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Source: *Medical Care*, August 2014, Vol. 52, No. 8 (August 2014), pp. 720-727

Published by: Lippincott Williams & Wilkins

Stable URL: https://www.jstor.org/stable/24465759

Barriers to Care in an Ethnically Diverse Publicly Insured Population

Is Health Care Reform Enough?

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Background: The Affordable Care Act provides for the expansion of Medicaid, which may result in as many as 16 million people gaining health insurance coverage. Yet it is unclear to what extent this coverage expansion will meaningfully increase access to health care.

Objective: The objective of the study was to identify barriers that may persist even after individuals are moved to insurance and to explore racial/ethnic variation in problems accessing health care services.

Research Design: Data are from a 2008 cross-sectional mixed-mode survey (mail with telephone follow-up in 4 languages), which is unique in measuring a comprehensive set of barriers and in focusing on several select understudied ethnic groups. We examine racial/ethnic variation in cost and coverage, access, and provider-related barriers. The study adhered to a community-based participatory research process.

Subjects: Surveys were obtained from a stratified random sample of adults enrolled in Minnesota Health Care Programs who self-report ethnicity as white, African American, American Indian, Hispanic, Hmong, or Somali (n = 1731).

Results: All enrollees reported barriers to getting needed care; enrollees from minority cultural groups (Hmong and American Indian in particular) were more likely to experience problems than whites. Barriers associated with *cost and coverage* were the most prevalent, with 72% of enrollees reporting 1 or more of these problems. Approximately 63% of enrollees reported 1 or more *access* barriers. *Provider-related* barriers were the least prevalent (about 29%) yet revealed the most pervasive disparities.

Conclusions: Many challenges to care persist for publicly insured adults, particularly minority racial and ethnic groups. The ACA expansion of Medicaid, although necessary, is not sufficient for achieving improved and equitable access to care.

Key Words: Medicaid, disparities, barriers, access

(*Med Care* 2014;52: 720–727)

Lack of health insurance is well documented as a persistent barrier to health care, and approximately 54% of the 47 million uninsured in the United States are members of minority cultural groups.[1] This disproportionate lack of health insurance among cultural minorities contributes to racial and ethnic disparities in health care access and health outcomes.[2,3] The 2010 Patient Protection and Affordable Care Act (ACA) may move as many as 16 million persons to insurance coverage by 2019 through Medicaid expansions,[1] which will disproportionately affect low-income populations including persons from minority cultural groups.[2,3]

Although increased access to health insurance is an attractive aspect of ACA, it is overly simplistic to believe that providing health insurance is sufficient to eliminate all barriers to care.[3,4] The case of Massachusetts is instructive. Using Medicaid expansions, an insurance marketplace, subsidies for low-income individuals, and insurance mandates, Massachusetts significantly increased public and private coverage overtime generally and among low-income adults.[5] Relative to other areas in New England, Massachusetts significantly increased coverage and reduced perceived cost barriers to accessing care for all adults in the state. However, disparities remain as African Americans, Hispanics, and low-income adults continue to have lower coverage rates and experience greater financial barriers to care than their white and higher-income counterparts. There were no improvements in the ability to access a personal physician for any group after health reform, and there were no reductions in access disparities.[6] The results highlight the importance of going beyond insurance when trying to understand barriers to health care services among different cultural groups.[7] In the influential 2002 IOM report, Unequal

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Supported through a contract with the Minnesota Department of Human Services (DHS).

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ISSN: 0025-7079/14/5208-0720

Treatment, the authors deliberately put aside the issue of inequality in insurance coverage as an explanation for disparities in health care and health outcomes.[3] They did this not because health insurance is unimportant but to highlight other patient-level, provider-level, and system-level factors that produce disparities.

Although numerous studies document potential barriers to timely and quality care, even among insured populations,[8–12] we know little about the relative importance of these barriers.[13,14] Understanding the range of barriers and their influence on access is important because different types and levels of barriers necessitate different policy solutions. For example, informational barriers are faced by people who are confused about their benefits and the cost of seeking care, who may hesitate to use services unless they are ill. This suggests the importance of health plans clearly conveying information about the services that are covered and the cost-sharing associated with different services. Logistical access barriers include difficulty obtaining transportation to appointments[8] and excessive wait times after arriving for appointments.[12] These logistical barriers call for different policy-level and practice-level solutions such as transportation vouchers, expanded clinic hours, and effective clinic management to move people efficiently through their appointments. Provider-related impediments to health care, such as lack of trust in physicians,[13,15] and language limitations[3,16,17] suggest solutions associated with provider training and meeting the national Culturally and Linguistically Appropriate Services standards for care delivery.

This study begins to fill the knowledge gaps surrounding barriers to care among a diverse sample of publicly insured adults in Minnesota Health Care Programs (MHCP). At the time of the study, MHCP included MinnesotaCare, Medicaid, and General Assistance Medical Care (GAMC), each of which has different eligibility criteria resulting in somewhat unique populations or case mix, most of whom are served in managed care settings.[18,19] MinnesotaCare is mainly for employed Minnesotans without insurance who do not qualify for Medicaid or GAMC. Eligibility is set at 250% of the Federal Poverty Guidelines (FPG) for adults without dependents and 275% FPG for parents, children, and pregnant women. MinnesotaCare enrollees pay a sliding-scale premium that increases as their income increases. Medicaid eligibility was capped at 150% FPG, providing comprehensive coverage with copayments limited primarily to nonpregnant adults. GAMC primarily served adults at $\leq$75% FPG who are unable to work (GAMC was discontinued in 2009 and most of this population was moved to Medicaid when Minnesota applied for early expansion of Medicaid available through the ACA). As such, MHCP eligibility is above minimum thresholds set by the ACA, which will expand Medicaid to all adults up to 138% FPG and eliminate copayments on preventive care.

MHCPs are relatively generous and are highly ranked in terms of access, prevention, treatment, and health outcomes,[20] with broad eligibility, generally low copayments, and no copayments for preventive services.[21] As such Minnesota may represent a best-case scenario for understanding the experience of public program enrollees accessing health care services. We describe the extent to which this insured population, including several understudied populations (eg, Hmong, Somali, and American Indian, as well as Hispanic and African American), reports a broad range of experiences that hinder use of health care. Inclusion of a comprehensive set of barriers allows for a comparison of relative importance within and across cultural groups.

METHODS

Data

Data come from a 2008 mixed mode survey (mail followed by telephone) of a random sample of non-institutionalized MHCP enrollees. On the basis of data in the administrative file, we oversampled Somali, Hmong, American Indian, Hispanic, and African American enrollees and further stratified to obtain an equal number of adults and children within each race/ethnic strata, with the goal of interviewing only 1 adult or child enrollee per household to reduce respondent burden. The telephone survey was conducted in English, Hmong, Somali, and Spanish. The study received IRB approval from the Minnesota Department of Human Services and the University of Minnesota. The overall response rate was 44.3%, with the highest response rate among Hmong adults (53%) and the lowest among American Indian adults (34.7%). This is consistent with surveys of Medicaid beneficiaries relying on mail and telephone follow-up alone.[22] We compared respondents and nonrespondents using administrative and claims data from the year before the survey. Adult respondents were more likely to be female, White, Asian, and younger compared with nonrespondents, and they were less likely to be African American or American Indian (see Appendix A for more details). Poststratification weights correct for these differences. We limit this analysis to adults who self-report membership in 1 of the 5 oversampled groups and whites (N = 2077) for whom we have complete data on the barrier items and demographic controls (N = 1731).

The study was conducted through a community-based participatory research process, with community researchers from each of the cultural groups fully involved in all stages of the research. Community researchers were extensively involved in the design of the instrument (eg, ensuring question wording was culturally appropriate, amenable to translation to Hmong, Somali, and Spanish), data collection (eg, oversight of translation to ensure conceptual equivalence and training of bilingual interviewers), interpretation of data, development of study recommendations, and dissemination of study results.[23] Details of this process are documented elsewhere.[24]

Measures

The dependent variables are measures of perceived barriers to getting needed medical care. The goal was to develop a comprehensive set of problems accessing health care in 3 areas: (1) cost and coverage; (2) access problems; and (3) provider-related problems (Table 1 shows the items included in each domain). Most of the barrier items (12) were developed by the research team on the basis of focus groups findings, and several (7) were adapted from a local survey [Survey of the Health of All the Population and the

TABLE 1. Items in Barriers Measures

Cost and Coverage Barriers	Access Barriers	Provider-related Barriers
Worry will have to pay more than expect	Cannot get appointment as soon as needed	Doctors do not speak language
Worry pay more than can afford	Transportation problems	Doctors do not understand culture
Worry medications will cost too much	Cannot see preferred doctor	Doctors do not respect religious beliefs
Not sure if you will be dropped from MHCP	Office not open when you can go	Doctors are not trustworthy
Worry insurance will not cover care	Do not know where to go	Place is not welcoming
Do not know what plan covers	Work or family responsibilities	
Do not know where to go with questions	Availability of childcare	

Environment (SHAPE) 2002].[25] Respondents were asked about how many of the 19 barriers presented a "big problem," "a small problem," or "not a problem" in getting health care. Responses of a big or small problem were coded as having a problem in that area. We computed the percentage of respondents reporting any barrier (Table 2) and a summed score of the number of barriers in each domain (Tables 2 and 3). For the cost and coverage and access domains the scores range from 0 to 7; for the provider barriers the scores range from 0 to 5 barriers. Although the summed scores were deemed a priori as index count scores rather than as internally consistent scales, Cronbach α for each domain exceeded 0.80, indicating that the items are sufficiently intercorrelated to be added together. The distribution of each of the barriers within the 3 domains by race/ethnicity is included in Appendix B.

Racial/ethnic group membership was based on self-report. We expanded the ethnicity question to include Hmong and Somali along with Hispanic ethnicity,[26] followed by the standard race question.[27] We used OMB guidelines to recategorize respondents who reported >1 race into a single category using the "whole assignment, smallest group" method.[27] For cases with missing data on the self-report, we substituted race/ethnicity from the administrative data.[28]

We controlled for self-rated health (fair/poor vs. good/very good/excellent); age; sex; marital status (married vs. single, divorced, or widowed); employment (employed or not) and education status (high school graduate or not); living in a metropolitan area with county population >250,000 (vs. rural or other areas); and the language in which the survey was conducted (English vs. non-English). Language of the interview, in comparison with language spoken at home, captures respondents who are least comfortable with English. Descriptive statistics included the proportion of US-born versus not; this variable was dropped from multivariate analysis due to collinearity with survey language and race/ethnicity.

Analysis

We used *t* tests to assess bivariate differences between the minority ethnic groups and whites in demographics, health status, and the experience of barriers. We then use Poisson regression (the dependent variables are counts) to examine whether differences in experiences of barriers remain after adjusting for demographic and health status differences between groups. Data were weighted to correct for unequal selection probabilities (on the basis of race/ethnicity, age, and household type categorized by the presence or absence of both adult and child enrollees in the household) and nonresponse and poststratified to match MHCP population control totals (by age, sample strata, race/ethnicity, household size, sex, metro/nonmetro residence, and fee-for-service/managed care sector). Variance estimates were produced using Taylor series linearization.

RESULTS

As shown in Table 2, approximately 71% of the adult MHCP population was white. The mean age of enrollees was 42 years, and 67% were female. Compared with other ethnic groups, white enrollees were more likely to have graduated high school and to be employed. More African American, Hmong, and Somali enrollees reside in metro areas as compared with whites. Nearly 46% of Hispanic enrollees were born in the United States, compared with 20% of Hmong and almost none of the Somali enrollees. Hispanic, Hmong, and Somali respondents were more likely than other ethnic groups to have completed the survey in a language other than English. American Indian and African American enrollees were significantly less likely to report excellent/very good/good health than white enrollees.

The bottom section of Table 2 shows that the most common barriers to care were those related to cost and coverage (72.4% report any cost and coverage barriers, with a mean of 2.91 barriers reported among adult enrollees overall). The least common were provider-related barriers (29.3% report any provider-related barriers, with a mean of 0.52 barriers among adult enrollees overall). However, provider-related barriers were significantly more common for each minority cultural group than whites. Hispanic, Hmong, and Somali adults reported significantly more cost and coverage barriers compared with whites. Finally, American Indian, Hmong, and Somali adults reported significantly more barriers to access than whites.

Table 3 examines whether differences in barriers between cultural groups are accounted for by demographic and health status differences. In the multivariate analysis, Hmong respondents experience more cost and coverage disparities than whites. In addition, persons who were interviewed in a non-English language report greater cost barriers than those interviewed in English. Poorer health status is also significantly associated with a higher number of barriers. Additional analyses, not tabled, indicate that it is the inclusion of language in the regression that reduces the differences in number of costs/coverage barriers between whites and Hispanic and Somali adults' coefficient to nonsignificance.

Hmong and American Indian respondents report a greater number of access barriers than whites, after controlling for socioeconomic and health status differences. Female individuals and younger enrollees report more access barriers than male individuals and older persons, and poor

TABLE 2. Demographic Characteristics, Health Status, and Barriers for Adult MHCP Enrollees

	Total Enrollees	White	American Indian	African American	Hispanic	Hmong	Somali
No. respondents	1731	347	276	199	321	369	219
Percentage per group, weighted (%)	100.0	70.7	7.9	10.5	5.1	2.8	2.9
Demographic characteristics and health status							
Mean age of enrollee, (SE)	41.9 (0.70)	42.7 (0.95)	39.7 (1.83)	41.6 (1.07)	37.6 (1.17)**	41.0 (2.37)	38.1 (1.26)**
Female (%)	66.6	65.0	79.5***	69.5	71.7	49.8*	64.9
Married (%)	39.8	42.2	29.0*	22.1***	51.4	44.6	48.6
High school graduate (%)	77.0	83.2	74.9*	68.7***	60.8***	30.2***	37.4***
Employed (%)	38.8	43.7	28.1**	23.7***	32.7*	21.3***	31.1**
Metro residence (%)	64.7	58.2	61.6	94.6***	63.8	98.3***	92.6***
US Born (%)	90.4	97.6	99.2	100.0**	45.6***	21.9***	0.0***
Non-English survey language (%)	4.7	0.0	0.1	0.0	37.0***	31.9***	64.1***
Excellent, very good, good health (%)	74.3	76.5	63.5*	65.4*	75.1	74.7	81.4
Barriers to care							
Any cost and coverage barrier (%)	72.4	70.6	75.5	73.2	81.5**	85.4*	76.8
Mean cost and coverage, (SE)	2.91 (0.10)	2.74 (0.14)	3.18 (0.26)	3.06 (0.20)	3.39 (0.19)**	4.50 (0.43)***	3.34 (0.18)**
Any access barrier (%)	62.6	59.3	77.1***	67.9	63.3	80.9**	64.5
Mean access barrier, (SE)	1.62 (0.07)	1.47 (0.09)	2.13 (0.17)***	1.71 (0.14)	1.69 (0.12)	3.27 (0.26)***	1.84 (0.14)*
Any provider-related barriers (%)	29.3	23.0	43.2***	34.1*	48.1***	70.9***	55.3***
Mean provider barrier, (SE)	0.52 (0.03)	0.35 (0.04)	0.84 (0.11)***	0.63 (0.09)**	0.86 (0.10)***	2.19 (0.24)***	1.21 (0.11)***

Indication of a significant difference compared with whites: *$P<0.05$, **$P<0.01$, ***$P<0.001$.
Source: 2008 Disparities and Barriers to Utilization among Minnesota Health Care Program Data, Adults only (n = 1731).

health status is associated with a higher number of barriers. Although not tabled, it is controlling for age that reduces the difference between white and Somali respondents to non-significance. In the final model, whites are significantly less likely to experience provider-related barriers than all other ethnic groups. Non-English survey language and poor health are associated with a greater number of provider-related barriers.

CONCLUSIONS

Although insured, all MHCP enrollees experience widespread barriers to getting needed health care. Reports of barriers are unacceptably high among all enrollees including whites who represent 71% of the adult population in Minnesota public health programs. However, enrollees from ethnic and racial minority groups were significantly more likely to report these problems than were whites. Moreover, many disparities in reports of barriers remained after controlling for demographic and health factors commonly associated with access to services.

The pervasiveness of *cost and coverage* barriers across all ethnic and racial groups suggests that MHCP is not doing enough to educate enrollees. Just over 72% of adults reported worrying that the cost of care and medications would be more than they could afford, being unaware of what the plan covers, etc. There is a need for more accessible and effective information (succinct and simplified mailings, help lines, navigators, and improved outreach) to facilitate understanding of available benefits. Local policy research, community efforts, and media attention in Minnesota suggest that lack of knowledge about available services is a key concern for the state's publicly insured population, particularly those facing language and cultural barriers.[29,30] Consistent with the ACA, preventive services are delivered at no cost to MHCP enrollees, and copayments for drugs were minimal (between $1 and $3 for all enrollees with a cap of $12 per month).[31] However, it is not clear whether enrollees are aware of this cost-sharing structure. Our findings suggest that inadequate knowledge about costs and coverage may disproportionately affect Hmong populations. Such barriers may be reduced with language services, assistance from navigators/community health workers, and contracts that require plans and providers to both monitor and reduce disparities in use of services, particularly preventive services. Unfortunately, it appears that new ACA provisions dedicated to improving health literacy may be poorly funded thereby dampening their intended impact.[32]

Approximately 63% of all enrollees reported 1 or more *access* barriers (transportation problems, clinic hours, childcare), with even greater disadvantage among American Indian and Hmong enrollees. Transportation assistance and subsidies are offered through Medicaid programs,[31,33,34] but it is not clear whether enrollees are aware of such services and their efficacy for reducing inequity. Although Minnesota offers childcare assistance, childcare is not identified among the list of services for improving access to health care specifically.[31] Along with expanding clinic hours or days, these

TABLE 3. Poisson Regression of Number of Barriers on Race, Controlling for Demographics and Health Status

	Coef (95% CI)		
	Cost and Coverage Barriers	**Access Barriers**	**Provider-related Barriers**
White†	Ref	Ref	Ref
American Indian	0.14 (−0.05 to 0.33)	0.33 (0.13–0.53)***	0.79 (0.46–1.12)***
Black	0.10 (−0.07 to 0.28)	0.12 (−0.10 to 0.33)	0.43 (0.04–0.81)*
Hispanic	0.13 (−0.03 to 0.30)	0.07 (−0.14 to 0.28)	0.64 (0.21–1.07)**
Hmong	0.47 (0.21–0.73)***	0.80 (0.55–1.06)***	1.55 (1.13–1.97)***
Somali	0.09 (−0.11 to 0.29)	0.17 (−0.08 to 0.42)	0.85 (0.44–1.25)***
Age	0.00 (−0.01 to 0.00)	−0.01 (−0.01 to 0.00)*	−0.00 (−0.01 to 0.00)
Female	0.03 (−0.12 to 0.19)	0.19 (0.00–0.37)***	0.04 (−0.25 to 0.33)
Married	0.07 (−0.08 to 0.22)	0.08 (−0.09 to 0.26)	0.06 (−0.21 to 0.33)
High school graduate	0.10 (−0.08 to 0.27)	0.04 (−0.14 to 0.23)	0.00 (−0.25 to 0.25)
Employed	0.12 (−0.03 to 0.28)	0.16 (−0.01 to 0.34)	−0.11 (−0.40 to 0.19)
Metro residence	0.09 (−0.08 to 0.25)	0.13 (−0.06 to 0.33)	0.28 (−0.06 to 0.62)
Non-English survey language	0.19 (0.05–0.34)**	0.04 (−0.14 to 0.22)	0.43 (0.16–0.69)***
Excellent, very good, good health	0.22 (0.06–0.38)**	0.24 (0.06–0.43)**	0.37 (0.11–0.64)**

Indication of a significant difference compared with whites: *$P<0.05$, **$P<0.01$, ***$P<0.001$.
†White non-Hispanic are the reference group.
CI indicates confidence interval; Coef, coefficient.
Source: 2008 Disparities and Barriers to Utilization among Minnesota Health Care Program Data, Adults only (n = 1731).

issues are mutable through the state's contracting arrangements with plans and providers.

Provider-related barriers (feelings of trust and being welcome at the clinic, providers respect for cultural and religious differences, and language barriers) were the least common type of barrier experienced by respondents (reported by approximately 30% or more of adult enrollees). Yet, compared with whites, most of the other cultural groups were much more likely to experience these barriers; the exceptions being Hispanic and Somali enrollees. Reducing provider-related barriers is the impetus behind the Office of Minority Health's National Culturally and Linguistically Appropriate Services Standards. However, only 4 of the 14 standards are mandated, and resources are not specifically allocated to the enforcement of even those standards that are mandated.[35] Furthermore, provider barriers such as culture, religion, or language are usually not included in the metrics used for quality and equity,[20] suggesting a greater need for attention in both policy and research. There is a need for training of health care providers that increases respect among clinic staff and providers, as well as appreciation of varied cultural and religious beliefs, and improvements in the quality of communication and availability of interpreter services.[36,37] Although the ACA authorizes funding for education of health professionals, the amount and terms of this funding are not articulated.[36]

We acknowledge several limitations of the study. First, the data are cross-sectional, limiting our ability to examine the impact of barriers on use of health services; however, other studies provide evidence of the relationship between barriers and access.[14] Second, the response rate was modest (44%), although reasonably high given falling response rates and the challenges of reaching low-income and minority populations.[38,39] Third, we acknowledge weaknesses in the construction of the 3 barriers measures. The barrier items were dichotomized and treated as indicator variables, combined as index sum scores; this may have resulted in a loss of information. Further, it is clear that the means of scale scores should not be compared without an examination of measurement invariance.[40,41] Although beyond the scope of these analyses, it is unknown whether response bias could have affected comparison of the outcomes across groups. Further research is needed to understand the properties of these 19 items and derive the best scales. Finally, the diverse population enrolled in Minnesota public programs may not reflect the diversity of populations elsewhere in the United States. These limitations should not diminish the message conveyed by public health care program enrollees in this study, which suggest that there is much to do to resolve disparities in access to care beyond offering health insurance. The study has several strengths including a diverse study population allowing us to share the experiences of members of several understudied communities as well as the insights gained through community partners' involvement in creating an exhaustive set barriers questions and formulating recommendations for removing these barriers.

The experience of public program enrollees in Minnesota may represent a best-case scenario compared with other states in the nation given the generosity of the benefits and program eligibility criteria. That said, if Minnesota's experience is indicative of what will happen under the ACA, it becomes clear that the 2014 Medicaid expansion will not achieve its full potential to provide equitable access to health services unless barriers to care aside from coverage are adequately addressed. The platform for this effort is contained in the language of the ACA, but legislation is only as meaningful as the regulations, funding, and enforcement that support it.

Our paper focuses on experiences of people already enrolled in Medicaid and the potential implications of Medicaid expansions available through the ACA. However, other ACA provisions, such as the individual mandate and ability to purchase affordable insurance in the new marketplaces may combine to further strain the supply of health care services and providers available to those newly insured

in the private market. This in turn will likely further constrain access among current and newly eligible Medicaid enrollees given lower provider reimbursement rates for the same services in Medicaid as compared with the private sector. This persistent gap in payments, not addressed in the ACA, will likely intensify barriers to health care services among those with public insurance and widen disparities among those with public versus private insurance.

ACKNOWLEDGMENTS

The authors extend our sincere gratitude to Vicki Kunerth and James McRae at DHS for supporting this work, Nicole Martin-Rogers and her staff at the survey center at Wilder Research, the Cultural Wellness Center (CWC) for partnering on the research, hosting the Project Management Team and creating a bridge to the community needed to make this project a success. They are also indebted to the State Health Access Data Assistance Center (SHADAC) for help with sampling, weighting, and administrative support. Kashmira Chawla (Mayo) helped with the review of relevant literature. They thank the community members who came together to learn about the survey results and provided recommendations to improve the delivery of health care. They also thank members of health plans, health care, and government entities who joined the "Working Together" forum on March 13, 2009 at the CWC. Finally, they are very thankful to the thousands of MHCP enrollees throughout the state who took the time to complete the survey and tell us about their experiences with health care.

APPENDIX

TABLE A1. Comparison of Adult Respondents and Nonrespondents

	Respondents (N = 2194) (%)	Nonrespondents (N = 2993) (%)
Demographic characteristics		
Age	42.4	38.1*
Female	66.8	60.6*
Hispanic	16.7	16.0
White	45.7	43.8*
African American	32.3	40.1*
Asian	24.5	15.4*
American Indian/Alaska Native	15.7	20.6*
Somali Nationality	10.4	12.5*
Use of services		
Any outpatient services	86.7	84.2*
Any inpatient services	19.1	21.8*
Any emergency room visit	32.1	42.5*
Mental health outpatient visit	23.8	23.7
Primary care visit	31.2	29.4
Eligibility due to disability	23.3	19.2*
First listed diagnosis		
Infectious and parasitic diseases	11.8	13.1
Neoplasms	6.2	5.1
Endocrine, nutritional, metabolic	26.5	21.0*
Depression	20.3	20.2
Other mental disorders	28.4	30.5
Diseases of nervous system	41.9	39.1*
Disease of circulatory system	23.3	18.3*
Diseases of respiratory system	29.5	29.9
Diseases of digestive system	18.0	21.8*
Diseases of genitourinary system	24.4	25.4
Disease of skin	14.0	14.8
Diseases of musculoskeletal system	41.6	37.4*
Symptoms, signs, and ill-defined conditions	53.4	53.4
Injury and poisoning	23.9	25.5
All other	18.1	17.1

Indication of a significant difference: *$P<0.05$.
Source: 2008 Disparities and Barriers to Utilization among Minnesota Health Care Program Data.

TABLE A2. Within Domain Reports of Barriers Among Adult MHCP Enrollees

	% (SE)					
Barriers to Care	**White**	**American Indian**	**African American**	**Hispanic**	**Hmong**	**Somali**
Cost and coverage barriers						
Worry insurance will not cover care	40.5 (0.03)	47.3 (0.05)	41.3 (0.04)	53.7 (0.06)*	71.4 (0.07)***	49.4 (0.04)
Worry will have to pay more than expect	38.7 (0.03)	45.2 (0.05)	49.1 (0.04)*	57.6 (0.05)***	61.7 (0.07)**	42.5 (0.04)
Worry pay more than can afford	50.3 (0.03)	54.4 (0.05)	46.2 (0.04)	61.2 (0.05)	64.8 (0.07)	53.2 (0.04)
Worry medications will cost too much	34.8 (0.03)	38.2 (0.05)	39.1 (0.04)	42.0 (0.03)	60.4 (0.07)***	42.5 (0.04)
Not sure whether you will be dropped from MHCP	40.2 (0.03)	44.5 (0.05)	46.8 (0.04)	47.7 (0.05)	66.2 (0.07)**	48.3 (0.04)
Do not know what plan covers	41.7 (0.03)	49.2 (0.05)	47.4 (0.04)	44.2 (0.03)	65.3 (0.07)**	49.4 (0.04)
Do not know where to go with questions	27.9 (0.03)	39.3 (0.05)*	36.4 (0.03)	32.3 (0.03)	60.6 (0.07)***	48.5 (0.04)***
Any cost and coverage barrier	70.6 (0.03)	75.5 (0.04)	73.2 (0.03)	81.5 (0.03)**	85.4 (0.06)*	76.8 (0.03)
Access barriers						
Cannot get appointment as soon as needed	36.0 (0.03)	41.4 (0.05)	40.7 (0.03)	40.6 (0.05)	52.1 (0.07)*	28.6 (0.03)
Transportation problems	23.4 (0.02)	45.7 (0.05)***	40.3 (0.03)***	32.7 (0.06)	40.4 (0.02)**	30.8 (0.04)
Cannot see preferred doctor	23.8 (0.02)	28.7 (0.04)	21.5 (0.04)	18.8 (0.02)	44.8 (0.06)**	31.4 (0.04)
Office not open when you can go	12.4 (0.02)	24.4 (0.04)*	14.7 (0.03)	19.0 (0.02)*	41.0 (0.03)***	19.6 (0.03)*
Do not know where to go	11.3 (0.02)	18.5 (0.03)*	15.8 (0.03)	17.7 (0.02)*	41.6 (0.06)***	20.7 (0.03)**
Work or family responsibilities	26.9 (0.03)	31.0 (0.04)	22.0 (0.04)	23.8 (0.02)	59.6 (0.07)***	27.0 (0.03)
Availability of childcare	12.7 (0.02)	22.8 (0.04)*	15.7 (0.03)	14.3 (0.02)	47.0 (0.07)***	26.0 (0.04)**
Any access barrier	59.3 (0.03)	77.1 (0.04)***	67.9 (0.04)	63.3 (0.05)	80.9 (0.06)**	64.5 (0.03)
Provider-related barriers						
Doctors do not speak your language	8.3 (0.02)	18.9 (0.04)*	11.9 (0.03)	32.8 (0.06)***	51.0 (0.03)***	29.7 (0.04)***
Doctors do not understand your culture	2.1 (0.01)	15.8 (0.03)***	10.2 (0.02)***	16.8 (0.02)***	50.9 (0.07)***	28.0 (0.03)***
Doctors do not respect your religious beliefs	1.1 (0.01)	11.3 (0.03)**	3.4 (0.01)	1.8 (0.01)	27.7 (0.02)***	15.6 (0.03)***
Doctors are not trustworthy	15.0 (0.02)	23.0 (0.04)	21.2 (0.04)	24.1 (0.06)	48.8 (0.06)***	25.8 (0.03)**
Place of care is not welcoming	8.6 (0.02)	15.4 (0.03)*	16.0 (0.03)*	10.2 (0.02)	41.1 (0.06)***	22.7 (0.03)***
Any provider-related barriers	23.0 (0.02)	43.2 (0.05)***	34.1 (0.04)*	48.1 (0.05)***	70.9 (0.08)***	55.3 (0.04)***

Indication of a significant difference compared with whites: *$P<0.05$, **$P<0.01$, ***$P<0.001$.
Source: 2008 Disparities and Barriers to Utilization among Minnesota Health Care Program Data.

REFERENCES

1. Kaiser Family Foundation. Facts on health reform. Available at: http://www.kff.org. Accessed July 7, 2011.
2. Lillie-Blanton M, Hoffman C. The role of health insurance coverage in reducing racial/ethnic disparities in health care. *Health Aff.* 2005;24:398–408.
3. Institute of Medicine. *Unequal treatment: Confronting racial and ethnic disparities in health care*. Washington, DC: National Academy Press; 2002.
4. Bashshur RL, Homan RK, Smith DG. Beyond the uninsured: problems in access to care. *Med Care*. 1994;32:409–419.
5. Long SK, Stockley K, Nordahl KW. Coverage, access, and affordability under health reform: learning from the Massachusetts model. *Inquiry*. 2012/2013;49:303–316.
6. Zhu J, Brawarsky P, Lipsitz S, et al. Massachusetts Health Reform and disparities in coverage, access and health status. *J Gen Intern Med*. 2010;25:1356–1362.
7. Long SK, Masi PB. Access and affordability: an update on health reform in Massachusetts, Fall 2008. *Health Aff.* 2009;28:w578–w587.
8. Alexandraki I, Mooradian AD. Barriers related to mammography use for breast cancer screening among minority women. *J Natl Med Assoc*. 2010;102:206–218.
9. Laditka SB, Laditka JN, Probst JC. Racial and ethnic disparities in potentially avoidable delivery complications among pregnant Medicaid beneficiaries in South Carolina. *Matern Child Health J*. 2006;10:339–350.
10. Mayberry RM, Mili F, Ofili E. Racial and ethnic differences in access to medical care. *Med Care Res Rev*. 2000;57(suppl):108–145.
11. Mollborn S, Stepanikova I, Cook KS. Delayed care and unmet needs among health care system users: when does fiduciary trust in a physician matter? *Health Serv Res*. 2005;40(6p1):1898–1917.
12. Weech-Maldonado R, Morales LS, Elliott M, et al. Race/ethnicity, language, and patients' assessments of care in Medicaid managed care. *Health Serv Res*. 2003;38:789–808.
13. Ahmed SM, Lemkau JP, Nealeigh N, et al. Barriers to healthcare access in a non-elderly urban poor American population. *Health Soc Care Community*. 2002;9:445–453.
14. Kullgren JT, McLaughlin CG, Mitra N, et al. Nonfinancial barriers and access to care for U.S. adults. *Health Serv Res*. 2012;47(1pt2):462–485.
15. Mollborn S, Stepanikova I, Cook KS. Delayed care and unmet needs among health care system users: When does fiduciary trust in a physician matter? *Health Serv Res*. 2005;40:1898–1917.
16. Beckmann CA, Buford TA, Witt J. Perceived barriers to prenatal care services. *MCN Am J Matern Child Nurs*. 2000;25:43–46.
17. Doescher MP, Saver BG, Franks P, et al. Racial and ethnic disparities in perceptions of physician style and trust. *Arch Fam Med*. 2000;9:1156–1163.
18. Coughlin TA, Courtot B, Peters R. Are state Medicaid managed care programs ready for 2014? A review of eight states. Urban Institute, Washington, DC. May 2013. Available at: http://www.rwjf.org/content/dam/farm/reports/issue_briefs/2013/rwjf406305. Accessed September 20, 2013.
19. Government Accountability Office. Medicaid: state's use of managed care. August 17, 2012. GAO-12-872R. Washington, DC. Available at: http://www.gao.gov/assets/600/593781.pdf. Accessed September 30, 2013.
20. McCarthy D, How SKH, Schoen C, et al. Aiming higher: Results from a state scorecard on health system performance, 2009. Available at: http://www.commonwealthfund.org/~/media/Files/Publications/Fund%20Report/2009/Oct/1326_McCarthy_aiming_higher_state_scorecard_2009_ull_report_FINAL_v2.pdf. Accessed July 2, 2014.
21. Kaiser Family Foundation. Medicaid benefits by state. Available at: http://medicaidbenefits.kff.org. Accessed July 19, 2011.
22. Gallagher P, Fowler F. Don't forget about personal interviewing. In: Cohen SB, Lepkowski JM, eds. *Eighth Conference on Health Survey Research Methods*. Hyattsville, MD: National Center for Health Statistics; 2004.
23. Call KT, McAlpine D, Britt H, et al. Partnering with communities in survey design and implementation. In: Cohen SB, Lepkowski JM, eds.

Eighth Conference on Health Survey Research Methods. Hyattsville, MD: National Center for Health Statistics; 2004.
24. Azzahir A, Barbee J, Beebe T, et al. Disparities and barriers to utilization among Minnesota health care program enrollees. June 2009. Available at: http://www.shadac.org/publications/disparities-and-barriers-utilization-among-minnesota-health-care-program-enrollees-2009. Accessed March 21, 2013.
25. Hennepin County Human Services and Public Health Department. SHAPE 2006: Survey of Health of All the Population and the Environment, Minneapolis, Minnesota, July 2008. Available at: http://www.hennepin.us/SHAPE. Accessed September 4, 2013.
26. Ulmer C, McFadden B, Nerenz DR. *Race, ethnicity, and language data: Standardization for health care quality improvement*. Washington, DC: National Academy Press; 2009.
27. Office of Management and Budget. Provisional guidance on the implementation of the 1997 standards for federal data on race and ethnicity. Available at: http://www.whitehouse.gov/sites/default/files/omb/assets/omb/fedreg/r&e_guidance_notice.pdf. Accessed March 21, 2013.
28. McAlpine DD, Beebe TJ, Davern M, et al. Agreement between self-reported and administrative race and ethnicity data among Medicaid enrollees in Minnesota. *Health Serv Res*. 2007;42(6p2):2373–2388.
29. Espinoza A. Priests and health department tackle fetal and infant deaths among Latino families. Minnesota Public Radio Nov. 13, 2006. Available at: http://minnesota.publicradio.org/display/web/2006/10/09/infantmort. Accessed March 21, 2013.
30. Davidoff M, Ulrich E, Carrizales P, et al. Improving health care access for Minnesota's growing Latino community. University of Minnesota Extension Web site. Available at: http://www.extension.umn.edu/distribution/familydevelopment/components/7565_03.html. Accessed March 21, 2013.
31. Minnesota Department of Human Services, Minnesota Health Care Programs. Summary of coverage, cost sharing and limits. Available at: https://edocs.dhs.state.mn.us/lfserver/Public/DHS-3860-ENG. Accessed September 8, 2013.
32. Williams RA. *The Good, the Bad, and the Ugly: Overview of the Health Reform Law and its Impact on Health-care Disparities. Healthcare Disparities at the Crossroads with Healthcare Reform*. 1st ed Springer Publications; 2011:145–165.
33. Kaiser Family Foundation, State Health Facts, Medicaid Benefits. Non-emergency medical transportation services. Available at: http://kff.org/medicaid/state-indicator/non-emergency-medical-transportation-services/. Accessed September 8, 2013.
34. Minnesota Department of Human Services, Minnesota Health Care Programs. Provider manual, special transportation services. Available at: http://www.dhs.state.mn.us/main/idcplg?IdcService=GET_DYNAMIC_CONVERSION&RevisionSelectionMethod=LatestReleased&dDocName=dhs16_141021. Accessed September 8, 2013.
35. US Department of Health and Human Services, Office of Minority Health. National standards for culturally and linguistically appropriate services in health care. March 2001, Rockville, MD. Available at: http://minorityhealth.hhs.gov/assets/pdf/checked/finalreport.pdf. Accessed September 7, 2013.
36. Fiscella K, Franks P, Doescher MP, et al. Disparities in health care by race, ethnicity, and language among the insured: Findings from a national sample. *Med Care*. 2002;40:52–59.
37. Flores G. The impact of medical interpreter services on the quality of health care: A systematic review. *Med Care Res Rev*. 2005;62:255–299.
38. Groves RM. Nonresponse rates and nonresponse bias in household surveys. *Public Opin Q*. 2006;70:646–675.
39. Dillman DA, Phelps G, Tortora R, et al. Response rate and measurement differences in mixed-mode surveys using mail, telephone, interactive voice response (IVR) and the internet. *Soc Sci Res*. 2009;38:1–18.
40. Meredith W. Measurement invariance, factor analysis and factorial invariance. *Psychometrika*. 1993;58:525–543.
41. Gregorich SE. Do self-report instruments allow meaningful comparisons across diverse population groups? Testing measurement invariance using the confirmatory factor analysis framework. *Med Care*. 2006;44(suppl 3):S78–S94.