions that affect your community	47.0
Can work with others to influence decisions	69.6
Believe people have connections and can influence what happens	67.4
Believe problems that arise in community can be solved	68.8

^aThe median age was 43 years.

survey, yielding a response rate of 76.4%. Table 1 shows that most respondents were women and Hispanic; 35% of respondents did not have health insurance coverage. About half of the respondents were employed, and almost 60% resided in rural

areas. Men were more likely than were women to be employed ($P<.01$) and less likely to reside in a rural area ($P=.01$) or have Medicaid coverage ($P<.01$).

Table 1 also shows the percentages of respondents providing affirmative responses to the social capital questions. Slightly more than half reported that they would be likely to ask a neighbor for help in a medical emergency or for a ride to a clinic, but fewer than half reported that they would ask for help with forms or small tasks. Larger majorities provided affirmative responses to questions about community interconnectedness, including trust, plans to continue living in the community, and talking with others. Mixed but generally positive responses emerged for the 4 questions focusing on community participation.

Psychometric Properties of Social Capital Measures

A factor analysis of responses to the social capital items identified 3 factors with eigenvalues above 1.0 (Table 2); together, these factors explained 69.4% of the total variance in the 12 items. In general, the factor analysis produced a grouping of social capital questions that was consistent with the 3 social capital constructs. Factors 1, 2, and 3 included 3 of the 4 items measuring social support, psychosocial interconnectedness, and community participation, respectively.

We calculated Cronbach alpha coefficients (indicating the internal consistency of each of the constructs), and these coefficients supported the 3-factor solution of the survey results. Table 2 shows that the alpha coefficient for factor 1 (social support) was highest, at 0.77, but the coefficients for all 3 factors were above 0.60. Table 3 presents correlation coefficients among the 12 social capital items. In general, items within each factor showed moderate to high correlations with each other, as opposed to lower correlations with items outside that factor.

With respect to discriminant validity, there was a strong correlation (Spearman coefficient=0.29; $P<.01$) between the psychosocial interconnectedness and community participation factors (Table 3); the social support factor was less strongly correlated (Spearman coefficient=0.17; $P<.01$) with each of the other 2 factors. The cross-validation

TABLE 2—Results of Factor Analysis of Social Capital Survey Items: New Mexico, 2001

Item	Factor 1: Social Support	Factor 2: Interconnectedness	Factor 3: Community Participation
Likely to call neighbors for help in medical emergency	0.823 ^a	0.088	0.014
Likely to call neighbor for ride to clinic	0.906 ^a	0.098	0.071
Likely to ask neighbor for help filling out forms	0.851 ^a	0.181	0.028
Helped each other with small tasks within the past year	0.469	0.007	0.300
Believe most people in community can be trusted	0.012	0.687 ^a	0.244
Believe community is good place for kids to grow up	0.085	0.877 ^a	0.197
Expect to live in community for a long time	0.207	0.585 ^a	0.147
Regularly stop and talk with people in community	0.273	0.359	0.448
Believe it's possible to influence decisions that affect your community	0.169	0.220	0.828 ^a
Believe it's possible to work with others to influence decisions	0.069	0.162	0.854 ^a
Believe that people have connections and can influence what happens	0.000	0.221	0.665 ^a
Believe that problems that arise in community can be solved	0.048	0.491	0.526
Eigenvalue	4.60	1.35	2.37
Variance explained, %	38.3	11.3	19.8
Cronbach α	0.77	0.69	0.62

^aDifference between primary and secondary factors was at least 0.2 in addition to factor loading exceeding 0.5; these survey items were retained in subsequent factor analyses (see "Methods" section).

factor analysis yielded a 3-factor solution similar to that observed in the full sample analyses, as well as similar eigenvalues, loadings, and Cronbach alpha coefficients (results are available from the authors).

Relationships Between Social Capital and Health Care Measures

Table 4 presents the results of the logistic regression analyses. Social support was inversely related to reported barriers to care after control for area of residence, educational level, ethnicity, gender, age, and health insurance coverage. By contrast, social support showed no significant associations with use of health care services, satisfaction with care, or perceived quality of provider communication. A significant relationship emerged between psychosocial interconnectedness and satisfaction but not between psychosocial interconnectedness and barriers to health care or use of services. The relationship of psychosocial interconnectedness to perceived quality of provider communication approached but did not reach statistical significance (odds

ratio [OR]=1.34; 95% confidence interval [CI]=0.99, 1.81). There were no significant relationships between community participation and any of the health care measures.

The regression analyses also showed the importance of several structural and demographic variables as predictors of health care experiences. Lack of insurance coverage strongly predicted increased barriers to health care, decreased use of and satisfaction with care services, and worse perceived quality of communication. Male gender was associated with fewer barriers to care and decreased use of and satisfaction with care. Older age (i.e., older than 65 years), presumably as a result of Medicare coverage, was associated with decreased barriers, increased use, more satisfaction, and better perceived quality. Rural residence and Hispanic ethnicity were predictors of increased barriers.

As mentioned, we conducted additional regression analyses to determine whether the relationships just described differed among selected subgroups (detailed results are available from the authors). Among women and rural residents, the relationships between the

social capital measures and health care experiences were similar to those for the sample as a whole; in addition, psychosocial interconnectedness was significantly associated with perceived quality of communication. Among Hispanic respondents, the only significant relationship was that between psychosocial interconnectedness and satisfaction.

Among respondents with diabetes, no significant relationships emerged between the social capital measures and health care experiences. However, there were significant relationships between psychosocial interconnectedness and satisfaction and between social support and perceived quality of communication among respondents with hypertension.

DISCUSSION

Social Capital and Health Care Experiences

Our results provide evidence of relationships between social capital and health care experiences among low-income individuals. Social support inversely predicted barriers to health care, whereas psychosocial interconnectedness emerged as a significant predictor of satisfaction with care. At the same time, community participation showed no association with the health care measures, and none of the social capital measures predicted use of care services or perceived quality of communication by providers. Findings among subgroups varied somewhat but generally conformed to those from the overall sample.

By contrast, several structural and demographic variables were as strong as or stronger than the social capital measures in terms of predicting health care experiences. For instance, lack of insurance coverage was a strongly adverse predictor of all of the dependent variables.

These findings show a complex association between social capital and health care experiences. As a theoretical construct, social capital is perhaps best understood as a composite of community attributes, some of which may relate to health care experiences and some of which may not. As a predictor of health care experiences, the broad concept of social capital may prove less important than these specific community attributes.

TABLE 3—Spearman Correlation Matrix for Social Capital Items: New Mexico, 2001

	Call Neighbor for Help in Medical Emergency	Call Neighbor for Ride to Clinic	Ask Neighbor for Help Filling Out Forms	Help From Neighbor With Small Tasks	Community Trustworthy	Community Good for Raising Kids	Plan to Live in Community for Long Time	Talk With People in Community	Can Influence Community Decisions	Work Together to Influence Decisions	Connections to Influence Decisions	People Work to Solve Problems
Call Neighbor for Help in Medical Emergency	1.00											
Call Neighbor for Ride to Clinic	0.55**	1.00										
Ask Neighbor for Help Filling out Forms	0.51**	0.55**	1.00									
Help From Neighbor With Small Tasks	0.27**	0.34**	0.24**	1.00								
Community Trustworthy	0.05	0.07	0.11**	0.04	1.00							
Community Good for Raising Kids	0.10	0.13**	0.09	0.04	0.40**	1.00						
Plan to Live in Community for Long Time	0.11**	0.14**	0.16**	0.11**	0.24**	0.39**	1.00					
Talk With People in Community	0.15**	0.17**	0.16**	0.24**	0.17**	0.24**	0.27**	1.00				
Can Influence Community Decisions	0.13**	0.17**	0.14**	0.17**	0.17**	0.24**	0.24**	0.34**	1.00			
Work Together to Influence Decisions	0.13**	0.15**	0.12**	0.15**	0.21**	0.23**	0.15**	0.23**	0.50**	1.00		
Connections to Influence Decisions	0.01	0.07	0.04	0.10**	0.20**	0.17**	0.14**	0.23**	0.31**	0.36**	1.00	
People Work to Solve Problems	0.10**	0.11**	0.11**	0.09	0.32**	0.34**	0.21**	0.24**	0.27**	0.30**	0.29**	1.00

**P < .01.

This study is among the few to provide data assessing the psychometric properties of social capital measures. We developed and applied a short, easy-to-use questionnaire adaptable in other health service research. Our factor analysis produced 3 factors consisting of items derived from earlier research on social capital and community interventions. The items composing these factors bridged 2 previously unconnected literatures, incorporating items from the “sense of community” construct of community psychology, as well as items from the “trust” construct of epidemiological research on social capital.

Limitations

Our data were derived from only 1 state and from only low-income individuals, and thus different associations between social capital and health care experiences may emerge in other settings. Although we based our measures of social capital on previously theorized components of the construct, these measures may have failed to capture elements of social capital that have important relationships with health care experiences. Recent theories have posited that “linking” social capital—that is, developing trusting relationships across community groups of different status and power—may have a positive effect on access to care, partly through increased trust in providers on the part of patients.^{7,31} Our design did not permit assessment of this newly theorized component of social capital.

Furthermore, our statewide sample may have obscured important variability in the relationship of social capital to health care experiences occurring at local levels. If community advocacy, for example, led to establishment of a health clinic, community participation might show a correlation with access to care in that community. Finally, a portion of the low-income population in New Mexico does not have telephone service and may have experiences different from those of our respondents. However, we conducted a house-to-house survey among 100 low-income households and found response patterns nearly identical to those observed in our telephone sample (data available from the authors).

TABLE 4—Health Care Measures Predicted by Social Capital Measures and Key Predictor Variables: New Mexico, 2001

	Barriers to Care, OR (95% CI)	Use Of Services, OR (95% CI)	Satisfaction With Care, OR (95% CI)	Perceived Quality of Provider Communication, OR (95% CI)
Social capital measure				
Social support	0.73** (0.59, 0.92)	1.02 (0.83, 1.26)	1.05 (0.85, 1.29)	1.15 (0.93, 1.42)
Interconnectedness	0.87 (0.64, 1.19)	1.01 (0.74, 1.36)	1.77** (1.32, 2.39)	1.34 (0.99, 1.81)
Community participation	0.86 (0.65, 1.15)	0.90 (0.68, 1.18)	1.04 (0.83, 1.30)	1.00 (0.76, 1.32)
Predictor variable				
Rural resident	1.30* (1.03, 1.63)	1.12 (0.90, 1.39)	0.88 (0.71, 1.09)	0.89 (0.72, 1.11)
High school graduate	1.23 (0.94, 1.60)	0.93 (0.72, 1.20)	1.00 (0.78, 1.28)	1.01 (0.78, 1.31)
Hispanic ethnicity	1.31* (1.04, 1.64)	1.15 (0.93, 1.43)	0.97 (0.79, 1.20)	1.00 (0.81, 1.25)
Age older than 65 y	0.52** (0.37, 0.72)	1.40* (1.04, 1.89)	2.20** (1.64, 2.97)	2.01** (1.47, 2.74)
Male gender	0.74* (0.58, 0.95)	0.60** (0.48, 0.76)	0.61** (0.49, 0.77)	0.83 (0.66, 1.05)
Uninsured	2.40** (1.89, 3.06)	0.28* (0.22, 0.36)	0.75* (0.60, 0.95)	0.73** (0.58, 0.92)

Note. OR = odds ratio; CI = confidence interval. Cell entries are point estimates of the ORs of the relationships between social capital measures and key predictor variables in the rows and outcome measures in the columns after controlling for the other predictor variables in the rows.

* $P < .05$; ** $P < .01$.

Criticisms and Applications of Social Capital

Research on social capital has come under criticism as a result of concern that attention to psychosocial risk factors may obscure the contributions to poor health of larger structural conditions such as material deprivation, inequitable policies, unequal distribution of infrastructure, and unequal distributions of toxic environmental exposures.^{13,32} Social capital emphasizes social relationships and does not include other community dimensions, such as marginalization, power conflicts, economic underdevelopment, or history of successful community organizing to attract resources.³²

Although research on social capital does not negate the importance of these structural factors, some critics have expressed fears that the increasing interest in social capital of the World Bank and other international financial institutions may focus interventions on building trust rather than addressing broader ecological conditions.^{7,32,33} Our findings demonstrate the importance of both structural conditions (e.g., lack of insurance coverage) and social capital as predictors of health care experiences.

The concept of social capital also has been criticized for lack of precision in characterizing social support mechanisms. For instance, most concepts and studies of social capital do not involve determination of which support networks may prove to be health enhancing and which may lead to damaging effects (such as drug trafficking gangs).³⁴ Further studies of social capital could help to clarify how the value orientations of differing networks relate to health care and health outcomes.

These criticisms highlight the importance of avoiding oversimplification when analyzing the complexity of community dynamics. Our data suggest that social capital functions not as a unitary attribute but, rather, as a composite of attributes that have varying associations with health service measures. A more complete understanding of community dynamics and their relationships to health and health care will require additional research on these different attributes of social capital.

To date, most of the discussion about application of social capital to health care has taken place at the macropolicy level, with debate about the potential role of major international funders in establishing programs advancing social capital in communities. There

has been less discussion at the micropolicy level about how local planners might use social capital concepts to improve health. With an enhanced understanding of these concepts, local planners might, for example, promote community organizing to expand social support and reduce barriers to care. Before such applications can be recommended, however, interventional research (as opposed to our observational study) must confirm their effectiveness.

Conclusions

We produced evidence that 2 components of social capital—social support and psychosocial interconnectedness—are related to certain health care experiences. Our findings provide further support for the thesis that community dynamics influence health. Because our brief measures of social capital constructs showed favorable psychometric properties, health planners may find them useful in conducting research on social capital relationships and health measures.

We recommend additional research to confirm our findings in other populations, to test additional social capital measures, and to validate further the measurement of social capital in other groups. Finally, future research should clarify the relative importance of and potential interaction between social capital and structural factors as predictors of health care experiences. ■

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Contributors

M. Perry conducted the data analysis and was responsible for the initial writing. R.L. Williams originated the study, supervised the data collection, assisted with analysis and interpretation, and led the writing. N. Wallerstein co-originated the study and assisted with analysis and interpretation. H. Waitzkin originated and directed the parent study of Medicaid managed care.

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Human Participant Protection

This study was approved by the human research review committee of the University of New Mexico Health Sciences Center. Respondents provided verbal informed consent to participate at the time of the survey.

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