

Disability and Health Update



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Distance and Modes of Transportation to Personal Physician/Health Care Provider: 2005 Montana Behavioral Risk Factor Surveillance System (BRFSS) Results

Transportation is a key environmental facilitator to participation for people with disabilities (World Health Organization, 2001). The *International Classification of Functioning, Disability and Health* codes transportation as an environmental factor under: (1) Products and technology– Personal indoor and outdoor mobility and transportation (e120); (2) Support and relationships (e.g., Personal care providers and personal assistants [transport assistants], e340); and (3) Services, systems, and policies (Transportation, e540).



Still, in the 2004 *National Organization on Disability/Harris Survey of Americans with Disabilities* (as cited in Rosenbloom, 2007), a third of respondents reported transportation problems, with more than half of those reporting major problems. Furthermore, Okoro and colleagues reported that 9% of adults unable to afford health care in the past year cited transportation as a barrier (2005). Okoro and colleagues suggested that rurality be included in future studies examining the role of transportation in health care.

Earlier Montana BRFSS data showed negative differences on quality-of-life indicators when comparing Montanans with disability to those without. Alarming, four times as many adults with disability as adults without disability (20% v. 5%) reported 14 or more days of poor mental health in the previous month (Cummings et al., 2005). These findings, in conjunction with an increasing body of disability and health literature describing relationships between quality-of-life issues and access to transportation (Whiteneck et al., 2004, 2006; Devitt et al., 2006), led to a second set of analyses that relate to *Healthy People 2010's* overarching goals of eliminating health disparities and increasing the number of quality-of-life years for all Americans.

Procedure: The 2005 annual Montana BRFSS was a random-digit-dialed telephone survey of 4,938 non-institutionalized Montanans aged 18 and older. Sampling procedures ensured that rural Montanans and American Indians were adequately represented (for more information, see www.brfss.mt.gov). Because of the pilot nature of the questions, the Montana BRFSS workgroup approved two transportation questions as follow-up to the *Access to Health Care Core Module*, querying only those respondents who reported having a regular health care provider.

Screener Item: Do you have one person you think of as your personal care doctor or health care provider?

1. Yes, only one
2. More than one

→ Ask two state-added questions on travel to regular health care provider:

1. Earlier you said that you had at least one person you think of as your personal doctor or health care provider. About how many miles is their nearest office from your house?

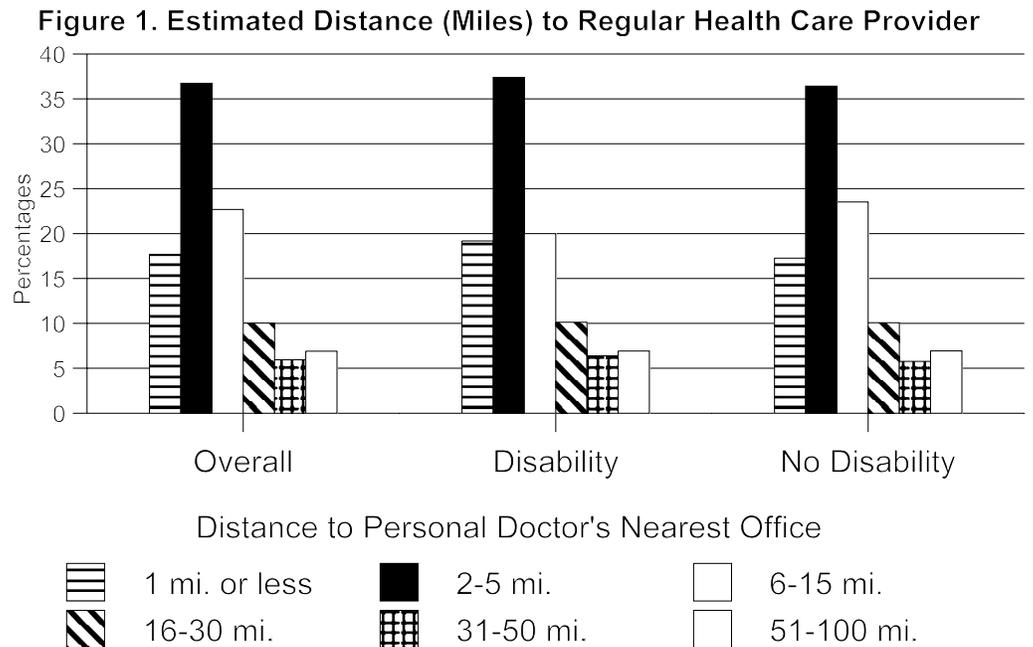
2. Which of the following best describes how you usually get to that office:

- I drive myself
- I take Medicab, Ride Share or community agency vans
- I take public transportation like a bus or para-transit
- I take a taxi
- I get a ride from someone like a friend or family member
- I walk, bicycle, or use my wheelchair or power scooter
- Do something else

Findings: About 78% of respondents (N = 3,851) reported having one person they consider as their personal doctor or health care provider. Callers asked this group the additional transportation questions. This group represented more women, more adults with disability and more adults over age 65 than the group not reporting a personal doctor or health care provider. Also, fewer American Indians, Alaska Natives, non-Hispanics, or other members of racial and ethnic minorities reported having a personal doctor or health care provider.

Distances traveled from home to nearest provider office were consistent across Montana’s five health planning regions and demographic categories of gender, age, race/ethnicity, and disability. Notably, 15-19% of most demographic sub-groups lived a mile or less from their regular health care provider, but 24% of those aged 65 and older lived this close to their regular providers.

Across all groups, 34-39% reported being 2-5 miles from their regular providers; 20-23% reported a distance of 6-15 miles; 8-11% reported a distance of 16-30 miles; 5-6% reported 31-50 miles; and 6-7% lived 51-100 miles from their personal health care providers. Figure 1 shows that trends by disability status were similar to trends for Montanans overall.



Driving to a health care provider office was more common than using other transport modes for both

people with disability (77.5%) and without disability (90.4%) – not unexpected in Montana, a state with a higher household vehicle ownership rate than the national average (Census 2000, Summary File 3, Table H44). However, people with disability (19.6%) were three times more likely than those without disability (6.3%) to rely on others (Medicab, public transportation, taxis, friend’s/family’s vehicles) to travel to their providers’ offices.

As fuel costs rise and the economy slows, travel-related costs will become a greater burden. Using the state employee reimbursement rate of 58.5 cents per mile for personal car usage (effective 7/1/08) illustrates how the costs associated with driving to a health care provider rise as distance increases. While BRFSS data were not compiled into rural-urban categories, rural Montanans are likely to drive greater distances and pay more to visit a health care provider.

In 2005, urban Montanans had a per capita average annual income of \$32,346 and a weekly income of \$622.04 (USDA Economic Research Service). Rural Montanans had a per capita average annual income of \$28,911 and a weekly income of \$555.98. A round trip of 102 miles to a health care provider would take 9.6% of an urban weekly income, compared to 10.7% of a rural weekly income (Table 1).

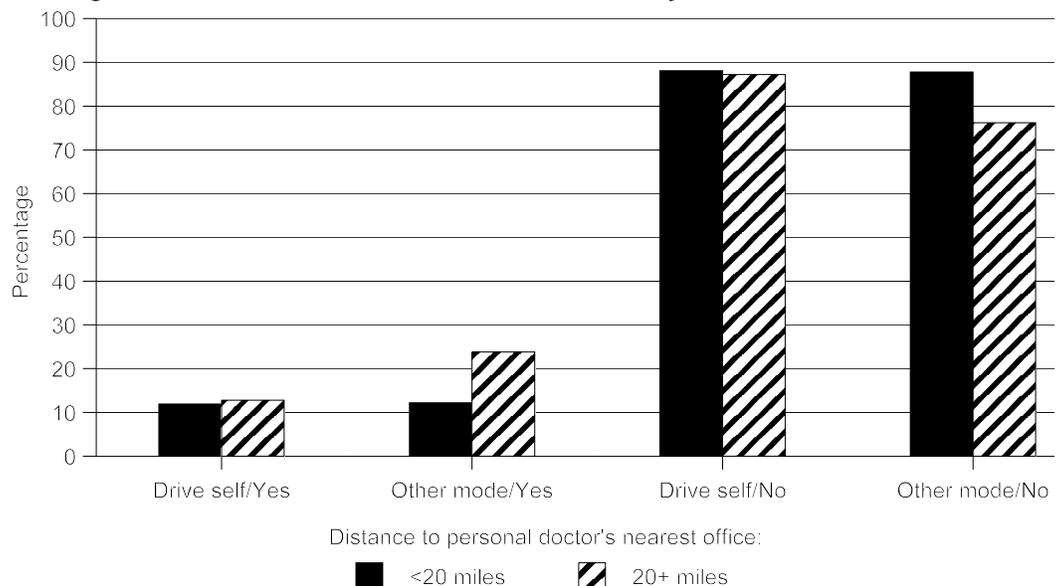
Table 1. Cost of Health Care Travel as Percent of Weekly Income

Distance (round trip)	Cost (at 58.5 cents per mile)	Percent of average 2005 weekly per capita income	
		Urban ranges	Rural ranges
4-10 miles	\$2.34-\$5.85	0.4%-0.9%	0.4%-1.1%
12-30 miles	\$7.02-\$17.55	1.1%-2.8%	1.3%-3.2%
32-60 miles	\$18.72-\$35.10	3.0%-5.6%	3.4%-6.3%
62-100 miles	\$36.27-\$58.50	5.8%-9.4%	6.5%-10.5%
102-200 miles	\$59.67-\$117.00	9.6%-18.8%	10.7%-21.0%

The Medicaid Transportation Center reimburses clients’ travel costs, including personal vehicle mileage. The mileage rate gradually increased from 25¢ per mile in July, 2008 to 33¢ per mile on November 1, 2008. A traveler may request a maximum of \$15 per day for meals and \$25 per day for lodging if an overnight stay is required. Lodging receipts are required. Coverage for meals begins the second day of the stay. Prior authorization is required for reimbursement of costs.

Figure 2 shows preliminary results indicating a higher percentage of those who didn’t drive themselves and lived more than 20 miles from their nearest provider’s office reported forgoing needed health care in the last year because of cost.

Fig. 2. Unable to Access Health Care due to Cost, by Travel Mode & Distance



Health Status: Preliminary results suggested that of those who did not drive themselves and who lived more than 20 miles from their nearest provider's office, there were disproportionately more in 'fair or poor health' (47.0% v. 28.8%) and fewer in 'good or better health' (53.0% v. 71.2%). Results did not show such differences among those who drove themselves, nor among those who did not drive themselves and lived closer than 20 miles from their provider (Fig. 3).

Cross-sectional findings do not, however, suggest a causal relationship among any factors examined (e.g., distance/mode of travel and health status).

A preliminary analysis of the relationship between health-related quality of life and transportation mode showed that, in the previous month, Montanans who relied on other modes of transportation reported 14 or more 'not good' physical or mental health days at rates 2-3 times higher than those who drove themselves (Figs. 4 & 5). This finding held for those who lived more OR less than 20 miles from their nearest provider office.

These findings suggest higher travel costs for a large sector of transportation-dependent Montanans who may need health care more often and must travel the farthest.

Fig. 3. Health Status by Travel Mode & Miles to Regular Provider

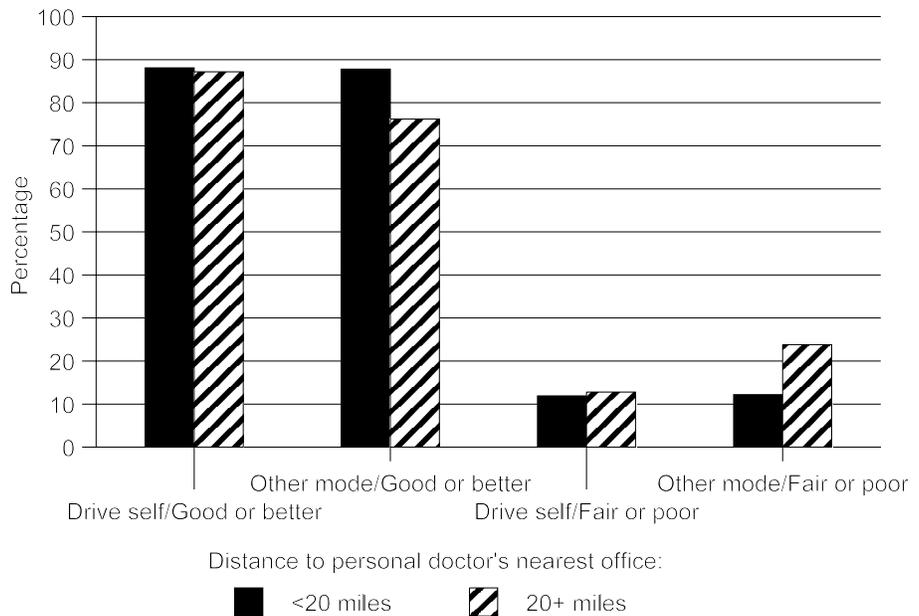


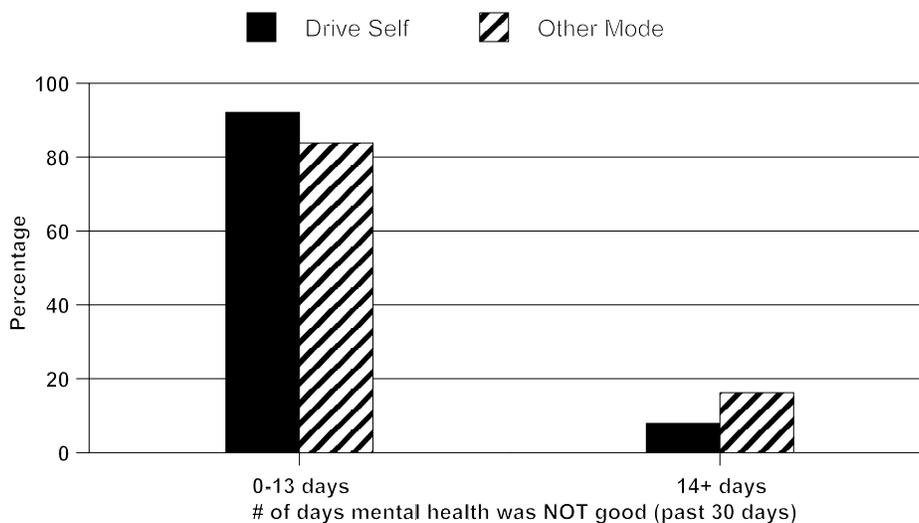
Fig. 4. Physical Health Days by Transportation Mode

(All distances to regular health care provider)



Fig. 5. Mental Health Days by Transportation Mode

(All distances to regular health care provider)



Discussion: This study has several limitations. The Montana 2005 BRFSS protocol excluded households without land-line telephones and used self-reported, cross-sectional data. We used a limited set of items to measure travel behavior in a sub-population of Montanans with regular health care providers. Relatively few respondents with or without disabilities did not drive themselves to their personal health care providers.

Described findings on health status and access to health care had chi-square test statistics significant at the .05 level. However, the half widths of confidence intervals were greater than ten, warranting cautionary interpretations of valid differences, as well as further analysis controlling for potential confounds.

In conclusion, Montanans with disabilities rely on personal vehicles, just as others with disabilities have reported on national surveys. Our findings show the importance of examining the interaction of mode and distance when defining transportation as a barrier to health care. An individual's usual mode of transportation may be a sole predictor of health-related quality-of-life facilitators. Finally, this study suggests that the BRFSS may have promise as a method for evaluating the impact of transportation initiatives on health status and behaviors.

Next Steps: Future studies might: 1) Ask these questions of all BRFSS respondents, in addition to those with regular health care providers; 2) Be conducted in a year when the BRFSS includes a larger set of preventive care items; 3) Be included in BRFSS questionnaires in rural states with CDC Disability and Health programs, and states interested in transportation and access to health care; 4) Include items about ease and cost of securing transportation for those who do not drive themselves; and 5) Include items about travel to and from other health care providers (specialists, dentists, ancillary health services providers). Additional surveillance data on transportation might inform the Montana Transportation Partnership as it considers policy and program changes, including those allowable under SAFETEA-LU.

Resources on rural transportation policy and programs for people with disability:

Progress Toward Equity in Rural Transportation: An Update on SAFETEA-LU
<http://rtc.ruralinstitute.umt.edu/Trn/Policy.htm>

Models of Rural Transportation for People with Disabilities: Rural Practice Guideline
<http://rtc.ruralinstitute.umt.edu/Trn/models.htm>

Use of Section 5310 Transportation Resources in Urban and Rural America: A Baseline Assessment; Rural Disability and Rehabilitation Research Progress Report #34
<http://rtc.ruralinstitute.umt.edu/Trn/Section5310.htm>

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