

## POPULATIONS AT RISK

## Beyond the Examination Room

## Primary Care Performance and the Patient-physician Relationship for Low-income Women

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**OBJECTIVE:** To assess whether primary care performance of low-income women's primary care delivery sites is associated with the strength of their relationships with their physicians.

**DESIGN:** Random-digit-dial and targeted household telephone survey of a population-based sample.

**SETTING:** Washington, D.C. census tracts with  $\geq 30\%$  of households below 200% of federal poverty threshold.

**PARTICIPANTS:** Women over age 40 ( $N = 1,205$ ), 82% of whom were African American.

**MEASUREMENTS AND MAIN RESULTS:** The response rate was 85%. Primary care performance was assessed using women's ratings of their systems' accessibility (organizational, geographic, and financial), continuity, comprehensiveness, and coordination. Respondents' ratings of trust in their physicians, communication with their physicians, and compassion shown by their physicians were used to operationalize the patient-physician relationship. Controlling for population and insurance characteristics, 4 primary care features were positively associated with women's trust in and communication with their physicians: continuity with a single clinician, organizational accessibility of the practice, comprehensive care, and coordination of specialty care services. Better organizational access, but not geographic or financial access, was associated with greater levels of trust, compassion, and communication (odds ratios [ORs], 3.2, 7.4, and 6.9, respectively;  $P \leq .01$ ). Women who rated highest their doctor's ability to take care of all of their health care needs (highest level of comprehensiveness) had 11 times the odds of trusting their physician ( $P \leq .01$ ) and 6 times the odds of finding their physicians compassionate and communicative ( $P \leq .01$ ), compared to those with the lowest level of comprehensiveness.

**CONCLUSIONS:** Primary care delivery sites organized to be more accessible, to link patients with the same clinician for their visits, to provide for all of a woman's health care needs,

and to coordinate specialty care services are associated with stronger relationships between low-income women and their physicians. Primary care systems that fail to emphasize these features of primary care may jeopardize the clinician-patient relationship and indirectly the quality of care and health outcomes.

**KEY WORDS:** physician-patient relations; patient-centered care; primary health care; communication; trust; women; African American; low-income.

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A growing body of research is defining the most effective components of patient-physician interactions.<sup>1-3</sup> Common to most conceptualizations of the patient-physician relationship are essential elements of trust,<sup>2,4,5</sup> compassion,<sup>5,6</sup> communication,<sup>5-8</sup> and clinical competence.<sup>1-3</sup> These elements have been rated as particularly important among lower income and minority women,<sup>9</sup> for whom a strong patient-physician relationship is crucial to obtaining needed health care services.<sup>10,11</sup>

In addition to being important to patients, having a strong sustained relationship with a physician<sup>5,12,13</sup> is correlated with patient outcomes such as satisfaction.<sup>8,14-16</sup> Specific components of the patient-physician relationship, such as communication, also influence health outcomes, measured as both self-assessed health status and functional status.<sup>17-22</sup> Better communication,<sup>23</sup> trust,<sup>14,24,25</sup> and more humane interpersonal treatment,<sup>26,27</sup> are associated with adherence to recommended behavior changes.

Yet it is still not clear which features of the structure and process of primary care delivery impact on these important components of the patient-physician relationship. Studies of specific attributes of primary care, especially for vulnerable populations, are few in number.<sup>28</sup> Goold and Lipkin noted that while much empirical work has been done on the patient-physician relationship, "... it has not yet been demonstrated that an emphasis, in principle, on primary care leads to stronger (patient-physician) relationships, and to what extent countervailing forces such as lack of continuity counter this."<sup>10</sup>

Primary care is characterized and distinguished from other types of care (specialty, in-patient hospital,

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emergency care, etc.) by several essential attributes.<sup>29–32</sup> These attributes include accessibility, comprehensiveness of services, coordination, continuity, and accountability.<sup>30,32</sup> Yet there is wide variation in the performance of “primary care” sites with respect to these attributes.<sup>33</sup>

Ideally, primary care is the point of first contact in the health service system and provides person-focused, (rather than disease-oriented) care over time.<sup>32</sup> Thus, we hypothesized that systems structured to emphasize these primary care principles would be more amenable to the establishment of a strong patient-physician relationship than would systems with less emphasis on these principles. For this study, a strong patient-physician relationship is defined as one having the highest levels of trust in, communication with, and compassion from a physician. To avoid the bias of sampling only high users of primary care, who might be more likely to be satisfied with their patient-physician relationships, we chose to use a community-based sample rather than a clinic-based sample. This also allowed us to evaluate women receiving care from a variety of ambulatory care settings. In sum, this paper assessed whether there is an association between the performance of women’s primary care sites and the strength of their patient-physician relationships.

## METHODS

### Survey Design and Sampling

**Sampling Strategy.** Because this was part of a larger study to examine low-income women’s use of cancer screening and primary care, inclusion criteria were: being female, age over 40 years, residing in Washington, D.C., and living in a census tract where at least 30% of the households had an income <200% of the 1999 poverty guideline for a family of four.<sup>34</sup> Our strategy balanced efficiency with a community-based sampling method. A professional sampling system (Genesys Sampling Systems, as used by Marketing Systems Group, Fort Washington, Pa) generated a list of telephone numbers to obtain a sample of 25% random-digit-dial and 75% targeted listed households. The Random Digit Dialing sample was generated from the set of all telephone exchanges that service the lower income census tracts from throughout Washington, D.C. The listed household sample was merged with demographic information from census and marketing data in order to over-sample lower income women.

**Instrument Development and Data Collection.** The telephone survey was developed using focus groups,<sup>9</sup> prior research,<sup>6,35,36</sup> and pilot testing. The instrument is available from the authors (ASO). Trained, female bilingual (Spanish/English) interviewers conducted a computer-assisted telephone survey between January and March, 2000. An original call and up to 5 call-backs were

attempted to reach each residence. Most calls were made between the hours of 3 PM and 10 PM on weekdays and weekends, but calls were also made outside of these hours and a toll-free number was provided. The survey took on average 25 minutes to complete. The survey response rate among eligible women was 85%.

### Independent Variables

On the basis of pilot testing, we adapted the Primary Care Assessment Survey to develop the primary care variables.<sup>6</sup> Because our survey was administered by telephone to a lower literacy sample, it was necessary, based on extensive pilot testing, to decrease the number of response options from 6 to 4 for certain items. Primary care variables were analyzed as categorical, rather than as scales. Women’s perceptions of their practice’s primary care features were assessed as follows:

1. Comprehensive service delivery—Overall comprehensiveness was assessed by 1 item asking, “Thinking about how well your doctor knows you, how would you rate your regular doctor’s ability to take care of all of your health care needs? Would you say it is poor, fair, good, or excellent?” Item responses were trichotomized into low, mid, and high comprehensiveness tertiles. Comprehensiveness of counseling (smoking, alcohol, and diet) and screening (cholesterol, blood pressure, height, and weight) services were each assessed with 3 items to determine these additional preventive aspects of comprehensiveness. Counseling and screening comprehensiveness were also included as separate variables.
2. Coordination—Coordination of care was assessed by women’s ratings of their regular clinicians help getting the patient an appointment with a specialist, involvement in the patient’s care when hospitalized or under the specialist’s care, and helping the patient to understand what the specialist said about her. This variable was only assessed for women who had been referred to a specialist or hospitalized by the regular clinician.
3. Continuity of care—included the degree to which office visits were with the same specific clinician (visit continuity), and the duration of that relationship with the clinician (longitudinal continuity). To assess duration of the relationship, women were asked: “How long has this person/place been your doctor/source of care?” The “Visit Continuity” variable was created to have 3 mutually exclusive categories: 1) having a usual site but no regular clinician at that site,<sup>6,35</sup> 2) having a usual site and a regular clinician at that site whom one saw for only some sick and well visits,<sup>6</sup> and 3) having a usual site and a regular clinician whom one saw for most sick and well visits.<sup>6</sup> To create these last 2

categories, survey items asked: "When you go for a check-up or routine care, how often do you see your regular doctor as opposed to an assistant or partner?" and "When you are sick and go to the doctor, how often do you see your regular doctor as opposed to an assistant or partner?" Response options were: Almost always, A lot of the time, Some of the time, Almost never, and Never.<sup>6</sup> If a woman had a regular clinician at her usual site of care and if she answered "Almost always" to these last 2 questions, she was put in the group with the highest level of visit continuity.

4. Accessibility—had 3 distinct components and was operationalized according to prior studies.<sup>36</sup> The first component, financial access, was assessed with a single item asking about the amount of money the woman paid for office visits and for prescribed treatments. The second component, geographic access, was assessed with a single item, the woman's rating of the convenience of her regular doctor's office location. The third component, organizational access, was assessed with 4 items: hours open for appointments, wait for appointments, ability to get through by phone, and amount of time the doctor spent with the patient. For organizational accessibility, women's ratings of these 4 items were averaged and then trichotomized into tertiles of low, mid and high organizational accessibility.

## Dependent Variables

The dependent variables of interest in this study operationalized the patient-physician relationship. Using recognized conceptualizations of the patient-physician relationship,<sup>2,6,30</sup> we included 5 items that assessed 3 of its aspects: trust, compassion, and communication. Patient-physician communication was assessed by asking the respondent how she would rate her regular doctor's explanations of her health problems or treatment that she needed. Responses were on a 4-point scale ranging from "poor" to "excellent." The response to this item was dichotomized into lower versus higher communication. Physician compassion was assessed by asking the women to rate her regular physician's: 1) patience with her questions or worries, 2) caring and concern for her, and 3) respect for her. Each item had the same 4-point response options ranging from poor to excellent. The mean of the responses for these 3 items was then dichotomized at the median into lower versus higher compassion. Trust was assessed with a single item asking, "All things considered, how much do you trust your doctor? On a scale from 0 to 10 where 0 is 'Not at all' and 10 is 'Completely.'"<sup>6</sup> Item responses were also dichotomized at the median into lower versus higher. For the logistic regressions, we modeled the outcome of having the higher (versus lower) level of trust, compassion, or

communication. All concepts were measured in the context of the global patient-clinician relationship; items were not visit specific.

Controlling variables were age (41 to 49, 50 to 64,  $\geq 65$  years) household income, race/ethnicity, education, work status, marital status, family size, whether one owns/rents a home, health status, and insurance status.

**Data Analysis.** Univariate, bivariate, and stratified analyses, using  $\chi^2$  tests as appropriate, were done. We tested for interactions between insurance status (insured vs uninsured) and each of the specific primary care domains with respect to the patient-physician relationship variables; none were found. Prior to conducting the full logistic regression models, the associations were tested between each patient-physician relationship variable and each primary care variable, controlling for the respondents' personal characteristics. Because the sizes of the odds ratios (ORs) from these regression analyses were consistent with those from the multivariate models done in the final phase of analyses, we are less concerned that the multivariate analyses were confounded by correlations among the independent primary care variables.

Multivariate logistic regressions modeled each element of the patient-physician relationship (trust, compassion, and communication) as dichotomous dependent variables. The features of primary care (coordination; visit continuity; longitudinal continuity; comprehensiveness; and organizational, financial, and geographic accessibility) were included as independent variables in all models. All regressions controlled for insurance status (public only, private, uninsured), age, education, income, race/ethnicity, home ownership status, marital status, and health status. The fit of all multivariate models was good as assessed via the Hosmer-Lemeshow test<sup>37</sup> and c statistics (SAS Institute, Inc., Cary NC, Version 8).

To put the importance of primary care performance into perspective as it relates to the patient-physician relationship, we calculated attributable risk percents. Attributable risk (AR) differs from ORs in that AR considers not only the relative risk but also the risk factor prevalence in the population of concern.<sup>38</sup> Thus, it is a better indicator of the public health importance of an identified association than is the OR alone. In health services research, the risk factor is absence (or having less) of a particular feature of primary care. This differs in direction from general biomedical research where the risk factor is usually an exposure of some type and the outcome is development of a disease. Thus, in order to permit a more meaningful interpretation of the AR estimates, we reran the logistic regressions to model the outcomes of low trust, low compassion, and low communication. We then calculated the population attributable risks to assess associations between having low levels of a particular primary care feature (risk factor) and the outcomes of low trust, compassion, and communication in the patient-physician relationship.<sup>38,39</sup>

## RESULTS

Table 1 describes the sample and presents the percentage of women with high levels of trust, compassion, or communication stratified by personal characteristics. We compared our sample to 1999 Current Population Survey (CPS)<sup>40</sup> data for Washington, D.C. for the universe of women over age 40 living in the census tracts from which we sampled. Compared with the CPS estimates, the study population was older, had less formal education, was poorer, and was more likely to be African American. This

reflects success in our targeting procedures for obtaining a large subgroup of low-income women. Additional characteristics of our sample population compared to the CPS have been described elsewhere.<sup>11</sup>

Overall, 84.8% (1,017) of respondents had a regular clinician. An additional 154 women reported a usual site of routine and sick care but lacked a regular clinician at that site; that is, they had continuity with a primary care site but not with a specific clinician. The types of primary care sites reported by respondents were private doctor's office/ HMO (62%), public health clinic/community health

Table 1. Characteristics of 1,205 Female Respondents

Characteristic	Study Population, % (N = 1,205)	Women Having Higher Level of Trust in their Physician, % (n = 1,171)*	Women Perceiving their Physician's Compassion to Be at the Higher Level, % (n = 1,171)	Women Rating Communication with their Physician as Being at the Higher Level, % (n = 1,171)
Age, (mean 64.8 years)				
41 to 49	16.3	56.4	45.7	51.8
50 to 65	28.4	72.6	50.6	56.2
≥65	55.3	77.1 <sup>†</sup>	43.7	50.8
Education (highest completed)				
<12 years	26.3	73.8	34.7	44.5
HS grad/GED	33.5	75.7	44.0	50.0
≥Some college	40.2	68.4 <sup>‡</sup>	55.6 <sup>†</sup>	60.3 <sup>†</sup>
Income				
Don't know/refused (most similar to the <\$10K group)	26.9	77.5	40.1	47.5
≤\$30 K	42.5	70.6	43.3	49.5
>\$30K	30.6	70.0 <sup>‡</sup>	55.7 <sup>†</sup>	61.6 <sup>†</sup>
Self-identified ethnicity/race				
Black/African American	82.7	71.6	45.3	52.3
Caucasian	6.6	69.6	51.9	50.6
Hispanic/ Other	3.7	86.7	64.4	62.2
Refused	7.0	75.0	41.7 <sup>‡</sup>	54.8
Owens home (vs rents)	66.2	73.0	49.4 <sup>†</sup>	55.7 <sup>†</sup>
Work status				
Retired/disabled	62.6	77.5	46.1	52.5
Working full-time	24.3	63.6	47.8	56.4
Working part-time	6.4	53.2	35.0	38.9
Unemployed/homemaker/ student/refused	7.2	74.1 <sup>†</sup>	50.6	54.3
Married/living as married	26.5	70.4	45.9	53.8
Family size (mean 2.1) ≥4 persons/household	12.4	70.0	48.7	60.0
Health status (self-assessed)				
Poor to fair	26.2	70.8	39.0	46.7
Good	36.4	68.5	41.1	47.3
Very good to excellent	37.4	76.9 <sup>‡</sup>	56.0 <sup>†</sup>	62.0 <sup>†</sup>
Health insurance any point in the past 12 months				
Public only	22.8	78.3	43.0	50.7
Private (may also have had Medicare/Medicaid)	67.9	71.4	47.9	54.3
Uninsured for the entire past 12 months	9.3	62.2 <sup>†</sup>	41.4	45.9

\* n = 1,171 includes only women with at least a usual site of care.

<sup>†</sup> P < .01.

<sup>‡</sup> P < .05.

The three right hand columns present the percentage of women with each personal characteristic having the highest levels of trust, compassion, or communication in their relationship with their regular physician.

center (26.7%), and other (11.1%). Older and healthier women in our sample reported greater trust in their physicians than did their counterparts. Compared to less educated women, those with more formal education had more favorable impressions of their physicians' compassion and communication, but were less likely to trust their physicians.

In bivariate analyses, (Table 2) each of the primary care characteristics was associated with having more trust, compassion, and communication in the patient-physician relationship. Insurance status was associated with patient-physician trust, but not with communication or with compassion. Publicly insured women (Medicaid or Medicare only) were twice as likely as uninsured women to trust their regular physician. However, once we controlled for continuity of care, having insurance was no longer associated with trust.

In logistic regressions, 4 primary care features were positively associated with higher trust, compassion, and communication in the patient-physician relationship: continuity with a single clinician, accessibility of the practice, comprehensive service delivery, and coordination of specialty services (Table 3). Three features of primary care (organizational accessibility, comprehensiveness, and coordination) were positively associated with a stronger physician-patient relationship, regardless of the degree of

continuity of care or of the duration of the relationship with a specific physician (data not shown).

Comparing women with the lowest level of organizational access to those with the highest, the attributable risk percents were 46.5% for low patient-physician trust and 56.5% for poor communication. Thus, if this were a causal association, reorganization of the practice to make it more accessible would result in a 56.5% increase in the percent of women rating their communication as high, among those currently rating their communication as low. Comparing women with the lowest level of continuity (having a usual site of care, but not a specific clinician) versus the highest (having a specific clinician which one saw for most visits), the attributable risk percents were 14.3% for low trust, and 3.9% for poor communication. Comparing women with the least comprehensiveness at their site, to those with the most comprehensiveness at their site, the attributable risk percents were 36.6% for low trust and 23.0% for poor communication.

## CONCLUSIONS

This study provides a comprehensive view of the structure and process of primary care delivery as it relates to the patient-physician relationship for low-income, predominantly African-American women. For these women,

**Table 2. Proportion of Women\* with High Levels of Trust, Compassion, and Communication According to their Primary Care Characteristics**

Primary Care Characteristic	Elements of the Patient-physician Relationship ( $P = .001$ ) <sup>†</sup>		
	Trust, %	Compassion, %	Communication, %
Continuity of visits with the same clinician*			
Has primary care site, but no regular doctor ( $n = 149$ )	49	28	36
Has site and regular doctor, but only sees regular doctor for some visits ( $n = 391$ )	68	43	46
Has site and regular doctor; sees the regular doctor for most visits ( $n = 631$ )	82	54	62
Duration of relationship with clinician			
<6 mo ( $n = 71$ )	57	35	37
6 to 24 mo ( $n = 273$ )	67	41	48
>24 mo ( $n = 826$ )	77	50	57
Organizational accessibility			
Low ( $n = 497$ )	55	21	26
Mid ( $n = 340$ )	81	49	61
High ( $n = 334$ )	92	84	88
Comprehensiveness of services (all needs met by provider)			
Low ( $n = 130$ )	25	8	10
Mid ( $n = 461$ )	64	25	32
High ( $n = 575$ )	92	73	80
Coordination of specialty care by the regular clinician <sup>‡</sup>			
Low ( $n = 133$ )	37	24	29
Mid ( $n = 354$ )	73	38	43
High ( $n = 266$ )	94	80	88

\*  $N = 1,171$  includes only women with at least a usual site of care.

<sup>†</sup> All associations presented were significant at  $P = .001$  across the levels of the primary care characteristics.

<sup>‡</sup>  $n = 754$  because this only includes women who first answered yes to the item, "Has your regular doctor ever recommended that you see a specialist for a specific health problem?"

**Table 3. Adjusted Odds Ratios of Having the Higher Level of Physician-patient Trust, Compassion, and Communication According to Insurance and Primary Care Characteristics**

Insurance and Primary Care Characteristics	Elements of the Patient-physician Relationship		
	Trust	Compassion	Communication
	OR (95% CI)	OR (95% CI)	OR (95% CI)
Insurance			
Uninsured	1	1	1
Public only	1.29 (0.69 to 2.42)	0.97 (0.53 to 1.80)	1.23 (0.66 to 2.28)
Private (may also have public)	0.77 (0.44 to 1.34)	0.84 (0.47 to 1.47)	1.00 (0.57 to 1.78)
Continuity			
Has primary care site, but no regular doctor	1	1	1
Has a site and regular doctor, but doesn't see at all visits	2.02 (1.23 to 3.34)*	1.99 (1.17 to 3.37)*	1.29 (0.77 to 2.15)
Has a site and regular doctor; does see for all visits	3.05 (1.86 to 5.00)*	1.75 (1.05 to 2.90)*	1.61 (1.00 to 2.64)
Accessibility, geographic			
Low	1	1	1
Mid	1.75 (1.06 to 2.89)*	0.86 (0.51 to 1.46)	1.50 (0.88 to 2.55)
High	1.23 (0.72 to 2.08)	1.11 (0.64 to 1.84)	1.91 (1.12 to 3.25)*
Accessibility, organizational			
Low	1	1	1
Mid	2.00 (1.34 to 2.98)*	1.92 (1.34 to 2.75)*	2.40 (1.65 to 3.35)*
High	3.25 (1.86 to 5.66)*	7.45 (4.80 to 11.56)*	6.90 (4.34 to 10.93)*
Accessibility, financial			
Low	1	1	1
Mid	1.21 (0.85 to 1.73)	1.18 (0.85 to 1.64)	1.18 (0.84 to 1.65)
High	1.22 (0.73 to 2.02)	1.32 (0.83 to 2.11)	1.28 (0.80 to 2.05)
Comprehensiveness, all needs met			
Low	1	1	1
Mid	2.65 (1.66 to 4.21)*	1.62 (0.93 to 2.84)	1.59 (0.94 to 2.69)
High	11.69 (6.79 to 20.12)*	6.63 (3.79 to 11.59)*	6.63 (3.88 to 11.34)*
Comprehensiveness, counseling			
Low	1	1	1
Mid	1.01 (0.68 to 1.48)	0.87 (0.61 to 1.25)	1.00 (0.67 to 1.40)
High	1.37 (0.83 to 2.26)	1.35 (0.86 to 2.11)	1.57 (1.00 to 2.47)
Comprehensiveness, screening			
Low	1	1	1
Mid	0.81 (0.32 to 2.05)	2.30 (0.82 to 6.44)	2.78 (1.00 to 7.76)
High	1.02 (0.43 to 2.41)	1.51 (0.58 to 3.93)	1.78 (0.68 to 4.64)
Coordination of specialty care			
Low	1	1	1
Mid	1.50 (1.03 to 2.16)*	1.00 (0.70 to 1.43)	0.82 (0.58 to 1.17)
High	4.62 (2.46 to 8.68)*	2.70 (1.78 to 4.09)*	3.55 (2.21 to 5.71)*
Overall model fit			
c (where 1 is perfect prediction)	0.859	0.867	0.874
-2 log likelihood	936	1077	1044
-2 log (intercept only)	1363	1618	1617

\* Odds ratios are statistically significant; the  $\chi^2$  test compared the levels of trust (or compassion or communication) between the levels of the primary care characteristic. The reference group for each comparison is the lower (vs higher) level of the primary care characteristic.

Table only includes women with a usual site of primary care, N = 1,171. In addition to the above variables, all models adjusted for age, socioeconomic status (education, income, home ownership, marital status), health status, and ethnicity.

OR, odds ratio; CI, confidence interval.

there was a link between the organization of primary care delivery and the strength of the patient-physician relationship. That is, features outside of the examination room played a role in how women interacted with their doctors. Specifically, women whose delivery sites had more emphasis on the principles of primary care were more likely to rate highly their trust in, and communication with, their regular physician. They were also more likely to find their regular physician to be compassionate. Specifically, continuity with the same clinician, better organizational accessibility,

comprehensiveness, and better coordination of specialty care were associated with a stronger patient-physician relationship. In light of a recent study documenting that the quality of the patient-physician relationship and of organizational access decreased from 1996 to 1999 for a sample of insured persons,<sup>41</sup> the present findings are especially noteworthy.

Consistent with findings from a qualitative study,<sup>4</sup> women's trust in their physician was higher if the organizational accessibility of the practice site was higher.

Our data suggest that if less accessible sites were modified to become more organizationally accessible, women's trust in their physicians might improve. Such modifications would include increasing hours open for appointments, decreasing the wait for appointments, enhancing the ability to get through by phone, and increasing the amount of time patients were allowed to spend with the doctor. This association between organizational accessibility and the patient-physician relationship has important implications for the structure of primary care practices.<sup>42,43</sup> For example, practices might alter the hours that they are open for appointments to include more evening or weekend hours. In addition, they might try to minimize the barriers to patients who call to speak with a clinician by phone. This study also found statistical associations between organizational accessibility and patient-physician communication. These data suggest that organizational changes may result in better reports of communication and increased trust.

We also identified positive associations between comprehensiveness of services (clinician's ability to provide for all of the patient's health care needs) and trust, a finding that is consistent with prior research.<sup>4</sup> In today's health care environment, some patients fear that providers might make management decisions based on insurance coverage, or avoid offering services to save money, a sentiment more pervasive among lower income than higher income persons.<sup>44</sup> More comprehensive care suggests that more of a woman's needs are being addressed, leading to a greater belief that the clinician is acting on the patient's behalf.

## Limitations

Because of the cross-sectional study design we cannot draw causal inferences. For example, it is possible that patients who trust their physician more may have a more favorable recollection of how accessible that physician's practice is. Alternately, women who are less prone to trust practitioners may differ in how they select their primary care provider. However, primary care sites that are more organizationally accessible are probably more likely to create an environment that fosters trust and communication than are less accessible sites. An additional possibility is that sites that support the components of high quality primary care may attract physicians for whom these characteristics are important. These physicians may differ from physicians in sites less supportive of primary care, by characteristics that could be correlated with the study variables. In addition, the exposure-response relationship between the primary care variables and elements of the patient-physician relationship adds evidence for a potentially causal relationship.

The study sample was restricted to inner-city women with telephones, making our findings less generalizable to persons in rural areas. Individuals least likely to have access to clinicians may also be those without telephones.

We also relied on women's self-report to assess the characteristics of their primary care settings. Our primary interest was in the women's perceptions of their primary care. Hence, we could not assess certain aspects of primary care from the provider standpoint. Because we did not survey providers, we did not attempt to measure the "competence" aspect of the patient-physician relationship.

## Implications

Once continuity of care was controlled for, insurance was not significantly associated with the patient-physician relationship measures. This finding suggests that insurance is an important facilitator of women's entry into the health care system and selection of a primary care delivery site. However, once a woman has entered the health care system, it is the specific features of that system that have more influence on the patient-physician relationship.

Health plans with organizational structures that inadvertently create unreasonable restrictions on the length of the patient visit, de-emphasize clinician continuity, or make it hard for a patient to contact her clinician, (by phone, or lengthy waiting times for appointments) may jeopardize the patient-physician relationship.<sup>5,42</sup> Indirectly, this may weaken the quality of care and health outcomes.<sup>14-27</sup> It is difficult for an individual to overcome systemic organizational barriers. Health plans, Medicaid managed care, community health centers and physician's groups can make organizational changes at the system level that foster an atmosphere of caring and strengthen relationships. "Organizational change may be a more efficient way to promote caring than changing either medical education or the process by which medical students are selected."<sup>42</sup>

Patient dissatisfaction is an important predictor of disenrollment from a health plan.<sup>45-47</sup> Specifically, dissatisfaction with the patient-physician relationship is a leading predictor of health plan disenrollment.<sup>48</sup> Voluntary disenrollment was especially common among women and nonwhite patients.<sup>48</sup> In our and others' studies,<sup>49,50</sup> patients who had longer relationships with their physicians and who reported that their physicians were more available to answer questions were less likely to report low ratings of trust and satisfaction. Health plans attempting to minimize member disenrollment might consider increasing the continuity with a specific clinician and the organizational accessibility of their sites in order to facilitate better patient-clinician relationships and hence better enrollee satisfaction.

In summary, emphasis on the principles of primary care is associated with stronger patient-physician relationships for lower income women. Primary care systems organized around these principles are more likely to foster strong relationships between patients and their physicians and to have patients who are more satisfied with those relationships.

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