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Perceptions of healthcare providers' communication skills: Do they differ between urban and non-urban residents?

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Abstract

We examined the association of place of residence—urban versus non-urban—with patients' perceptions regarding communication and interactions with healthcare providers.

Respondents' perceptions of their healthcare providers' communication skills were assessed by responses to six items from the 2002 Medical Expenditure Panel Survey, a nationally representative survey of the civilian, non-institutionalized US population. After controlling for several covariates, respondents in urban areas reported poorer communication by their healthcare providers than non-urban respondents. Differences in perceived quality of communication could contribute to reduce use of preventive healthcare and indicates a need to improve healthcare provider–patient communication in the urban setting.

Keywords

Urban health; Non-urban health; Logistic models; Physician–patient relations

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Introduction

Although disparities in access to medical care and utilization of services exist between urban and non-urban populations in the United States, it is often difficult to disentangle the underlying factors contributing to these differences. Place of residence can be both protective and a hindrance to receiving medical care and preventive services. As compared to residents of large metropolitan areas, those living in the most non-urban areas were more likely to have a usual source of care (USC), but had significantly fewer yearly healthcare visits (Larson and Fleishman, 2003). Rural veterans also experienced higher disease prevalence and lower mental and physical quality of life as compared to urban veterans (Weeks et al., 2006), while urban women were both more and less likely to obtain certain preventive health examinations as compared to non-urban women (Larson and Correa-de-Araujo, 2006).

A range of system and individual factors including access to employment-related health insurance (Larson and Hill, 2005) and differences in attitudes and behaviors toward seeking medical care (Harju et al., 2006) may contribute to urban and non-urban differences in use of services. Communication dynamics and quality of the patient–physician relationship have been associated with medical care utilization and used as indicators of care quality (Agency for Healthcare Research and Quality, 2005). The combined influences of patient and physician characteristics, such as age, sex, ethnicity, social class, personality type, cultural background, and political orientation, greatly affect communication dynamics during the medical encounter itself. To the degree that urban and non-urban settings vary by these dimensions, they could contribute to differences in patient–physician communication and subsequent utilization of services between urban and non-urban settings (Roter and Hall, 2006).

While some attention has been given to studying the general relationship between place of residence and communication (Rutten et al., 2006), little is known about the extent to which patient perceptions of provider communication behaviors in the healthcare setting vary based on place of residence. Differences in patient perceptions of communication could indicate targets for interventions to reduce disparities in access to care and receipt of preventive services. We examined the association of place of residence—urban versus non-urban—with patients’ perceptions regarding communication and interactions with healthcare providers using data from the 2002 Medical Expenditures Panel Survey (MEPS).

Methods

Data source

Data used in this cross-sectional study were obtained from the household component (HC) of the 2002 MEPS (Agency for Healthcare Research and Quality, 2007a). The MEPS is a nationally representative survey of healthcare use and spending in the US civilian, non-institutionalized population. Data were collected by telephone interviews using computerized-assisted personal interviewing technology. Because we were interested in patients’ perceptions of healthcare providers communication behaviors, our analyses were limited to approximately 16,700 MEPS respondents, 18 years of age, who had visited a

healthcare provider within the 12 months preceding data collection. The response rate for the full-year 2002 MEPS-HC was 64.7% (Agency for Healthcare Research and Quality, 2007b).

Study variables

The dichotomous predictor variable was respondents' place of residence in either a Metropolitan Statistical Area (MSA; urban) or non-MSA (non-urban) county. To be classified as an MSA, a county must have at least one urbanized area of 50,000 inhabitants (US Census Bureau, 2006).

Respondents' perceptions of communication with healthcare providers were ascertained from responses to six MEPS items. All respondents reporting going to a doctor's office or clinic in the 12 months prior to the survey were asked the following four items: (1) "How often did providers listen carefully to you?"; (2) "How often did providers explain things so you understood?"; (3) "How often did providers show respect for what you had to say?"; and (4) "How often did providers spend enough time with you?" Respondents who identified having a USC were asked the following two items: (5) "If there were a choice between treatments, how often would your provider at your USC ask you to help make the decision?" and (6) "How often does your provider at your USC give you some control over your treatment?" Responses to all six items were reported on a 4-point Likert-type scale (always, usually, sometimes, never). For the purposes of multiple logistic regression analyses, responses were dichotomized as "always" and "not always" (usually/sometimes/never).

Data analysis

Statistical analyses were conducted using SUDAAN (Research Triangle Institute, Research Triangle Park, NC) statistical software (Release 9.0.1). SUDAAN is able to account for the complex sampling design of the MEPS. Descriptive comparisons were conducted to determine the relationship of demographic characteristics to place of residence. Bivariate Chi-square (χ^2) analyses were used to examine differences in demographic characteristics as a function of place of residence. In all tables provided, the reported percentages were weighted to produce estimates for the entire US population.

Multiple logistic regression analyses were performed to assess the impact of place of residence (MSA [urban] or non-MSA [non-urban]) on respondents' perceptions of healthcare providers' communication skills, while controlling simultaneously for the effect of potentially confounding demographic factors (i.e., sex, age, race, ethnicity, family income, completion of high school [head of household], census region, health insurance status, and USC). Results of the multiple logistic regression models are reported in adjusted odds ratios (ORs) with corresponding 95% confidence intervals (CIs).

Results

The demographic characteristics of respondents are depicted in Table 1. Four-fifths of the sample resided in urban settings (81.4%) while 18.6% of the sample resided in non-urban areas.

Slightly more than half of respondents reported that their healthcare provider “always” listened to them carefully (urban = 54.4%; non-urban = 58.3%), explained things so that they understood (urban = 57.5%; non-urban = 59.3%) and showed respect for what they had to say (urban = 58.7%; non-urban = 60.1%). However, fewer than half of respondents reported that their healthcare provider “always” spent enough time with them (urban = 44.9%; non-urban = 49.5%).

Consistent across place of residence (urban versus non-urban), several demographic characteristics were strongly related to positive perceptions about physician communication skills (Table 2).

Overall, respondents 65 years were more likely to indicate positive perceptions of their healthcare providers’ communication behaviors than younger respondents. Family income was not related to respondents’ perceptions of their healthcare providers’ communication behaviors. Respondents living in the Western geographical region of the US were less likely to report that their healthcare provider “always” listened to them, explained things so that they understood, showed respect for what they had to say, or spent enough time with them as compared to those residing in other census regions. Those with private/public health insurance and a USC were more likely to respond favorably to these questions than the uninsured or those without a USC.

About half of respondents with a USC reported that their healthcare provider “always” asked them to help make decisions about their healthcare (urban = 51.1%; non-urban = 56.9%) and gave them control over their treatment (urban = 49.0%; non-urban = 54.6%). Consistent across place of residence (urban versus non-urban), all demographic characteristics, with the exception of sex, were strongly related to positive perceptions about healthcare decision-making autonomy (Table 3).

Within each MSA category, younger and poor individuals were less likely to report that their providers asked them to help make decisions or give them control over treatment options. Respondents of Hispanic ethnicity and without a high school diploma were less likely to report that their providers offered autonomy in healthcare decision-making. Those living in the Western US were less likely to be asked by their provider to help make decisions or given control over treatments. Having private insurance was a protective factor in the respondents’ perceptions of their ability to make decisions regarding healthcare decisions and control of treatment options.

After controlling for the effects of all demographic characteristics reported in Table 1, positive respondent perceptions about healthcare providers’ communication were significantly associated with place of residence (Table 4). When compared with adults living in non-urban areas (reference group), those living in urban areas were less likely to report that their healthcare provider always listened to them (odds ratio (OR) 0.86, 95% confidence interval (CI) 0.78–0.94), always spent enough time with them (OR = 0.83, 95% CI 0.76–0.91), always asked them to help make decisions about their healthcare (OR = 0.82, 95% CI 0.69–0.98), and always gave them control over their treatment (OR = 0.83, 95% CI 0.71–0.97).

Discussion

Using data from the 2002 MEPS, we examined perceptions of communication and interactions with healthcare providers among a nationally representative sample of more than 16,000 adults. Overall, our cross-sectional analyses demonstrated that just half of those sampled reported that their healthcare provider “always” listened to them carefully, explained things so that they understood, showed respect for what they had to say, spent enough time with them, involved them in decisions about their healthcare, and gave them control over treatment options. These findings are troubling because current recommendations call for healthcare providers to actively engage patients in decisions related to their care (Institute of Medicine, 2001).

Of greatest importance, we found that after controlling for potentially confounding variables, urban respondents were less likely to report high quality communication by their healthcare providers than their non-urban counterparts. Specifically, those living in urban areas were less likely to report that healthcare providers “always” listened to them carefully and spent enough time with them. One possibility for these differences may be that respondents felt healthcare providers did not listen to them carefully because the medical encounter itself was rushed. Unfortunately, time constraints reflect system-based factors and poor patient–physician communication is a recognized consequence of high-volume practices (Zyzanski et al., 1998). Slowing down the pace of speech during the medical encounter—even just slightly—has been recommended to facilitate improved communication between patient and healthcare provider (Weiss, 2003). Additional research is needed to explore whether primary care practices vary in time constraints across urban and non-urban settings.

Another plausible explanation for these discrepancies could reflect subjective differences in individuals’ expectations and/or perceptions of acceptable standards of interactions with one’s healthcare provider as a function of place of residence. For instance, not only do rural patients often have a limited number of providers to choose from (Colwell and Cultice, 2003), they usually have to travel greater distances to obtain health-related services (Probst et al., 2007) than those residing in urban areas. Underlying factors such as these may contribute to lower expectations and increased gratitude to receive even minimum levels of care among non-urban residents.

Additionally, patients and providers living together in an environment with a lower population density are more likely to interact in non-medical settings. For instance, rural patients likely see their providers at community locations such as church services, sporting events, school functions, and grocery stores. Conversations that occur during such informal interactions may influence how patients perceive overall communication with their providers. Further, personal characteristics (e.g., sex, age, immigration status) of healthcare providers in MSAs and non-MSAs may differ (Hughes et al., 2005; Morris et al., 2006; Phillips et al., 2007); thereby, potentially contributing to differences in practice style and communication dynamics with patients. This explanation may also be relevant to the regional differences noted in this study. Providers and patients may choose to live in a certain part of the country based on cultural norms or regional offerings unique to certain

areas. For example, the vast open spaces of the Western US are sometimes known for fostering independent thinkers with a more rugged nature. Patients and providers in the West, therefore, may not be as good about participating in shared decision-making.

Despite regional differences observed in our study, the overall comparison showed that urban residents with a USC reported less autonomy regarding decision-making than non-urban residents with a USC. We sense that these differences may be attributed to how well non-urban residents know their healthcare providers and are able to maintain continuity of care. These findings are particularly important because a strong patient–physician relationship has been linked to not only increased patient satisfaction (Stewart et al., 2000), but better clinical outcomes (Wanzer et al., 2004). And, even in rural locations with some provider turnover among those who locate there primarily to payback medical school loans or satisfy visa (immigration) requirements, access to the same rural clinic is fairly stable in many of these locations. In comparison, an adult in an urban setting may be less likely to have a consistent USC site, contributing to perceptions of weaker decision-making autonomy in a disjointed urban care system less conducive to patient–provider continuity.

Despite many plausible explanations, it is difficult to pinpoint the exact contributing factors for these differences. Further research is needed to explore how these factors may be intertwined with place of residence. If these findings represent a systems-based problem, certain changes may be possible to help minimize underlying influences. Regardless of any larger healthcare system changes, individual providers in both urban and non-urban locations should be made aware of different patient perceptions about their communication and healthcare interactions. In this educational process, there may be a role for training about how to assess patient health literacy skills (Weiss, 2003) and how to elicit patient communication preferences in order to improve shared decision-making.

Our findings should be interpreted in light of several potential limitations. First, as with all cross-sectional studies, our results demonstrate associations but not causation. Second, responses to MEPS items are subject to possible reporting errors and biases because of reliance on self-reported data. Third, because this study used secondary analysis of existing data, we were unable to control for variables not available in MEPS, which might influence patient–healthcare provider communication dynamics (e.g., patients’ health literacy skills (Roter, 2005), patients’ personal preferences for involvement in healthcare-related decisions (Levinson et al., 2005; Street et al., 2005), congruence between physician and patient in regard to sex and race/ethnicity (Cooper et al., 2003), or length of time respondent had been a patient of his/her healthcare provider). However, this large representative sample of the US population provides a unique opportunity to look at patient–provider communication factors broadly.

Conclusion

Respondents living in urban areas were less likely to report positive communication and interactions with healthcare providers. These findings may be related to factors unique to these different geographic settings as well as possible disparities in how healthcare services are delivered in urban as compared to non-urban settings. Our results provide a starting point

in identifying factors needed to achieve better patient–provider communication and to improve the overall delivery of healthcare services in all areas. Future research is needed to better define underlying reasons for differences in healthcare provider–patient communication in urban settings versus non-urban settings and how to best address these differences with policy and practice changes.

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Table 1Percentage of US adults^a living in urban and non-urban areas by demographic characteristics

Demographic characteristic	% Living in urban areas	% Living in non-urban areas
Sex		
Male	81.2	18.8
Female	81.5	18.5
Age group (years)		
18–24	81.5	18.5
25–44	83.8	16.2
45–64	80.3	19.7
65	77.3	22.7
Race		
White	80.0	20.0
Black	87.9	12.1
American Indian	63.2	36.8
Asian	95.8	4.2
Native Hawaiian	81.8	18.2
Multiple races	77.0	23.0
Ethnicity		
Hispanic	91.9	8.1
Not Hispanic	79.9	20.1
Family income		
Poor	78.0	22.0
Near poor	75.2	24.8
Low income	77.0	23.0
Middle income	79.4	20.6
High income	85.6	14.4
Completed high school		
Yes	82.2	17.8
No	77.6	22.4
Census region		
Northeast	89.2	10.8
Midwest	75.1	24.9
South	77.0	23.0
West	87.8	12.2
Health insurance		
Any private	82.3	17.7
Public	76.9	23.1
Uninsured	80.6	19.4
Usual source of care		
Yes	80.5	19.5
No	84.4	15.6

Demographic characteristic	% Living in urban areas	% Living in non-urban areas
Total	81.4	18.6

^aEstimates pertain to civilian, non-institutionalized adults in the US in 2002 ($N = 212, 731, 642$).

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Table 2

Percentage of US adults^a living in urban areas (UAs) and non-urban areas (non-UAs) reporting positive perceptions of healthcare provider communication

Demographic characteristics ^b	% Reporting provider "always" listened carefully to them		% Reporting provider "always" explained things so that they understood		% Reporting provider "always" showed respect for what they had to say		% Reporting provider "always" spent enough time with them	
	UA	Non-UA	UA	Non-UA	UA	Non-UA	UA	Non-UA
Sex								
Male	55.8	56.2	57.6	57.6	59.8	59.6	46.3	46.9
Female	53.6	54.5	57.5	58.1	57.9	58.5	43.8	44.9
Age group (years)								
18–24	50.1	51.5	54.2	54.9	54.5	55.0	38.9	40.4
25–44	50.4	50.9	56.1	56.3	55.5	55.6	40.8	41.4
45–64	55.6	56.2	58.6	58.9	59.3	59.6	46.2	47.0
65	62.6	63.0	60.2	60.4	66.0	65.8	53.4	53.9
Race								
White	53.9	54.7	57.2	57.6	58.1	58.4	44.2	45.1
Black	62.6	63.4	63.3	63.9	67.3	67.5	51.8	52.9
American Indian	58.5	54.2	70.5	63.6	58.4	54.3	52.5	48.1
Asian	46.9	47.8	48.9	49.2	50.3	51.2	40.6	41.5
Native Hawaiian	48.1	46.4	64.9	60.5	46.1	48.0	46.9	45.5
Multiple races	42.3	44.8	47.5	48.1	49.1	50.6	35.1	37.2
Ethnicity								
Hispanic	56.4	57.5	58.2	59.0	62.4	63.1	44.8	46.0
Not Hispanic	54.3	55.0	57.5	57.8	58.3	58.5	44.9	45.7
Family income								
Poor	55.0	56.4	57.2	56.9	58.9	59.1	45.6	46.9
Near poor	52.5	55.7	52.2	53.8	58.8	59.5	45.0	46.3
Low income	56.9	57.2	58.0	57.4	60.3	59.7	45.5	46.0
Middle income	52.8	54.2	56.7	57.9	57.0	58.1	43.9	45.5
High income	55.0	55.1	58.4	58.5	59.3	59.2	45.1	45.5
Completed high school								
Yes	53.8	54.4	57.6	57.9	58.1	58.4	44.1	44.9
No	58.4	59.3	57.5	57.9	62.1	61.7	48.8	49.7
Census region								
Northeast	58.0	58.2	60.8	60.9	63.4	62.9	48.9	49.4
Midwest	57.5	57.5	59.1	59.4	60.0	60.0	46.6	46.8
South	53.9	55.0	56.2	56.9	57.5	58.3	44.7	45.7
West	49.2	50.3	54.9	55.0	54.6	55.3	39.6	41.2
Health insurance								
Any private	54.1	54.6	57.5	57.8	58.6	58.8	44.2	44.9
Public	59.8	61.0	60.5	60.5	62.6	62.5	51.6	52.4

Demographic characteristics ^b	% Reporting provider "always" listened carefully to them		% Reporting provider "always" explained things so that they understood		% Reporting provider "always" showed respect for what they had to say		% Reporting provider "always" spent enough time with them	
	UA	Non-UA	UA	Non-UA	UA	Non-UA	UA	Non-UA
Uninsured	48.8	50.4	51.9	53.8	52.4	53.5	39.1	41.1
Usual source of care								
Yes	55.8	56.4	58.7	58.9	59.9	60.0	46.0	46.7
No	45.9	47.1	50.1	51.3	51.1	52.3	37.4	39.0
Total	54.5	58.3	57.5	59.3	58.7	60.1	44.9	49.5

^a Estimates pertain to civilian, non-institutionalized adults in the US in 2002 ($N = 212, 731, 642$).

^b Italics denote differences in demographic characteristics for those living in UAs and non-UAs ($P < 0.001$).

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Table 3

Percentage of US adults^a with a usual source of care living in urban areas (UAs) and non-urban areas (non-UAs) reporting positive perceptions of their degree of health decision-making autonomy

Demographic characteristics ^b	% Reporting provider “always” asks person to help make healthcare decisions		% Reporting provider “always” gives person control of treatment	
	UA	Non-UA	UA	Non-UA
Sex				
Male	51.2	51.8	48.9	49.7
Female	51.1	52.6	49.0	50.4
Age group (years)				
18–24	46.2	48.0	45.6	46.8
25–44	49.7	50.9	48.0	48.9
45–64	53.1	53.5	51.0	51.8
65	53.0	54.7	48.9	50.8
Race				
White	52.0	53.2	49.8	51.1
Black	50.2	50.4	47.7	47.1
American Indian	48.6	46.2	46.7	46.6
Asian	39.9	41.0	38.2	39.0
Native Hawaiian	35.9	36.1	44.5	37.2
Multiple races	43.6	43.2	38.8	38.5
Ethnicity				
Hispanic	44.9	46.0	41.7	42.6
Not Hispanic	51.9	52.9	49.8	50.8
Family income				
Poor	44.1	46.9	41.3	43.7
Near poor	54.0	56.4	52.0	54.2
Low income	49.1	50.4	47.0	47.8
Middle income	49.6	51.5	46.6	48.8
High income	53.7	54.1	52.2	52.6
Completed high school				
Yes	52.0	52.9	49.9	51.0
No	47.0	49.3	44.5	46.0
Census region				
Northeast	52.9	54.7	52.1	53.4
Midwest	52.5	52.8	50.0	50.7
South	53.8	54.2	51.0	51.5
West	44.2	46.0	42.0	43.7
Health insurance				
Any private	52.5	53.4	50.5	51.4
Public	46.1	48.7	42.6	45.4
Uninsured	46.7	48.0	44.8	46.0

Demographic characteristics ^b	% Reporting provider “always” asks person to help make healthcare decisions		% Reporting provider “always” gives person control of treatment	
	UA	Non-UA	UA	Non-UA
Total	51.1	56.9	49.0	54.6

^aEstimates pertain to civilian, non-institutionalized adults in the US in 2002 ($N = 212,731,642$).

^bItalics denote differences in demographic characteristics for those living in UAs and non-UAs ($P < 0.001$).

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Table 4

Perceptions of healthcare providers' communication skills among respondents^a living in urban areas versus non-urban areas

MEPS items pertaining to healthcare provider communication skills	% Reporting "always" to items regarding healthcare provider communication ^a	Adjusted OR (95% CI) ^b
Provider listened carefully to them ^c		
Urban areas	54.5	0.86 (0.78, 0.94)
Non-urban areas	58.3	Reference
Provider explained things so they understood ^c		
Urban areas	57.5	0.90 (0.80, 1.01)
Non-urban areas	59.3	Reference
Provider showed respect for what they had to say ^c		
Urban areas	58.7	0.91 (0.82, 1.00)
Non-urban areas	60.1	Reference
Provider spent enough time with them ^c		
Urban areas	44.8	0.83 (0.76, 0.91)
Non-urban areas	49.5	Reference
Provider asks person to help make healthcare decisions ^d		
Urban areas	51.1	0.82 (0.69, 0.98)
Non-urban areas	56.9	Reference
Provider gives person control of treatment ^d		
Urban areas	49.0	0.83 (0.71, 0.97)
Non-urban areas	54.6	Reference

^aEstimates pertain to civilian, non-institutionalized adults in the US in 2002 ($N = 212, 731, 642$).

^bOR, odds ratio; CI, confidence interval.

^cAdjusted for sex, age, race, ethnicity, family income, educational attainment, census region, and health insurance status.

^dAdjusted for sex, age, race, ethnicity, family income, educational attainment, census region, health insurance status, and an identified usual source of care.