



## **Non-Emergency Medical Transportation and the Iowa Health and Wellness Plan**

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## Background

On January 1, 2014 Iowa implemented the Iowa Health and Wellness Plan (IHAWP). IHAWP expanded health coverage for low income Iowans through two separate coverage programs - Iowa Wellness Plan and Iowa Marketplace Choice Plan. The Iowa Wellness Plan (IHAWP-WP) is administered by the Medicaid program and covers adults ages 19 to 64 with income up to and including 100% of the Federal Poverty Level (FPL). IHAWP-WP members can choose a provider from the statewide provider network. In the Iowa Marketplace Choice Plan (IHAWP-MPC), adult (ages 19 to 64) members with income from 101-133% of the FPL get health care coverage through private insurers (Coventry Health Care and CoOpportunity Health) with plans on the Health Insurance Marketplace and Medicaid pays the members' premiums for the health plan. IHAWP-MPC members get their health care from providers approved by their private health plan. The IHAWP has been modified in its first 2 years. CoOpportunity Health withdrew from the IHAWP-MPC at the end of November 2014.<sup>1</sup> CoOpportunity members were automatically transitioned to IHAWP-WP providers on December 1, 2014, however; they retained their designation as IHAWP-MPC members.

Programmatically, the IHAWP was designed to include a benefit structure more like commercial insurance than traditional Medicaid. Specifically, IHAWP benefits were based on the state of Iowa employees' commercial health insurance plan and therefore does not contain the extensive benefits traditionally associated with Medicaid under the State Plan and, in particular, does not include the non-emergency medical transportation (NEMT) benefit.

Briefly, the Code of Federal Regulations requires States to "specify that the Medicaid agency will ensure necessary transportation for beneficiaries to and from providers."<sup>2</sup> Thus, all states are required to make NEMT available to their Medicaid beneficiaries. However, the provision of NEMT services and reimbursement methodologies are determined by the individual state Medicaid programs. In Iowa, an NEMT service broker called TMS Management Group<sup>3</sup> is used to manage NEMT services, including the authorization of transportation, verifying member and trip eligibility, processing transportation claims and reimbursements, and auditing trips and claims.<sup>4</sup>

The Centers for Medicare & Medicaid Services (CMS) initially approved a waiver of the state of Iowa's responsibility to provide NEMT services for IHAWP members during the first year of the IHAWP (January 1, 2014 – December 31, 2014) with the possibility of extending the waiver based on an evaluation of the impact on member access to care. After CMS reviewed preliminary data on NEMT and access, Iowa's NEMT waiver for the IHAWP was extended through July 31, 2015 during which time a review of IHAWP member experiences (based on 2014 survey data) regarding transportation and access to care could be conducted. The findings from this data were mixed with somewhat more IHAWP-WP members (who do not have an NEMT benefit) than traditional Medicaid State Plan members (who do have an NEMT benefit) experiencing an unmet need for transportation to or from a health care visit. However, the difference was not statistically significant. Due to these results, CMS extended the NEMT waiver through March 31, 2016 (and subsequently through June 30, 2016) and requested the independent evaluators of the IHAWP conduct an additional survey of IHAWP and Medicaid State Plan (MSP) members regarding transportation and access to health care to provide additional information to consider before granting further extensions of the NEMT waiver. In response to this request, the Public Policy Center fielded a survey to over 30,000 IHAWP-WP, IHAWP-MPC, and MSP members (10,180 from each program) from October 28, 2015 – January 15, 2016. This report includes the findings from the analyses of the survey data and associated administrative claims experiences of the members who responded to the survey.

- 1 Iowa Marketplace Choice Plan Changes. Iowa Department of Human Services. November 2014. Available at: [https://dhs.iowa.gov/sites/default/files/CoOpTransition\\_FAQ\\_11052014.pdf](https://dhs.iowa.gov/sites/default/files/CoOpTransition_FAQ_11052014.pdf). Accessed July 2, 2015.
- 2 Assurance of Transportation, 42 CFR 431.53. Accessed January 15, 2016 from [http://www.ecfr.gov/cgi-bin/retrieveECFR?gp=&SID=0c7ee7a5cbe463eda67e0e61810a8627&mc=true&n=pt42.4.431&r=PART&ty=HTML#se42.4.431\\_153](http://www.ecfr.gov/cgi-bin/retrieveECFR?gp=&SID=0c7ee7a5cbe463eda67e0e61810a8627&mc=true&n=pt42.4.431&r=PART&ty=HTML#se42.4.431_153)
- 3 Iowa Medicaid Non-Emergency Medical Transportation Program. TMS Management Group, Inc. <http://www.tmsmanagementgroup.com/index.php/iowa-medicaid-net-program> Accessed January 15, 2016.
- 4 Iowa Department of Human Services. Non-Emergency Medical Transportation. <https://dhs.iowa.gov/ime/members/medicaid-a-to-z/NEMT> Accessed January 15, 2016.

# Methodology

To understand and evaluate issues related to non-emergency medical transportation (NEMT) for IHAWP members, we used both survey (personal experience) and administrative (billing claims experience) data. Our samples included members whose health plan included an NEMT benefit (MSP-Family Medical Assistance Program (FMAP)) and those in health plans that were not obligated (through a governmental waiver) to provide an NEMT benefit (IHAWP-WP & IHAWP-MPC). We asked all members in the surveys about their experiences with health care and transportation in the six months prior to the survey and merged their responses to their administrative claims during the same period to assess the relationship between need for NEMT and health care utilization. The following description provides detail about the survey data collection, the administrative claims, and the analytic methods used for this report.

## Member Surveys

This report includes data from surveys of IHAWP-WP, IHAWP-MPC, and adult MSP-FMAP members. These surveys were fielded from October 28, 2015 through January 15, 2016.

General methods used to develop, field, and compile the data from these surveys follow.

### *Survey Instruments*

The survey included questions about the following topic areas:

- Access to Transportation and Need/Unmet Need for Non-Emergency Medical Transportation
- Need and Unmet Need for Routine Health Care Services (derived from NHIS<sup>5</sup>)
- Barriers to Obtaining Health Care Services
- Usual Place of Care and Identification of a Personal Doctor
- Emergency Room Care
- Functional Limitations (derived from the Behavioral Risk Factor Surveillance System (BRFSS)<sup>6</sup>)
- Chronic Physical and Mental Health Conditions
- Demographics

The survey instrument is available in Appendix A. At the end of the survey, respondents had a chance to provide open-ended comments about their experiences. Appendix B includes a summary of the comments left by respondents.

### *Survey Field Methods*

The 2015 Survey of IHAWP and MSP-FMAP members was conducted during the fall and winter of 2015/2016 using a mixed-mode mail methodology. Surveys were mailed to a stratified random sample of members who had been in their current plan for at least the previous six months. The sample was stratified into three groups: IHAWP-WP, IHAWP-MPC, and MSP-FMAP.

Random samples for each group were drawn from IHAWP and Medicaid enrollment data, current as of September 2015. Only one person was selected per household to reduce the relatedness of the responses and respondent burden. The sample was comprised of 10,180 IHAWP-WP, 10,180 IHAWP-MPC members, and 10,180 adult MSP-FMAP members for a total sample of 30,540.

Both mail and web-based surveys were used. The initial mailings were sent to members in late October 2015. A reminder postcard was sent 14 days after the initial mailing. About 14 days after the postcard reminder, a second mailing was sent to those who had not responded to the initial mailing. In the mailed cover letter and on the reminder postcard, enrollees were given the option of completing the survey online and provided the website address for that purpose. In an effort to maximize response rates for the mailed survey, both a premium and an incentive were used in the first mailing: each initial survey packet included a \$2 bill and respondents who completed and returned the survey within two weeks of the mailing were entered into a random drawing for one of ten \$25 Wal-Mart gift cards.

5 Centers for Disease Control and Prevention (CDC). National Health Interview Survey. Available at [http://www.cdc.gov/nchs/nhis/quest\\_doc.htm](http://www.cdc.gov/nchs/nhis/quest_doc.htm)

6 CDC. BRFSS. Available at <http://www.cdc.gov/brfss/questionnaires.htm>

## Response Rates

Response rates for each of the population groups is provided in Table 1. Response rates were adjusted by removing ineligible individuals from the denominator. Individuals were determined to be ineligible to complete a survey because of invalid or out-of-state addresses or they were deceased. The overall adjusted response rate was 30% with the lowest response rate from MSP-FMAP (23%).

**Table 1. Response Rates for IHAWP-WP, IHAWP- MPC, MSP-FMAP**

Plan	Total Sampled	Adjusted* Total	Responded	Adjusted* Response Rate
<b>MSP-FMAP</b>	10,180	9,097	2,055	23%
<b>IHAWP-WP</b>	10,180	8,883	2,980	34%
<b>IHAWP-MPC</b>	10,180	9,274	3,220	35%
<b>Total</b>	30,540	27,254	8,255	30%

\* Adjusted for ineligibles – Those who no longer had a valid address or were outside the state of Iowa

## Characteristics of Respondents & Non-Respondents

Table 2 shows the demographic characteristics of the respondents for each of the survey populations. Overall, respondents were more likely to be older, white, and female as compared to non-respondents, regardless of plan type. Within the MSP-FMAP group, respondents were less likely to come from metropolitan areas when compared to non-respondents, but were comparable to non-respondents with regard to length of enrollment and being from non-metro or rural areas. Within the IHAWP-WP and IHAWP-MPC groups, respondents were more likely to be enrolled longer than non-respondents and more likely to be from metropolitan areas but less likely to be from non-metro or rural areas when compared to non-respondents. Because of the large sample sizes, many of the comparisons between groups reached statistical significance even when the percentage or mean differences were not particularly striking. Thus, these results should be interpreted with some caution and effect size differences should be considered.

**Table 2. Respondents vs. Non-Respondents by Plan Type**

	<b>MSP-FMAP</b>		<b>IHAWP-WP</b>		<b>IHAWP-MPC</b>	
	<b>Respon- dent N=2,055</b>	<b>Non-Re- spondent N=8,125</b>	<b>Respon- dent N=2,980</b>	<b>Non-Re- spondent N=7,200</b>	<b>Respon- dent N=3,220</b>	<b>Non-Re- spondent N=6,960</b>
<b>Mean Number Months of Plan Enrollment<sup>1</sup></b>	17.0	16.8	16.3†	14.4	13.1†	11.9
<b>Mean % Poverty Level</b>	11.9%	11.0%	35.9%†	32.9%	117.8%	118.5%
<b>Mean Age</b>	35.9†	32.8	44.6†	37.2	44.3†	36.4
<b>Female</b>	84%†	81%	59%†	49%	68%†	62%
<b>Race/Ethnicity<sup>2</sup></b>						
<b>White</b>	73%†	67%	70%†	65%	72%†	68%
<b>Black</b>	6%†	10%	5%†	9%	4%†	7%
<b>Hispanic</b>	4%†	5%	2%†	5%	4%†	6%
<b>Other<sup>3</sup></b>	4%†	5%	4%†	5%	3%†	5%
<b>Unknown<sup>4</sup></b>	13%	12%	20%†	16%	17%†	14%
<b>Urban/Rural<sup>5</sup></b>						
<b>Metropolitan</b>	53%†	56%	57%†	62%	56%†	61%
<b>Nonmetro</b>	41%	39%	37%†	34%	39%†	35%
<b>Rural</b>	6%	5%	6%†	4%	6%	5%

† Statistically significant difference between respondents and non-respondents at the p<.01 level.

<sup>1</sup>Months of enrollment ranges from 6 (all sampled had to have at least 6 months of enrollment) to 22 months. A member with 22 months of enrollment means that person was in the plan since January 1, 2014 (the start of IHAWP).

<sup>2</sup>Race/Ethnicity categories are not mutually exclusive; thus, the percentages may not sum to 100%.

<sup>3</sup>Other includes Asian, Pacific Islander, American Indian, or other.

<sup>4</sup>Race indicated as Unknown in the eligibility files.

<sup>5</sup>Urban/Rural Residence is defined by the Rural-Urban Continuum Codes (RUCC).<sup>7</sup> RUCCs define metropolitan counties by the population size of their metro area and nonmetropolitan (nonmetro) counties by degree of urbanization and adjacency to metro areas. In the table, metropolitan is an urban county with population up to 1 million. Non-metro is a nonmetropolitan county with population from 2,500 to 20,000 or more and rural is defined as completely rural with population less than 2,500.

## Administrative Data

Medicaid eligibility files were used to obtain basic demographic information (months of enrollment, age, sex, race, and percent poverty) for all of the sample members. Health care utilization for the survey respondents was obtained from their Medicaid administrative claims. Medicaid institutional claims were reviewed for the six-month period prior to the administration of the survey to obtain the number of well care, acute care, and emergency department visits during that period.

A well care visit was coded if the claim included:

- Any preventive exam visit with a CPT code of 99385-99387, 99395-99397, 99401-99404, 99411, 99412, 99420, 99429 OR
- Any visit with a CPT code of 99201-99205 AND a preventive visit diagnosis code of V70.0, V70.3, V70.5, V70.6, V70.8, or V70.9.

An acute care visit was coded if the claim included:

- Any MD or ARNP visit that was NON-behavioral/emotional, NON-maternal, and a NON-well visit, AND

<sup>7</sup> For more information on the Rural-Urban Continuum coding, refer to <http://www.ers.usda.gov/data-products/rural-urban-continuum-codes.aspx>

- The visit occurred in an office setting, outpatient clinic, rural health clinic, or FQHC according to the place of service AND
- The claim included CPT codes between 99210 and 99215.

An outpatient emergency department visit was coded if the claim included:

- A revenue code on an institutional claim of 450-459 AND
- The visit did not result in a hospitalization.

## Analytic Methods

### Study populations and univariate comparisons

Within this evaluation of NEMT, there are three distinct groups. Two of these are the study groups: Wellness Plan (IHAWP-WP) and Marketplace Choice (IHAWP-MPC). The third (comparison) group included adult members in the Medicaid Family Medical Assistance Program (MSP-FMAP). Descriptions of these plans follow.

**Wellness Plan (IHAWP-WP)** provides coverage for adults ages 19-64 with income up to and including 100 percent of the FPL. It is administered by the Iowa Medicaid Enterprise. Members have access to the Medicaid provider network established for this program.

**Marketplace Choice Plan (IHAWP-MPC)** provides coverage for adults 19-64 with income from 101-133 percent of the FPL. The Marketplace Choice Plan allows members to choose certain commercial health plans available on the health insurance marketplace, with Medicaid paying the member's commercial health plan premiums. During the study timeframe, IHAWP-MPC members could receive services through a qualified health plan (Coventry Health Care of Iowa-see below) or the traditional Medicaid program.

#### Coventry Health Care of Iowa

Coventry is a national managed care company that is based in Bethesda, MD. They operate statewide and are available on the Health Insurance Marketplace through the federal portal.

#### FMAP – Family Medical Assistance Program

The FMAP comparison group is composed of adult parents of children eligible for Medicaid. Non-employed and employed parents of children in Medicaid in families with incomes from 0-77% FPL are eligible for Medicaid coverage. As they earn more they are able to increase the percent FPL allowed for eligibility to encourage employment. They may be covered through a Health Maintenance Organization (HMO), Primary Care Case Management (PCCM), or Fee for Service (FFS) structure.

The initial analyses were means test comparisons of: 1) IHAWP-WP to MSP-FMAP members and 2) IHAWP-MPC to MSP-FMAP members. Statistical significance in the text and figures for these comparisons was at  $p < .01$ . For all survey analyses presented, the data were weighted to make it representative of all IHAWP and Medicaid members statewide and to account for the fact that there were not equal numbers of enrolled members in each sampled group. Thus, the percentages reported were weighted to reflect the statewide membership in each group. For the inferential statistics, the weight variable was re-based to the actual sample size in order to ensure that, while the adjustments for sampling method were retained, the standard errors used in the statistical testing were not artificially inflated.

## Multivariable Models

Data from the Fall 2015 survey and Medicaid administrative claims were used to model factors related to unmet NEMT need and health services utilization. Four separate multivariable logistic regression models were fit; one for each of the following research questions. The outcome (dependent) variable and the focal independent variables for each model are described below each question.

*Question 1. Is the presence or absence of the NEMT benefit associated with unmet need for transportation to health care visits?*

The model provides the odds that respondents experienced an unmet NEMT need in the six months prior to the survey.

### **Unmet NEMT need (Outcome)**

Survey respondents provided a yes or no answer to the following question: In the last 6 months, was there any time when you needed transportation to or from a health care visit but could not get it for any reason?

### **Plan Status (Focal Independent Variable)**

We used two variables for plan status: 1) an indicator of whether a member was in the IHAWP-WP program (as compared to MSP-FMAP) and 2) an indicator of whether a member was in the IHAWP-MPC program (as compared to MSP-FMAP). This approach allows us to use MSP-FMAP (the group with an NEMT benefit) as the comparison group.

*Question 2 Is unmet NEMT need associated with obtaining a well care visit?*

The model provides the odds that respondents had a claim for a well care visit in the six months prior to the survey.

### **Well Care Visit (Outcome)**

Claims data were used to determine if a respondent had a well care visit (yes or no) in the six months prior to the survey. The definition of a well care visit can be found in the [Administrative Data](#) section above.

### **Unmet NEMT need (Focal Independent Variable)**

The definition and categorization of the Unmet NEMT need variable are given under Question 1.

### **Plan Status (Focal Independent Variable)**

The definition and categorization of the Plan Status variables are given under Question 1.

### **Unmet NEMT need \* Plan Status (Interaction terms)**

Two interaction variables were included in the initial models to jointly model the effect of reported unmet need for transportation to health care visits (Unmet NEMT need) with the absence of NEMT benefit (Plan Status IHAWP-WP, Plan Status IHAWP-MPC).

If the interaction terms were not statistically significant at the  $p < .05$  level, the interaction terms were removed and the model was fit without them.

*Question 3 Is unmet NEMT need associated with obtaining an acute care visit?*

### **Acute Care Visit (Outcome)**

Claims data were used to determine if a respondent had an acute care visit (yes or no) in the six months prior to the survey. The definition of an acute care visit can be found in the Administrative Data section above.

### **Unmet NEMT need (Focal Independent Variable)**

The definition and categorization of the Unmet NEMT need variable are given under Question 1.

### **Plan Status (Focal Independent Variable)**

The definition and categorization of the Plan Status variables are given under Question 1.

### **Unmet NEMT need \* Plan Status (Interaction terms)**

The definition of the interaction terms is given under Question 2.

*Question 4 Is unmet NEMT need associated with using the emergency department (ED)?*

### **Emergency Department Visit (Outcome)**

Claims data were used to determine if a respondent had a visit to an emergency department (yes or no) in the six months prior to the survey and that visit did not result in a hospitalization. The definition of an emergency department visit can be found in the Administrative Data section

above.

### **Unmet NEMT need (Focal Independent Variable)**

The definition and categorization of the Unmet NEMT need variable are given under Question 1.

### **Plan Status (Focal Independent Variable)**

The definition and categorization of the Plan Status variables are given under Question 1.

### **Unmet NEMT need \* Plan Status (Interaction terms)**

The definition of the interaction terms is given under Question 2.

All models included the following additional explanatory covariates. These variables theoretically could have an effect on each outcome independent of the focal variables and are included to account for those potential effects. Variable data source, definitions, and reference group (for the categorical variables) are provided for each covariate.

### *Sociodemographic Variables*

**Age**-Survey self-report. Definition: Dichotomous 18-43 years (Reference Group), 44-64 years.

**Female gender**-Survey self-report. Male is the reference group.

**Race/Ethnicity**-Survey self-report. Each are dichotomous indicators. Race: White (Reference group = non-white), Black or African American (Reference group = non-Black), Hispanic (Reference group = non-Hispanic). Reference groups include those who self-reported as Asian, Native Hawaiian or Other Pacific Islander, American Indian or Alaska Native, and other, non-specified.

**Education**- Survey self-report. Dichotomous: High School or Less (Reference group), More than High School.

**Income**-We used percent poverty level as an indicator of household income. The median split (according to plan type) was used in the models: MSP-FMAP: 0% (Reference group), > 0%; IHAWP-WP: 0 – 21% (Reference group), > 21%; IHAWP-MPC: 0 – 119% (Reference group), > 119%.

**Months of enrollment**-Number of months enrolled in the IHAWP-WP, IHAWP-MPC, or MSP-FMAP in the period from January 1, 2014 through October 31, 2015. The number of months of enrollment could range from 6 to 22 months. We used the median split of months in program: Shortest length in program (Reference group): 6-14 months, Longest length in program: 15-22 months.

### *Health Status Variables*

**Number of chronic conditions**-Survey self-report. 1) Physical Health Conditions dichotomous: 0-1 (Reference Group), 2 or more. 2) Any Mental Health Condition dichotomous: None (Reference group), Any.

**Health Status**-3 measures from survey self-report were included: 1) Physical Health: Fair/Poor vs. Good/Very Good/Excellent (Reference group); 2) Mental Health: Fair/Poor vs. Good/Very Good/Excellent (Reference group); 3) Functional Limitations (yes/no): Reported any of four possible functional limitations which included physical or medical conditions that a) seriously interfered with a member's ability to work, attend school, or manage day-to-day activities, b) seriously interfered with a member's independence, participation in the community, or quality of life, c) required the member to have help with routine needs, such as everyday household chores, doing necessary business, shopping, or getting around for other purposes, or d) required the member to have help with personal care needs, such as eating, dressing, or getting around the house.

### *Geographic Variables*

**Rural/urban**-Rural-urban continuum codes (RUCC) provided through the US Department of Agriculture were used to categorize the respondent place of residence. RUCCs define

metropolitan counties by the population size of their metro area and nonmetropolitan (nonmetro) counties by degree of urbanization and adjacency to metro areas. We used three categories: Metropolitan/Urban (Reference group), Non-metro, Urban (suburban), and Non-metro, Completely Rural. Metropolitan is an urban county with population up to 1 million. Non-metro, urban is a nonmetropolitan county with population from 2,500 to 20,000 or more and rural is defined as nonmetropolitan, completely rural with population less than 2,500.

**Distance to nearest primary care provider**-Each respondent address and the addresses of primary care providers in the plan network were geocoded. The distance from the member's home to the nearest active primary care provider (at least 1 claim in the past 6 months) was calculated. Distance to PCP was grouped into tertiles: Low: 0 – 0.7 miles (Reference Group), Middle: 0.71 – 2.0 miles, High: > 2.0 miles.

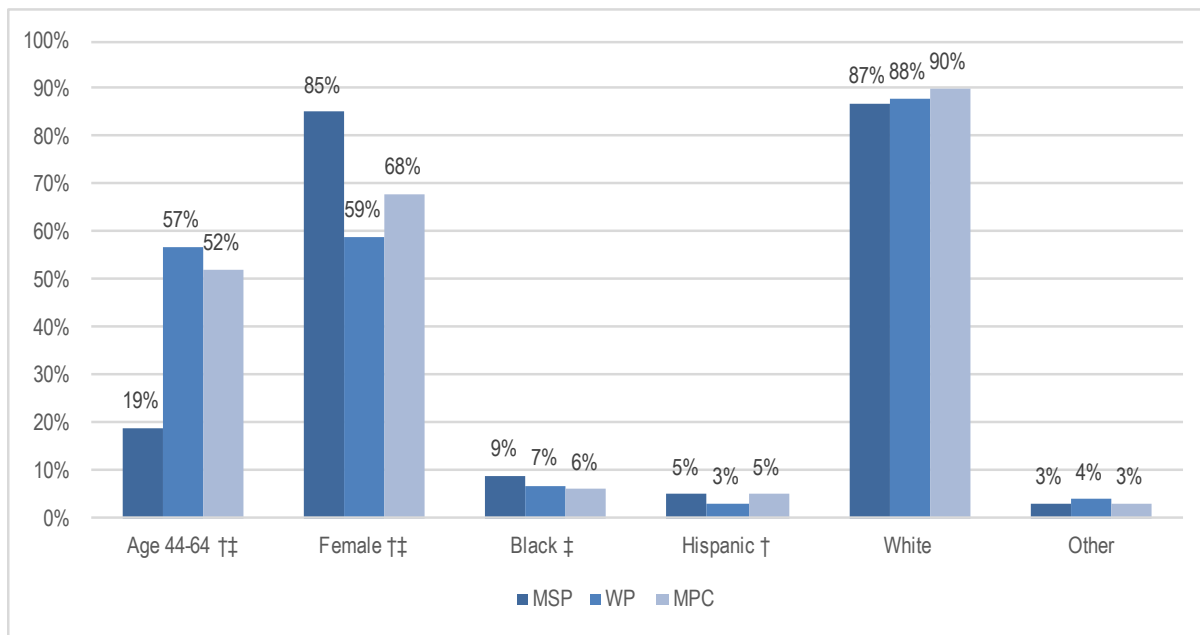
**Distance to nearest hospital ED**-Each respondent address and the addresses of all EDs in Iowa were geocoded. The distance from the member's home to the nearest ED was calculated. Distance to ED was grouped into tertiles: Low: 0 – 1.9 miles, Middle: 2.0 – 6.5 miles, High: > 6.5 miles.

## Results

### Demographic Characteristics

Figure 1 provides the age, gender, and racial characteristics of the members by plan type. MSP-FMAP members were younger and the vast majority (85%) were female which is significantly different than the IHAWP groups (WP & MPC) where less than 50% were under the age of 44 and less than 45% were female. Statistically, there were significantly more black respondents in the MSP-FMAP group than the IHAWP-MPC group and fewer Hispanics in the IHAWP-WP group compared to the MSP-FMAP group. The vast majority of members in all three groups were white (87%-90%).

**Figure 1. Age, Gender, and Race of Respondents by Plan**

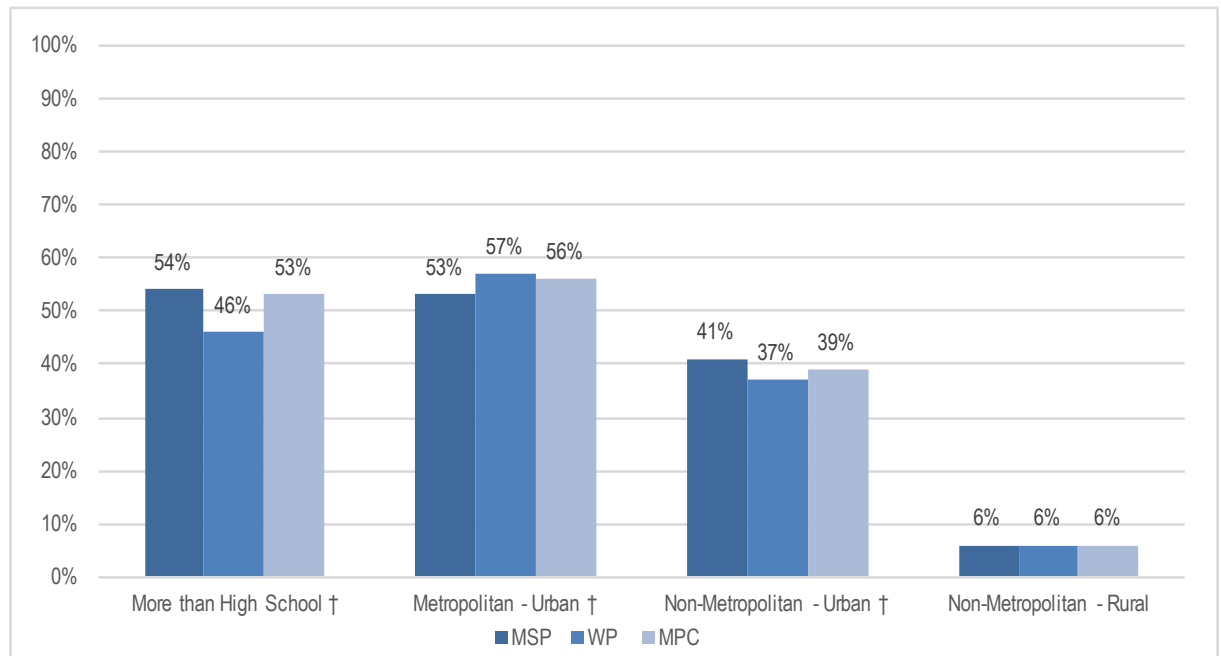


† Statistically significant difference between MSP-FMAP and IHAWP-WP at the  $p < .01$  level.

† Statistically significant difference between MSP-FMAP and IHAWP-MPC at the  $p < .01$  level.

Figure 2 shows the educational level and the urban/rural residential status of members by plan type. Approximately one-half of all respondents reported having more than a high school education with significantly more MSP-FMAP members (54%) than IHAWP-WP members (46%) reporting a higher level of education. Few members (around 6%) lived in a completely rural location. Most lived in an urban (metropolitan) or suburban (non-metropolitan, next to urban) setting. Significantly more IHAWP-WP members (57%) were in an urban setting compared to MSP-FMAP members (53%) with significantly fewer IHAWP-WP members (37%) living in a suburban setting compared to MSP-FMAP members (41%). The residential status of IHAWP-MPC members was comparable to MSP-FMAP members.

**Figure 2. Education level and Urban/Rural Status of Respondents**



† Statistically significant difference between MSP-FMAP and IHAWP-WP at the  $p < .01$  level.

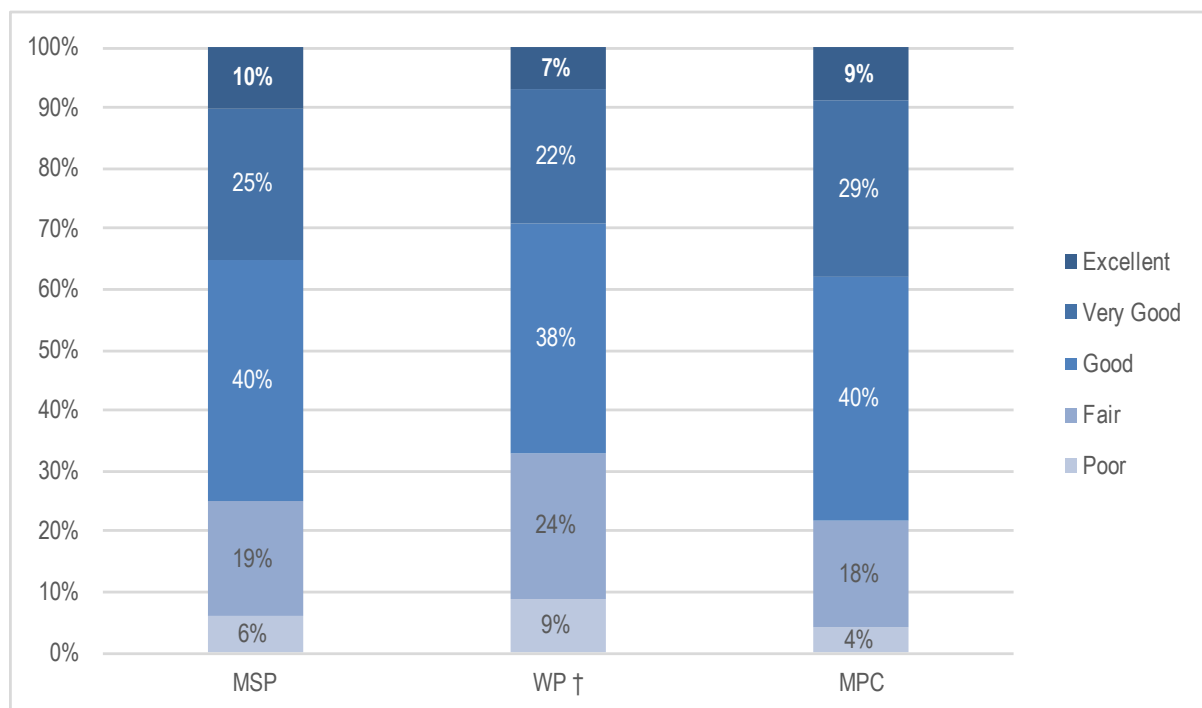
‡ Statistically significant difference between MSP-FMAP and IHAWP-MPC at the  $p < .01$  level.

Income levels within the three plan types were approximated using the household percent poverty level (PPL) as given in the enrollment files. The average PPL was 11.9% (median = 0%) for MSP-FMAP members, 35.9% (median = 21%) for IHAWP-WP members, and 117.8% (median = 119%) for IHAWP-MPC members.

## Health Status and Utilization of Health Care Services

The health status of plan members was measured using several survey items. Members self-rated their physical and mental health on a scale from poor to excellent. Figure 3 and Figure 4 show the self-reported physical and mental health status of members by plan type. The health status of IHAWP members compared to MSP-FMAP members depended on the IHAWP program, with IHAWP-WP members reporting worse health and IHAWP-MPC members reporting better health than MSP-FMAP members. Around one-third (33%) of IHAWP-WP members reported fair or poor physical and mental or emotional health which was significantly higher than reported by MSP-FMAP members (26% fair or poor physical health, 29% fair or poor mental or emotional health). Around one in five IHAWP-MPC members reported fair or poor mental or emotional health (19%) which was significantly less than reported by MSP-FMAP members.

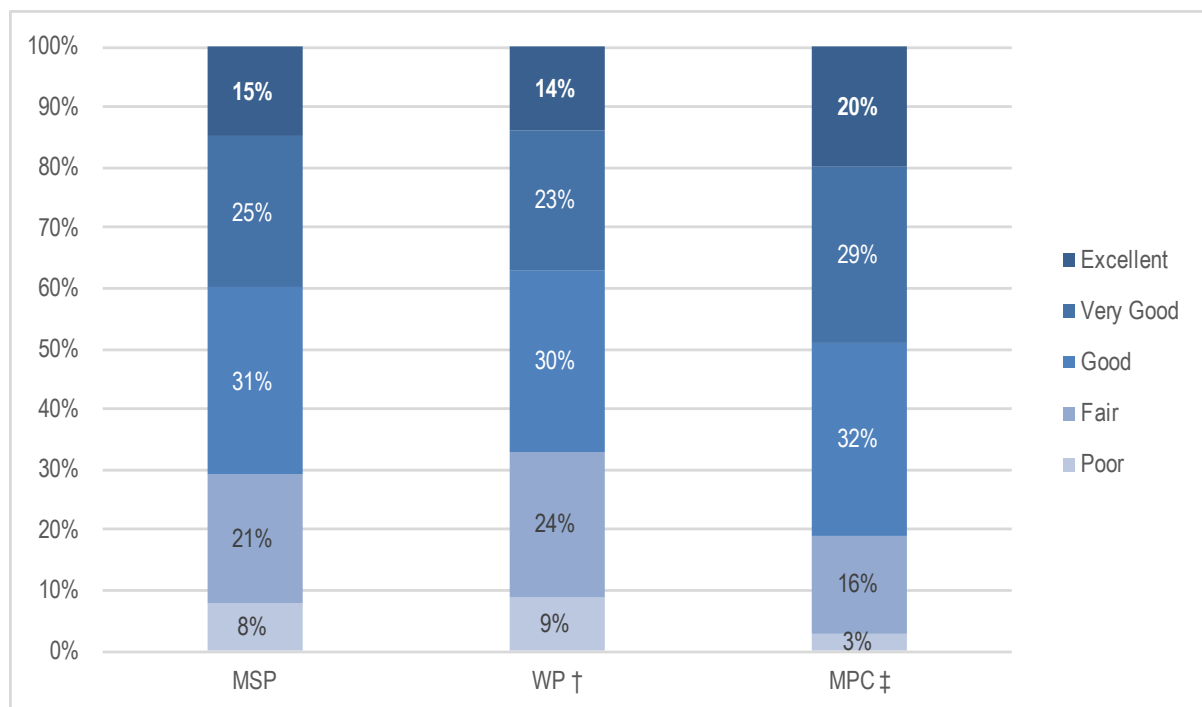
**Figure 3. Self-Reported Physical Health**



† Statistically significant difference reporting fair/poor between MSP-FMAP and IHAWP-WP at the  $p < .01$  level.

‡ Statistically significant difference reporting fair/poor between MSP-FMAP and IHAWP-MPC at the  $p < .01$  level.

**Figure 4. Self-Reported Mental Health**



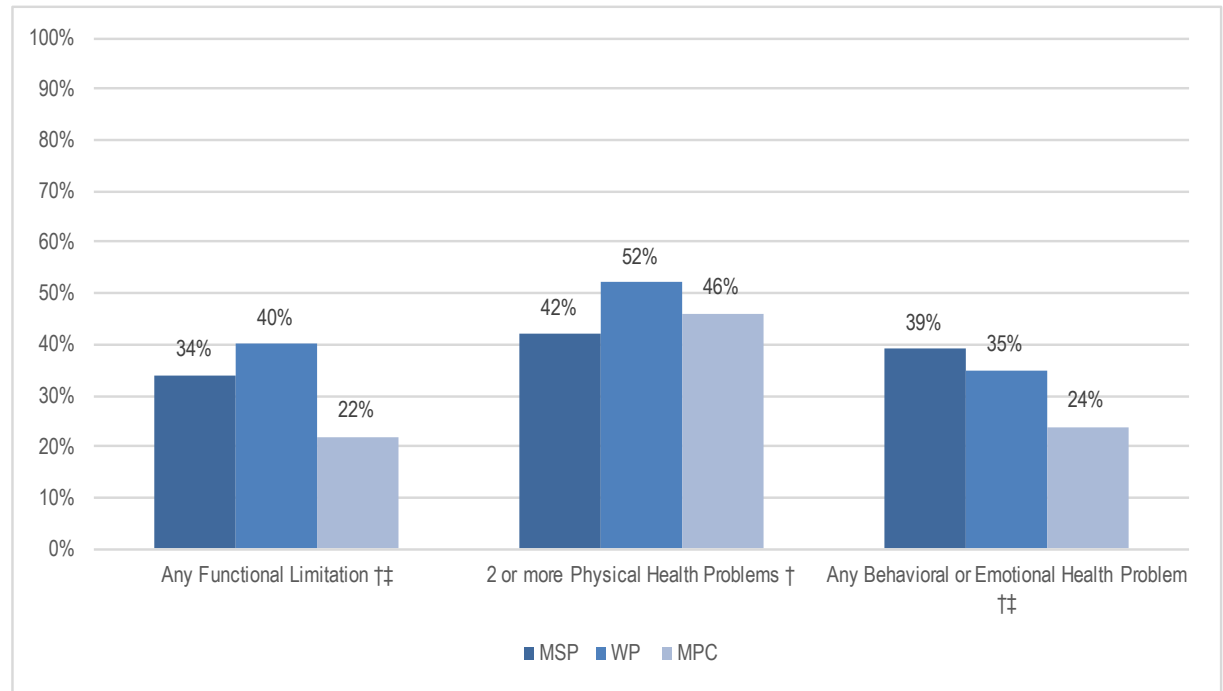
† Statistically significant difference reporting fair/poor between MSP-FMAP and IHAWP-WP at the  $p < .01$  level.

‡ Statistically significant difference reporting fair/poor between MSP-FMAP and IHAWP-MPC at the  $p < .01$  level.

The survey also asked members to indicate their current health conditions that had lasted or were expected to last for at least 3 months. The sum of the total number of reported chronic physical and mental health conditions was used to get a sense of the chronic disease burden experienced by these members. In addition, we asked four questions about potential functional limitations (see the [Health Status Variables](#) section for the content of the questions) to get an approximated sense of their disability burden. A member was defined as having a functional limitation if the response to any of the four questions was positive.

Figure 5 provides an idea of the physical, mental, and functional burden experienced by members of these health plans. Forty percent of IHAWP-WP members reported at least 1 functional limitation which is significantly higher than reported by MSP-FMAP members (34%). However, fewer IHAWP-MPC members (22%) reported at least 1 functional limitation and this was significantly less than reported by MSP-FMAP members. Slightly over half (52%) of IHAWP-WP members reported having 2 or more chronic physical health problems which was significantly higher than reported by MSP-FMAP members (42%). However, more MSP-FMAP members (39%) reported having a chronic behavioral or emotional health problem when compared to either IHAWP-WP (35%) or IHAWP-MPC (24%) members and these differences were statistically significant.

**Figure 5. Self-Reported Functional Limitations, Physical & Mental Health Problems**



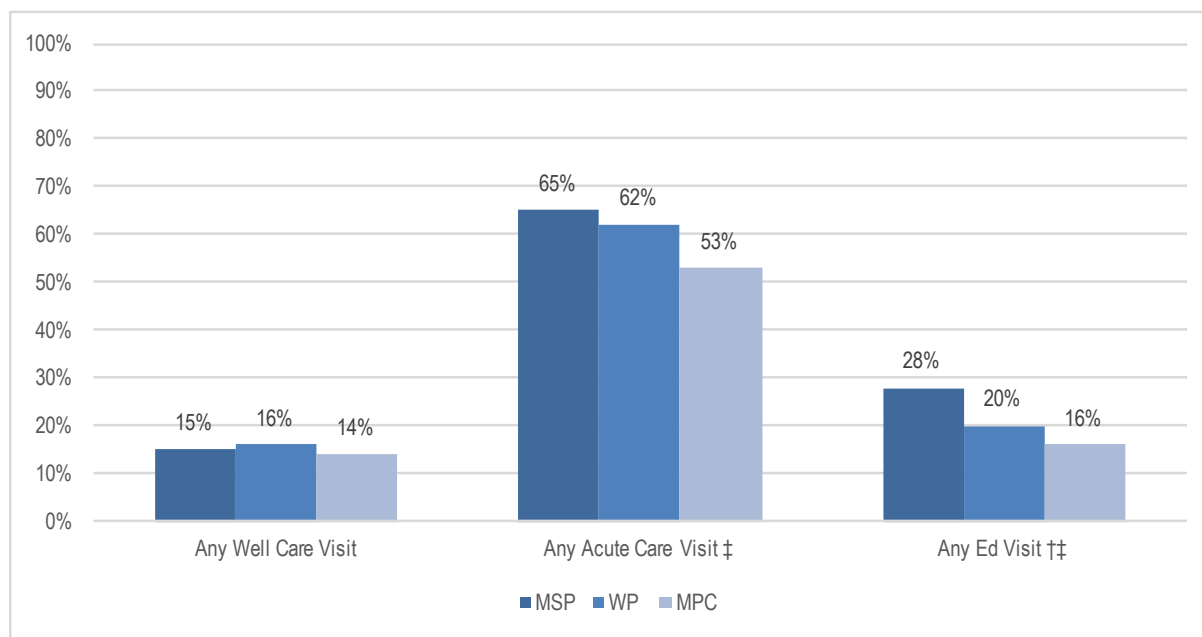
† Statistically significant difference between MSP-FMAP and IHAWP-WP at the  $p < .01$  level.

‡ Statistically significant difference between MSP-FMAP and IHAWP-MPC at the  $p < .01$  level.

The utilization of health services in the six months prior to the survey was evaluated using the members' claims history during that period. The number of well care, acute care, and emergency department (ED) visits were calculated for each survey respondent. For definitions of visit type, see the Administrative Data section.

Figure 6 shows the percentage of members by plan who had at least 1 visit (well care, acute care, and emergency department) in the six months prior to the survey. Well care visits were comparable among the three plan types with around 15% having at least one visit. Acute care visits were comparable between the MSP-FMAP (65%) and IHAWP-WP (62%) plans but the percentage in the IHAWP-MPC plan (53%) was significantly lower than that in the MSP-FMAP group. Finally, the percentage of members who had an ED visits was significantly higher in the MSP-FMAP plan (28%) compared to either the IHAWP-WP (20%) or IHAWP-MPC plans (16%).

**Figure 6. Well Care, Acute Care, and Emergency Department Visits**



† Statistically significant difference between MSP-FMAP and IHAWP-WP at the  $p < .01$  level.

‡ Statistically significant difference between MSP-FMAP and IHAWP-MPC at the  $p < .01$  level.

## Need and Access to Health Care Services

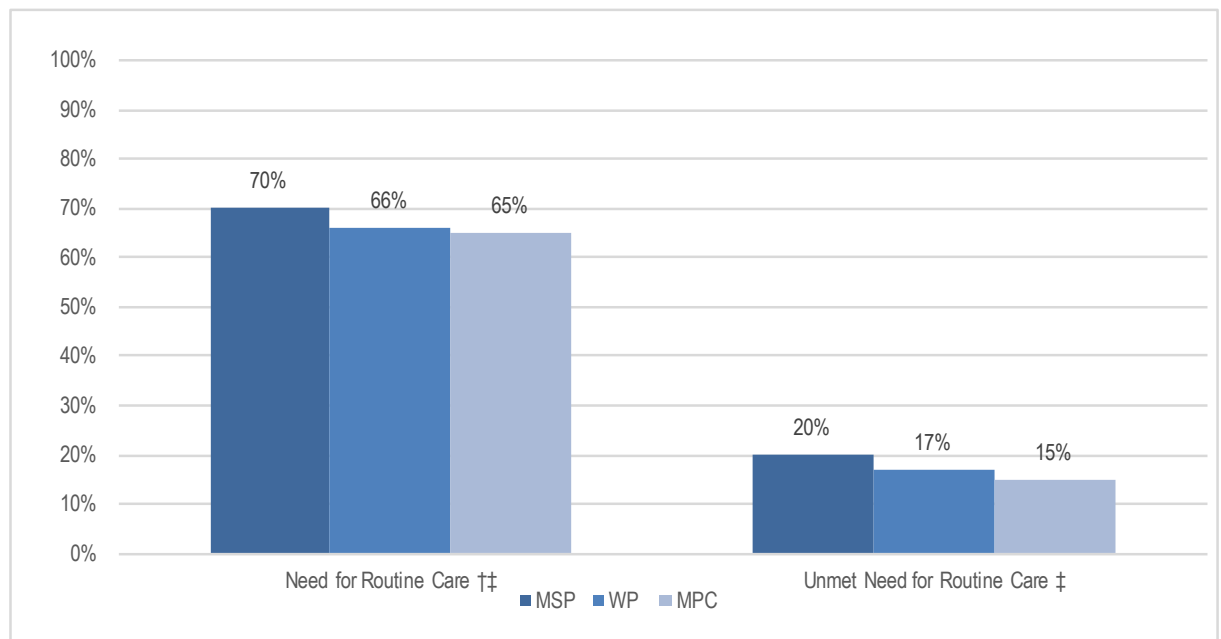
The need for NEMT services is likely to be impacted by the need for routine health care services. In the survey, the following three items asked about need and unmet need for routine health care.

- In the last 6 months, was there a time when you needed a check-up or routine care of any kind? Do not include times when you needed care right away in a clinic, emergency room, or doctor's office.
- In the last 6 months, was there any time when you needed a check-up or routine care but could not get it for any reason? [Only for those who responded "yes" to having a need]
- What was the main reason you were not able to get a check-up or routine care when you needed it? [Only for those who responded "yes" to having an unmet need]

Figure 7 provides the need and unmet need for routine care by plan type. Most members reported a need for routine care. Seventy percent of MSP-FMAP members experienced a need for routine care which was significantly higher than IHAWP-WP (66%) and IHAWP-MPC (65%). Of those with a need, 20% of MSP-FMAP members reported an unmet need for routine care which was comparable to IHAWP-WP members (17%) but significantly higher than reported by IHAWP-MPC members (15%).

For those who reported an unmet need for routine care, the top three reported reasons for not getting a needed routine care visit varied by plan type. For those in MSP-FMAP with an unmet need for routine care, 30% reported that the wait was too long, 17% reported not being able to get transportation to the doctor, and 10% reported not being able to afford the care, the health plan would not approve/ pay for the care, or they could not get time off work/get child care. For those in IHAWP-WP with an unmet need for routine care, 23% were not able to get transportation, 17% reported that the wait was too long, and 15% reported that the health plan would not approve/pay for the care. Finally, 20% of IHAWP-MPC members with an unmet need for routine care reported not being able to afford the care, 17% that the wait was too long, and 16% that they could not get time off of work/get child care. Of note, while transportation was one of the top issues for MSP-FMAP and IHAWP-WP members who experienced an unmet need for routine care, fewer IHAWP-MPC (12%) members reported transportation as a barrier.

**Figure 7. Self-Reported Need and Unmet Need for Routine Care**

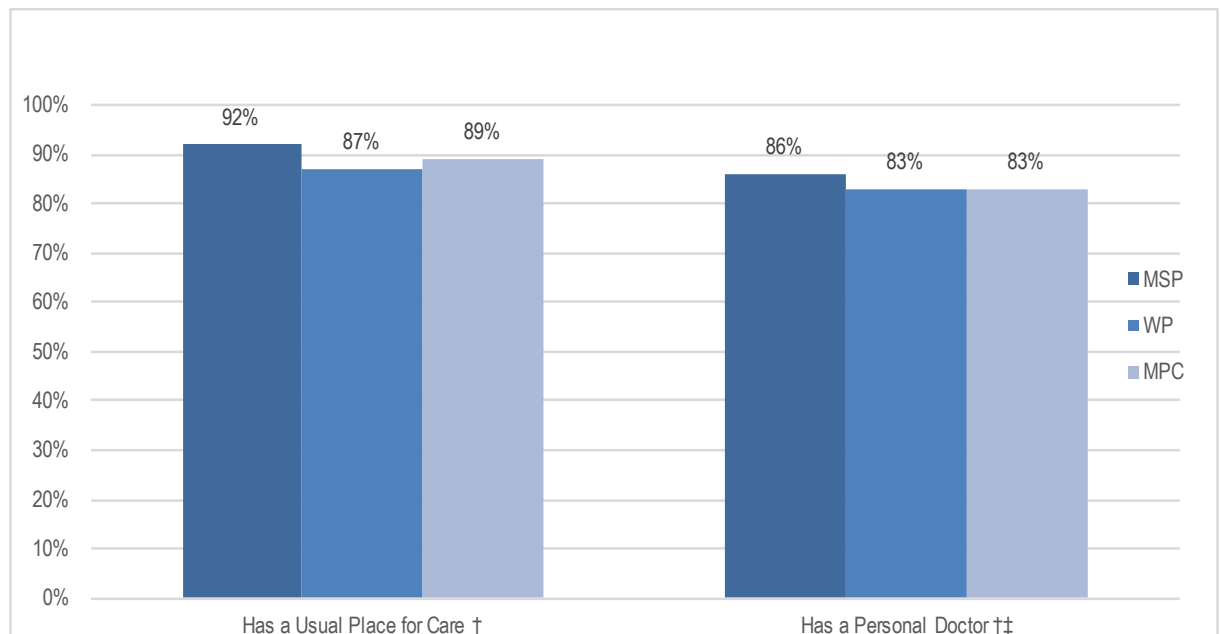


† Statistically significant difference between MSP-FMAP and IHAWP-WP at the  $p < .01$  level.

‡ Statistically significant difference between MSP-FMAP and IHAWP-MPC at the  $p < .01$  level.

Figure 8 shows the percentage of members, by plan type, who reported having a usual place for care and identified having a personal doctor (defined as the person they would see if they needed a check-up, wanted advice about a health problem, or were sick or hurt). The vast majority of all members reported having a usual place to go when they are sick or need advice about their health, with significantly more MSP-FMAP (92%) members reporting a usual place for care compared to IHAWP-WP (87%). Most members in each plan reported that the usual place they went for care was either a family physician's office (MSP-FMAP: 72%, IHAWP-WP: 62%, IHAWP-MPC: 67%) or a community or public health clinic (MSP-FMAP: 17%, IHAWP-WP: 23%, IHAWP-MPC: 21%). Given these results, it is not surprising that the majority of members also reported having a personal doctor (MSP-FMAP: 86%, IHAWP-WP: 83%, IHAWP-MPC: 83%).

**Figure 8. Usual Source of Care**



† Statistically significant difference between MSP-FMAP and IHAWP-WP at the  $p < .01$  level.

‡ Statistically significant difference between MSP-FMAP and IHAWP-MPC at the  $p < .01$  level.

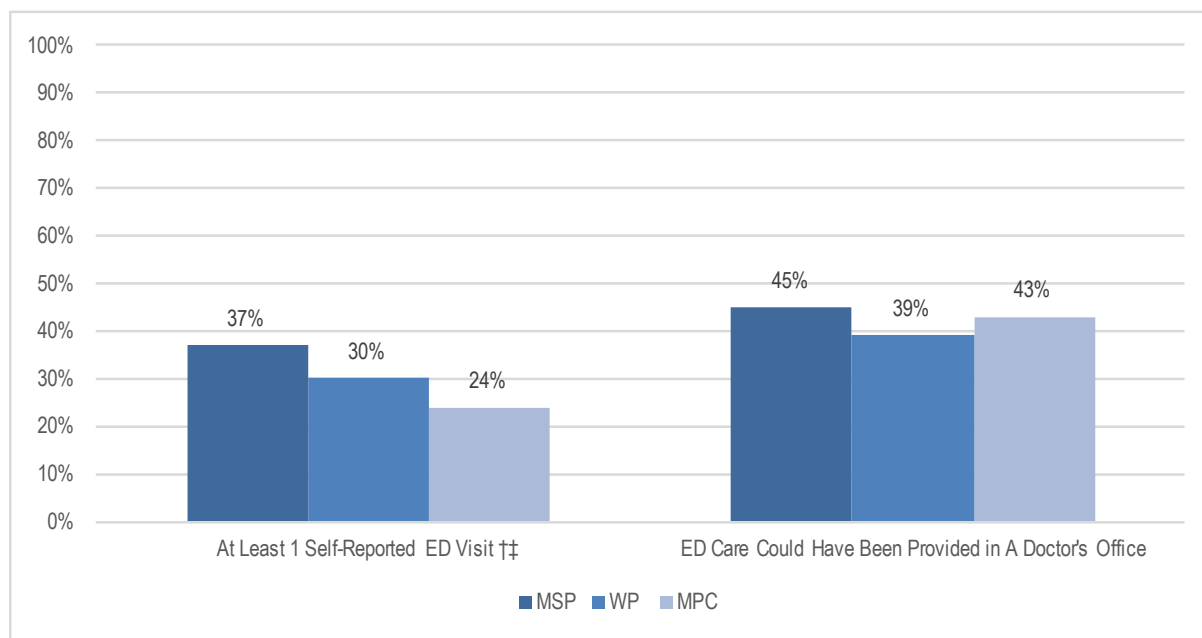
An emergency department (ED) visit may be used as a substitute for primary care for a variety of reasons, including when transportation issues pose a barrier to getting to a doctor's office. In the survey, three items asked about visits to the ED.

- In the last 6 months, how many times did you go to an emergency room (ER) to get care for yourself?
- [For those with at least 1 reported ED visit] Do you think the care you received at your most recent visit to the ER could have been provided in a doctor's office?
- [For those with at least 1 reported ED visit] What was the main reason you did not go to a doctor's office or clinic for the care you received at your most recent visit to the ER? Note: Transportation problems getting to a doctor's office or clinic was a listed response option.

Figure 9 provides the percentage, by plan, of members who reported at least one visit to an ED in the six months prior to the survey and the percentage who felt that the care they received at their most recent ED visit could have been provided in a doctor's office instead. Over one-third of MSP-FMAP members (37%) reported at least 1 visit to an ED which was significantly higher than reported by IHAWP-WP members (30%) and IHAWP-MPC members (24%). Of those who went to an ED, 45% of MSP-FMAP members thought the care could have been provided in a doctors' office which was comparable to IHAWP-MPC members (43%) and IHAWP-WP members (39%).

For those who had at least 1 visit to the ED, the top three reasons for not going to the doctor's office or clinic instead of the ED were the same for each plan type. The doctor's office not being open when care was needed was the most cited reason for using the ED instead of a clinic (MSP-FMAP: 50%, IHAWP-WP: 42%, IHAWP-MPC: 44%) followed by a health problem that was too serious for the doctor's office or clinic (MSP-FMAP: 24%, IHAWP-WP: 30%, IHAWP-MPC: 27%), and being advised by a doctor, nurse, or other health care provider to go to the ED for care (MSP-FMAP: 10%, IHAWP-WP: 10%, IHAWP-MPC: 12%). Of note, having transportation problems getting to a doctor's office or clinic was chosen as a main reason by 3% of MSP-FMAP, 3% of IHAWP-WP, and 1% of IHAWP-MPC members.

**Figure 9. ED Visits and Potentially Avoidable ED Visits**

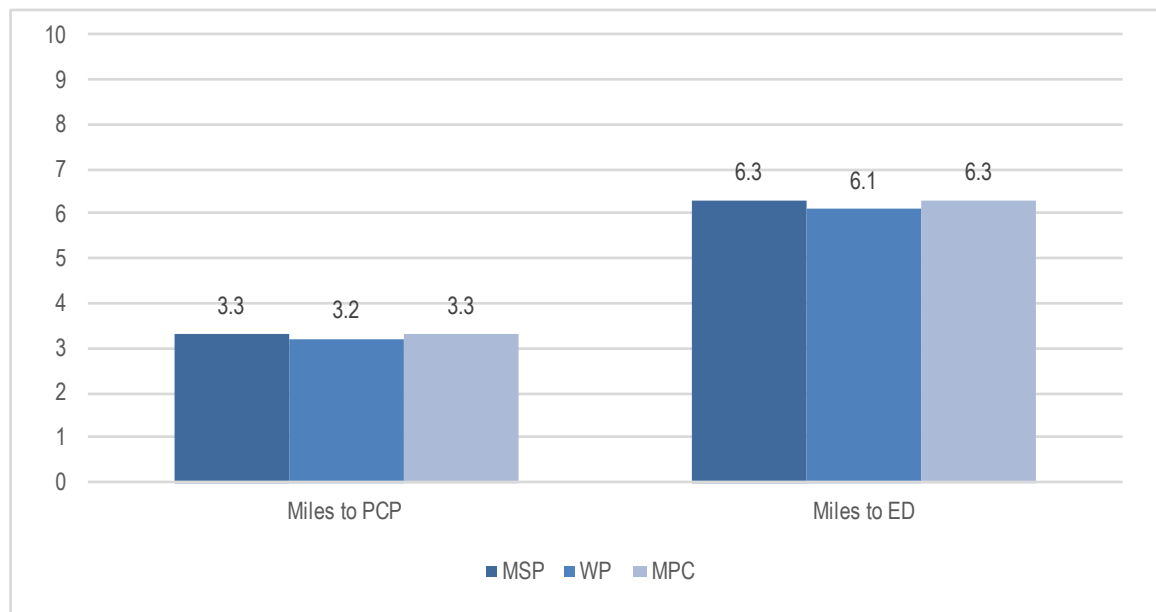


† Statistically significant difference between MSP-FMAP and IHAWP-WP at the  $p < .01$  level.

‡ Statistically significant difference between MSP-FMAP and IHAWP-MPC at the  $p < .01$  level.

The distance from home to health care providers can be one factor influencing transportation as a barrier to the utilization of needed health care services. Figure 10 provides, by plan, the average distance in miles from members' homes to a) the nearest active (at least 1 claim in the past six months) primary care provider (PCP), and b) the nearest ED. The average number of miles to the nearest PCP was a little over 3, and was around 6 to the nearest ED, regardless of plan type.

**Figure 10. Average Distance From Health Care Providers**



## Transportation and Access to Health Care

We examined member experiences with transportation to and from health care visits. Four items in the survey asked about access issues related to health care-related transportation.

- In the last 6 months, how often did you need assistance from other sources (such as friends, family, public transportation, etc.) to get to your health care visit? [Possible Responses: Never, Sometimes, Usually, or Always]
- In the last 6 months, was there any time when you needed transportation to or from a health care visit but could not get it for any reason?
- [Only for those who reported an unmet need for transportation]: Thinking of the most recent time you could not get to a health care visit because of transportation, what was the main reason you could not get there? [Possible Responses: My car broke down, The person who usually takes me was not available, The transit system was not available, and Other transportation problem]
- In the last 6 months, how much, if at all, have you worried about your ability to pay for the cost of transportation to or from a health care visit? [Possible Responses: Never, Sometimes, Usually, or Always]

Figure 11 provides, by plan, the percentages of members with need and unmet need for non-emergency medical transportation (NEMT), and worry about the cost of transportation. As stated previously, MSP-FMAP members have a plan benefit that covers NEMT services while members of IHAWP-WP and IHAWP-MPC do not.

A little over one-fifth (22%) of IHAWP-WP members reported usually or always needing assistance from other sources to get to a health care visit which was significantly higher than reported by MSP-FMAP members (18%). Yet, 9% of IHAWP-MPC members reported needing this help which was significantly lower than reported by MSP-FMAP members.

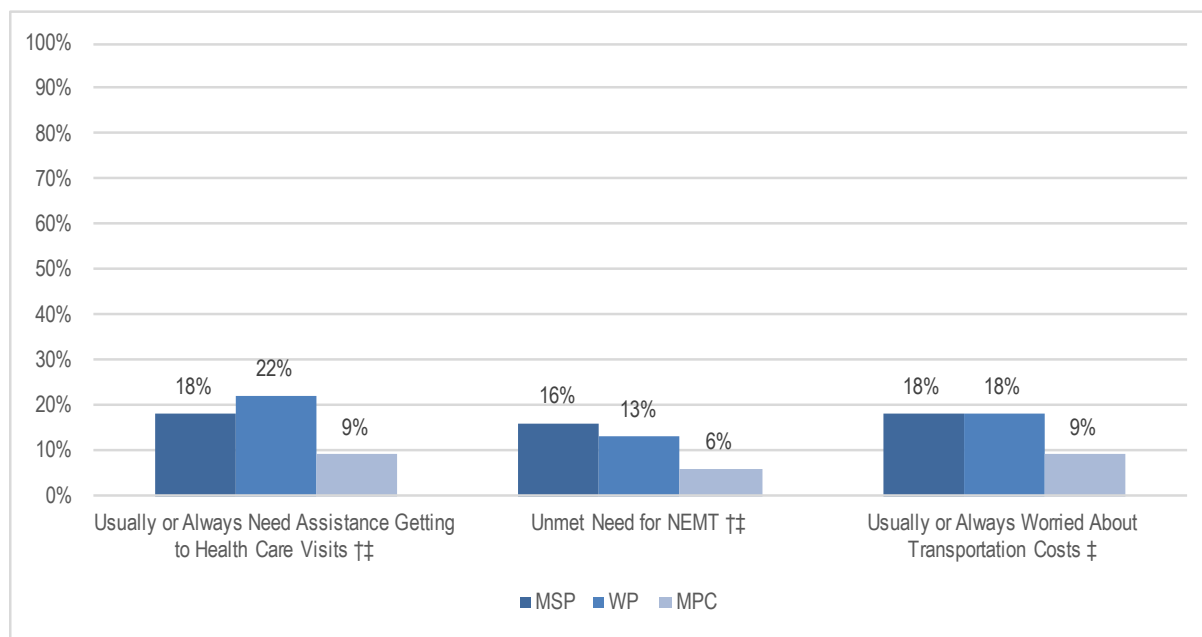
Regarding unmet NEMT need, 16% of MSP-FMAP members and 13% of IHAWP-WP members reported an unmet need for transportation to health care visits and this difference was statistically significant. Six percent of IHAWP-MPC members reported an unmet NEMT need which was also significantly different from the MSP-FMAP group.

The most common transportation-related reason for not being able to get to a health care visit in all three plan types (for those who reported an unmet NEMT need) was that the person who usually takes them to visits was not available (MSP-FMAP: 45%, IHAWP-WP: 53%, IHAWP-MPC: 44%). Having a car that broke down (MSP-FMAP: 28%, IHAWP-WP: 15%, IHAWP-MPC: 26%) and other problems such as transportation-related expenses (i.e., cost of gas, bus fare, cab fare, parking, or paying a friend or relative for a ride), lack of informal support (i.e., not having a friend or relative

available to drive), or health issues interfering with the ability to seek care (i.e., not feeling well enough to walk or drive) (MSP-FMAP: 21%, IHAWP-WP: 18%, IHAWP-MPC: 21%) were common reasons. For IHAWP-WP members, 14% reported that they were unable to get to a health care visit because the transit system was not available while 6% of MSP-FMAP and 9% of IHAWP-MPC cited this reason.

Finally, level of worry about the ability to pay for the cost of transportation to or from health care visits was comparable between MSP-FMAP members (18%) and IHAWP-WP members (18%). However, IHAWP-MPC members experienced significantly less worry about cost of transportation (9%) compared to MSP-FMAP members.

**Figure 11. Transportation to Health Care Visits: Need, Unmet Need, and Worry About Cost**



† Statistically significant difference between MSP-FMAP and IHAWP-WP at the  $p < .01$  level.

‡ Statistically significant difference between MSP-FMAP and IHAWP-MPC at the  $p < .01$  level.

To get a sense of the transportation environment surrounding these members, the survey included several items related to method of transportation used to get to health care appointments, household drivers and vehicle availability, and the availability and use of public transportation. The five items were:

- When you need to get to health care, what is the type of transportation you use most often to get to your visit?
- Are you a licensed driver?
- How many licensed vehicles were owned or available for regular use by members of your household during the last 6 months?
- Is there a public transit system in your area?
- Have you used public transportation (such as a bus or government-provided transit) for any reason in the past year?

Figure 12 provides a summary of the types of transportation used by members to get to their health care visits. The majority of all members, regardless of plan type, reported that they depended on themselves alone (drove themselves, using their own vehicle) to get to their appointments (MSP-FMAP: 69%, IHAWP-WP: 58%, IHAWP-MPC: 81%) with IHAWP-MPC members most likely to do so and IHAWP-WP least likely. A little over one-quarter of MSP-FMAP members (26%) reported some type of dependence on others for driving to visits (i.e., driving self, using someone else's vehicle, someone else drives, using own vehicle, someone else drives, using their vehicle). Slightly more IHAWP-WP members (31%) and fewer IHAWP-MPC members (14%) reported depending on others for driving compared to MSP-FMAP. Nine percent of IHAWP-WP members reported depending on other forms of transportation (i.e., taxi, public transit, biking, or walking) to get to health care compared to

5% for MSP-FMAP and 4% for IHAWP-MPC. Very few (1% in each group) reported having no reliable way to get to health care visits.

**Figure 12. Means of Transportation to Health Care Services**

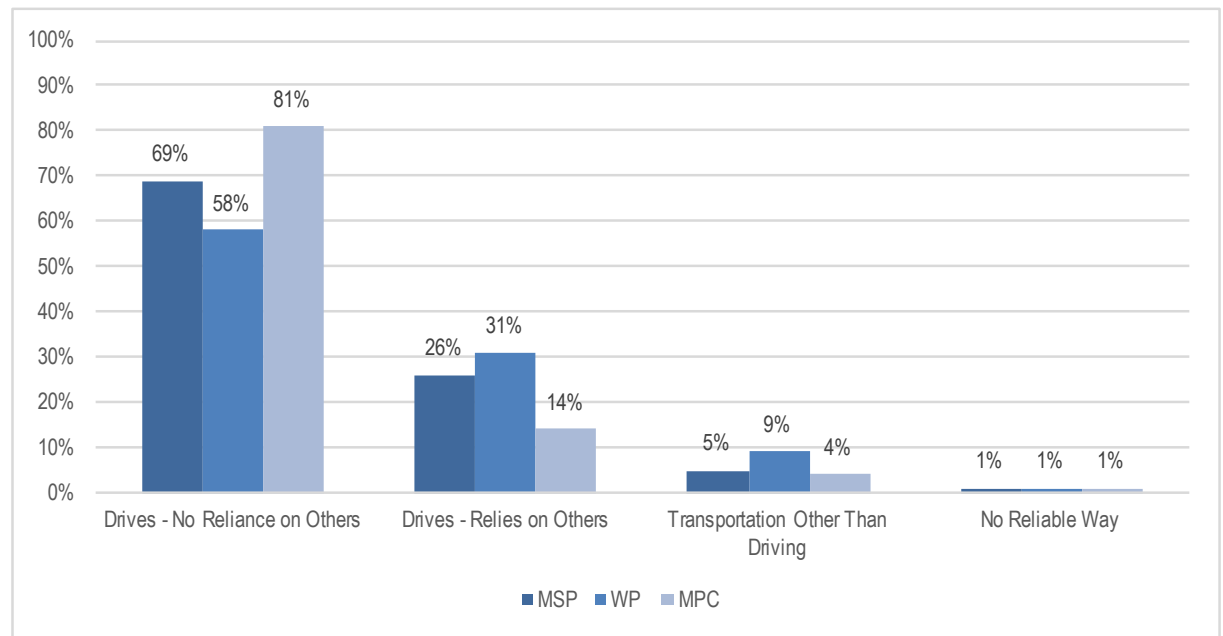
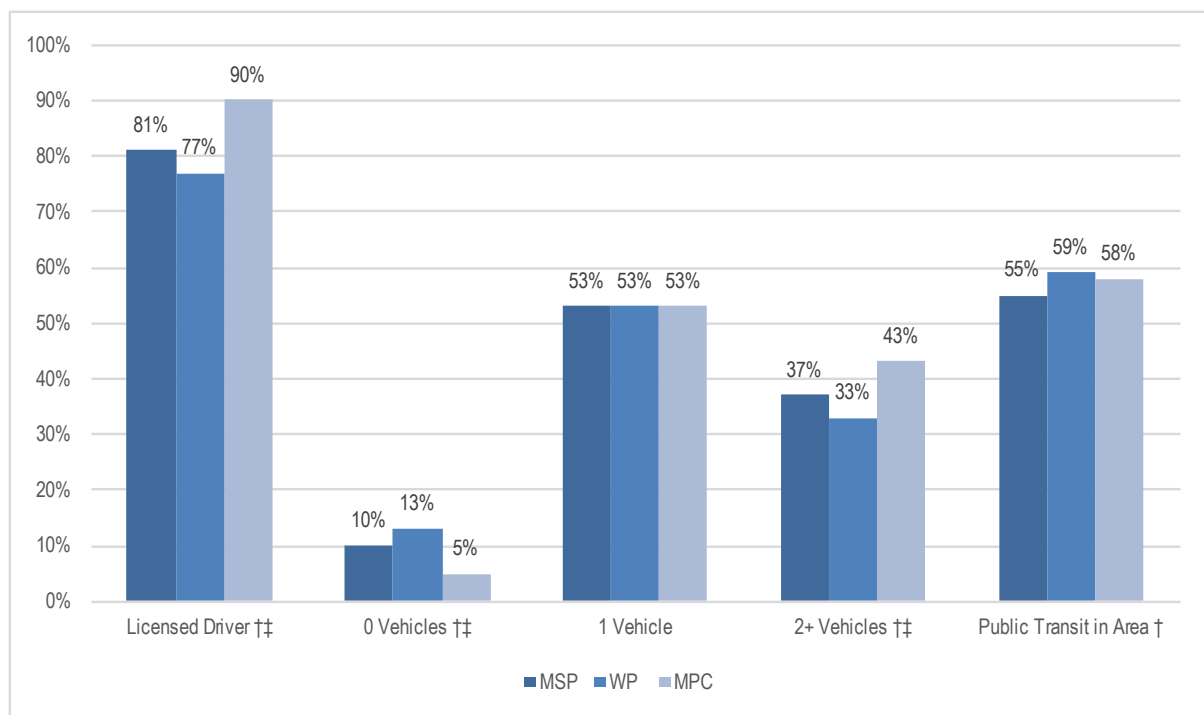


Figure 13 provides a summary of member access to and use of vehicles and public transit. The majority of respondents to the survey were licensed drivers with significantly fewer drivers in the IHAWP-WP (77%) and significantly more drivers in the IHAWP-MPC (90%) when compared to MSP-FMAP (81%). Interestingly, around half (53%) of members in each plan type reported having only 1 vehicle available to the household. Significantly more IHAWP-WP members (13%) and significantly fewer IHAWP-MPC members (5%) reported having no vehicles available to the household when compared to MSP-FMAP members (10%). Conversely, significantly more IHAWP-MPC members (43%) and significantly fewer IHAWP-WP members (33%) reported having two or more vehicles available to the household compared to MSP-FMAP members (37%).

With regard to public transit, a little over half of all members (MSP-FMAP: 55%, IHAWP-WP: 59%, IHAWP-MPC: 58%) reported that there was a public transit system in their area. Over one-quarter of IHAWP-WP members (27%) reported having used public transportation in the past year which is significantly higher than reported by either MSP-FMAP members (19%) or IHAWP-MPC members (17%).

**Figure 13. License status, Household Vehicles, and Public Transit**



† Statistically significant difference between MSP-FMAP and IHAWP-WP at the  $p < .01$  level.

‡ Statistically significant difference between MSP-FMAP and IHAWP-MPC at the  $p < .01$  level.

## Factors Related to Experiencing an Unmet NEMT Need

Table 1 provides the results of the logistic regression model predicting the likelihood of individuals experiencing an unmet need for transportation to or from a health care visit as a function of health plan (IHAWP-WP, IHAWP-MPC compared to MSP-FMAP), length of enrollment, age, gender, race/ethnicity, education, income, metropolitan area of residence, functional, physical, and mental health status, and distance to health care services. With regard to the relationship of plan type and unmet NEMT need, IHAWP-WP members had a 21% lower odds and IHAWP-MPC members had a 50% lower odds of having unmet NEMT need compared to MSP-FMAP members, after adjusting for the other variables in the model.

In addition to plan type, certain demographic characteristics also were associated with lower odds of unmet NEMT need. Older individuals (45 – 64) had an 18% lower odds compared younger individuals (18 -44), whites had a 36% lower odds compared to non-whites, individuals with an education level above high school had a 23% lower odds compared to those with a high school education or less, individuals in the upper 50<sup>th</sup> percentile of income had a 37% lower odds compared to those in the lower 50<sup>th</sup> percentile, and those who lived in a rural area had a 33% lower odds of unmet NEMT need when compared to those who lived in a metropolitan area.

Females, black respondents, those enrolled in their plan longer, and those in poor health had an increased likelihood of having an unmet NEMT need. Those enrolled in their health plan 15-22 months had 40% greater odds of unmet NEMT need compared to those enrolled 6-14 months, females had 24% greater odds than males, and black respondents had 83% greater odds than non-blacks. Not surprisingly, individuals in poor health experienced greater odds of unmet NEMT need ranging from 37% greater odds for individuals reporting fair/poor mental health compared to good/excellent mental health to 145% greater odds for individuals with functional limitations to those without functional limitations.

**Table 3. Factors Associated with Unmet NEMT Need**

<b>Factors</b>	<b>Odds Ratio (95% CI)</b>	<b>p-value</b>
<b>IHAWP-WP group (Ref: MSP-FMAP group)</b>	0.79 (0.65, 0.95)	0.01
<b>IHAWP-MPC group (Ref: MSP-FMAP group)</b>	0.50 (0.37, 0.66)	<.001
<b>Enrolled in plan for 15-22 months (Ref: 6-14 months)</b>	1.40 (1.19, 1.65)	<.001
<b>Age 45-64 years (Ref: Age 18-44)</b>	0.82 (0.70, 0.97)	0.02
<b>Female (Ref: Male)</b>	1.24 (1.05, 1.46)	0.01
<b>White (Ref: Non-white)</b>	0.64 (0.45, 0.90)	0.01
<b>Black (Ref: Non-black)</b>	1.83 (1.23, 2.73)	0.003
<b>Hispanic (Ref: Non-Hispanic)</b>	1.31 (0.82, 2.08)	0.25
<b>Education &gt; High School (Ref: High School or Less)</b>	0.77 (0.66, 0.89)	<.001
<b>Higher Income – Upper 50<sup>th</sup> Percentile (Ref: Lower 50<sup>th</sup> Percentile)</b>	0.63 (0.54, 0.73)	<.001
<b>Non metropolitan, urban residence (Ref: Metropolitan, Urban)</b>	0.91 (0.77, 1.07)	0.24
<b>Non metropolitan, rural residence (Ref: Metropolitan, Urban)</b>	0.67 (0.47, 0.96)	0.03
<b>Has any functional limitation (Ref: None)</b>	2.45 (2.04, 2.94)	<.001
<b>Fair/Poor Self-Reported Physical Health (Ref: Good/Very Good/Excellent)</b>	1.58 (1.33, 1.87)	<.001
<b>Fair/Poor Self-Reported Mental Health (Ref: Good/Very Good/Excellent)</b>	1.37 (1.14, 1.65)	<.001
<b>Reported 2 or more physical health conditions (Ref: 0-1 condition)</b>	1.63 (1.38, 1.94)	<.001
<b>Any Mental Health Condition (Ref: 0 conditions)</b>	1.20 (1.00, 1.44)	0.05
<b>Distance to PCP: 0.8 – 2.0 miles (Ref: 0 – 0.7 miles)</b>	1.15 (0.97, 1.38)	0.12
<b>Distance to PCP: Over 2.0 miles (Ref: 0 – 0.7 miles)</b>	1.06 (0.84, 1.35)	0.62
<b>Distance to ED: 2.0 – 6.5 miles (Ref: 0 – 1.9 miles)</b>	0.75 (0.62, 0.90)	0.002
<b>Distance to ED: Over 6.5 miles (Ref: 0 – 1.9 miles)</b>	0.87 (0.68, 1.10)	0.25

## Relationship of Unmet NEMT Need with Utilization of Health Care Services

Tables 4-6 provide the results of the logistic regression models predicting the likelihood of health care utilization, after accounting for unmet NEMT need, health plan status, and other characteristics. Three sets of models were fit to answer this question – one for each of the utilization types (well care visit, acute care visit, and emergency department visit).

### *Well care visits*

Table 4 provides the model odds ratios, 95% confidence intervals, and p-values for the focal variables of unmet NEMT need, plan type, the interaction of unmet NEMT need by IHAWP-WP, plus the other covariates as they relate to whether or not a member had a well care visit in the six months prior to the survey. Interaction terms for unmet NEMT need by plan type were included in the model and the interaction of unmet NEMT need by IHAWP-WP group was statistically significant while the interaction of unmet NEMT need by IHAWP-MPC group was not. Thus, the table includes the odds ratios and associated confidence intervals for unmet NEMT need by within strata of IHAWP-WP group (Yes or No) and for IHAWP-WP group within strata of unmet NEMT need (No unmet need, Yes unmet need) in order to clarify the interaction effect.

**Table 4. Factors associated with having a well care visit.**

<b>Factors</b>	<b>Odds Ratio (95% CI)</b>	<b>p-value</b>
<b>Interaction: Unmet NEMT need by IHAWP-WP group</b>	--	0.02
<b>Unmet NEMT need (Ref: no Unmet NEMT need)</b>		
When IHAWP-WP = No	0.98 (0.70, 1.38)	NS
When IHAWP-WP = Yes	0.60 (0.45, 0.78)	P<.05
<b>IHAWP – WP group (Ref: MSP-FMAP)</b>		
When Unmet NEMT need = No unmet NEMT need	1.39 (1.16, 1.67)	P<.05
When Unmet NEMT need = Yes	0.84 (0.56, 1.27)	NS
<b>IHAWP-MPC group (Ref: MSP-FMAP)</b>	0.99 (0.80, 1.24)	0.99
<b>Enrolled in plan for 15-22 months (Ref: 6-14 months)</b>	1.02 (0.90, 1.16)	0.73
<b>Age 45-64 years (Ref: Age 18-44)</b>	1.05 (0.92, 1.21)	0.46
<b>Female (Ref: Male)</b>	1.74 (1.51, 2.01)	<.001
<b>White (Ref: Non-white)</b>	0.96 (0.72, 1.29)	0.78
<b>Black (Ref: Non-black)</b>	0.89 (0.60, 1.31)	0.55
<b>Hispanic (Ref: Non-Hispanic)</b>	1.29 (0.85, 1.94)	0.23
<b>Education &gt; High School (Ref: High School or Less)</b>	1.54 (1.36, 1.75)	<.001
<b>Income – Upper 50<sup>th</sup> Percentile (Ref: Lower 50<sup>th</sup> Percentile)</b>	0.95 (0.84, 1.08)	0.43
<b>Non metropolitan, urban residence (Ref: Metropolitan, Urban)</b>	0.86 (0.75, 0.98)	0.03
<b>Non metropolitan, rural residence (Ref: Metropolitan, Urban)</b>	0.98 (0.75, 1.29)	0.90
<b>Has any functional limitation (Ref: None)</b>	0.88 (0.75, 1.04)	0.13
<b>Fair/Poor Self-Reported Physical Health (Ref: Good to Excellent)</b>	0.93 (0.79, 1.10)	0.40
<b>Fair/Poor Self-Reported Mental Health (Ref: Good/Very Good/Excellent)</b>	0.93 (0.78, 1.11)	0.42
<b>Reported 2 or more physical health conditions (Ref: 0-1)</b>	1.37 (1.19, 1.57)	<.001
<b>Reported Any Mental Health Condition (Ref: 0 conditions)</b>	1.08 (0.92, 1.26)	0.38
<b>Distance to PCP: 0.8 – 2.0 miles (Ref: 0 – 0.7 miles)</b>	1.06 (0.91, 1.24)	0.44
<b>Distance to PCP: Over 2.0 miles (Ref: 0 – 0.7 miles)</b>	1.05 (0.86, 1.27)	0.64
<b>Distance to ED: 2.0 – 6.5 miles (Ref: 0 – 1.9 miles)</b>	1.07 (0.91, 1.26)	0.39
<b>Distance to ED: Over 6.5 miles (Ref: 0 – 1.9 miles)</b>	0.99 (0.81, 1.20)	0.88

The interaction effect suggests that the greater likelihood of obtaining a well care visit for those in the IHAWP-WP depended on whether or not an individual experienced an unmet NEMT need. Individuals in the IHAWP-WP had 39% greater odds (statistically significant) of having a well care visit when they did not have an unmet NEMT need and 16% lower odds (not statistically significant) when they did have unmet NEMT need. Conversely, when looking at the odds of a well care visit for those with unmet NEMT need within IHAWP-WP strata, individuals with an unmet NEMT need had 40% lower odds (statistically significant) of a well care visit when in the IHAWP-WP and 2% lower odds (not statistically significant) when not in the IHAWP-WP.

In addition to these findings, some demographic and health status characteristics were found to be related to having a well care visit. Individuals living in a non-metropolitan, next-to-urban area had 14% lower odds of a well care visit compared to individuals living in metropolitan areas. And, females had 74% greater odds of having a well care visit than males, individuals with higher education had 54% higher odds than those with lower education levels, and individuals with more physical health conditions had 37% higher odds compared to those with fewer physical health conditions.

## Acute care visits

Table 5 provides the model odds ratio, 95% confidence interval, and p-value for the focal variables of unmet NEMT need, plan type (IHAWP-WP & IHAWP-MPC), plus the other covariates as described in the methods as they relate to whether or not a member had an acute care visit in the six months prior to the survey. Interaction terms between unmet NEMT need and plan type (IHAWP-WP, IHAWP-MPC) were not statistically significant and were therefore not included in the model results.

**Table 5. Factors associated with having an acute care visit.**

Factors	Odds Ratio (95% CI)	p-value
<b>Unmet NEMT need (Ref: No Reported Unmet NEMT need)</b>	1.16 (0.99, 1.37)	0.07
<b>IHAWP-WP group (Ref: MSP-FMAP group)</b>	0.82 (0.72, 0.93)	0.003
<b>IHAWP-MPC group (Ref: MSP-FMAP group)</b>	0.61 (0.52, 0.71)	<.001
<b>Enrolled in plan for 15-22 months (Ref: 6-14 months)</b>	0.98 (0.89, 1.08)	0.70
<b>Age 45-64 years (Ref: Age 18-44)</b>	1.32 (1.19, 1.47)	<.001
<b>Female (Ref: Male)</b>	1.49 (1.34, 1.65)	<.001
<b>White (Ref: Non-white)</b>	1.15 (0.92, 1.44)	0.23
<b>Black (Ref: Non-black)</b>	1.24 (0.93, 1.66)	0.15
<b>Hispanic (Ref: Non-Hispanic)</b>	1.49 (1.07, 2.07)	0.02
<b>Education &gt; High School (Ref: High School or Less)</b>	1.08 (0.98, 1.19)	0.10
<b>Higher Income – Upper 50<sup>th</sup> Percentile (Ref: Lower 50<sup>th</sup> Percentile)</b>	1.08 (0.98, 1.19)	0.14
<b>Non metropolitan, urban residence (Ref: Metropolitan, Urban)</b>	1.02 (0.92, 1.13)	0.69
<b>Non metropolitan, rural residence (Ref: Metropolitan, Urban)</b>	1.30 (1.05, 1.63)	0.02
<b>Has any functional limitation (Ref: None)</b>	1.48 (1.30, 1.68)	<.001
<b>Fair/Poor Self-Reported Physical Health (Ref: Good/Very Good/Excellent)</b>	1.50 (1.32, 1.71)	<.001
<b>Fair/Poor Self-Reported Mental Health (Ref: Good/Very Good/Excellent)</b>	0.89 (0.78, 1.02)	0.10
<b>Reported 2 or more physical health conditions (Ref: 0-1)</b>	1.91 (1.72, 2.13)	<.001
<b>Reported Any Mental Health Condition (Ref: 0 conditions)</b>	1.18 (1.04, 1.34)	0.01
<b>Distance to PCP: 0.8 – 2.0 miles (Ref: 0 – 0.7 miles)</b>	0.91 (0.81, 1.02)	0.10
<b>Distance to PCP: Over 2.0 miles (Ref: 0 – 0.7 miles)</b>	1.09 (0.94, 1.27)	0.26
<b>Distance to ED: 2.0 – 6.5 miles (Ref: 0 – 1.9 miles)</b>	0.93 (0.82, 1.05)	0.26
<b>Distance to ED: Over 6.5 miles (Ref: 0 – 1.9 miles)</b>	0.90 (0.77, 1.05)	0.19

There was no statistically significant relationship between having an unmet NEMT need and having an acute care visit. IHAWP-WP members had 18% lower odds and IHAWP-MPC members had 39% lower odds of having an acute care visit compared to MSP-FMAP members. Older (45-64) individuals had 32% greater odds than younger (18-44) of having an acute care visit, females had 49% greater odds than males, Hispanics had 49% greater odds than non-Hispanics, and individuals in rural areas had 30% greater odds of an acute care visit when compared to individuals in metropolitan areas. In addition, being in poor health increased the odds of having an acute care visit: ranging from 18% greater odds for those reporting a mental health condition compared to no mental health condition to 91% greater odds for people reporting 2 or more physical health conditions compared to 0 or 1.

## ED visits

Table 6 provides the model odds ratio, 95% confidence interval, and p-value for the focal variables of unmet NEMT need, plan type (IHAWP-WP & IHAWP-MPC), plus the other covariates as described in the methods as they relate to whether or not a member had an emergency department visit in the six months prior to the survey. Interaction terms between unmet NEMT need and plan type (IHAWP-WP, IHAWP-MPC) were not statistically significant and were therefore not included in the model results.

**Table 6. Factors associated with having an emergency department visit**

<b>Factors</b>	<b>Odds Ratio (95% CI)</b>	<b>p-value</b>
<b>Unmet NEMT need (Ref: No Reported Unmet NEMT need)</b>	1.45 (1.23, 1.70)	<.001
<b>IHAWP-WP group (Ref: MSP-FMAP group)</b>	0.72 (0.62, 0.83)	<.001
<b>IHAWP-MPC group (Ref: MSP-FMAP group)</b>	0.63 (0.52, 0.76)	<.001
<b>Enrolled in plan for 15-22 months (Ref: 6-14 months)</b>	0.96 (0.85, 1.08)	0.49
<b>Age 45-64 years (Ref: Age 18-44)</b>	0.66 (0.58, 0.75)	<.001
<b>Female (Ref: Male)</b>	1.19 (1.05, 1.35)	.007
<b>White (Ref: Non-white)</b>	1.35 (0.99, 1.83)	0.05
<b>Black (Ref: Non-black)</b>	1.96 (1.36, 2.80)	<.001
<b>Hispanic (Ref: Non-Hispanic)</b>	1.31 (0.87, 1.98)	0.20
<b>Education &gt; High School (Ref: High School or Less)</b>	0.81 (0.72, 0.91)	<.001
<b>Higher Income – Upper 50<sup>th</sup> Percentile (Ref: Lower 50<sup>th</sup> Percentile)</b>	0.85 (0.76, 0.96)	.007
<b>Non metropolitan, urban residence (Ref: Metropolitan, Urban)</b>	1.11 (0.98, 1.26)	0.10
<b>Non metropolitan, rural residence (Ref: Metropolitan, Urban)</b>	1.54 (1.22, 1.96)	<.001
<b>Has any functional limitation (Ref: None)</b>	1.32 (1.14, 1.52)	<.001
<b>Fair/Poor Self-Reported Physical Health (Ref: Good/Very Good/Excellent)</b>	1.52 (1.32, 1.74)	<.001
<b>Fair/Poor Self-Reported Mental Health (Ref: Good/Very Good/Excellent)</b>	1.04 (0.89, 1.20)	0.65
<b>Reported 2 or more physical health conditions (Ref: 0-1)</b>	1.37 (1.20, 1.56)	<.001
<b>Reported Any Mental Health Condition (Ref: 0 conditions)</b>	1.28 (1.11, 1.47)	<.001
<b>Distance to PCP: 0.8 – 2.0 miles (Ref: 0 – 0.7 miles)</b>	1.03 (0.90, 1.19)	0.65
<b>Distance to PCP: Over 2.0 miles (Ref: 0 – 0.7 miles)</b>	1.18 (0.98, 1.42)	0.07
<b>Distance to ED: 2.0 – 6.5 miles (Ref: 0 – 1.9 miles)</b>	0.84 (0.72, 0.97)	0.02
<b>Distance to ED: Over 6.5 miles (Ref: 0 – 1.9 miles)</b>	0.66 (0.55, 0.80)	<.001

Individuals with an unmet NEMT need had 45% greater odds of an ED visit compared to those with no unmet NEMT need. In addition, females had 19% greater odds than males, black respondents had 96% greater odds than non-blacks, and those in rural areas had 54% greater odds than those in metropolitan areas of having an ED visit. Not unexpectedly, individuals in poor health had a higher likelihood of an ED visit. Individuals with any functional limitation had 32% greater odds of an ED visit compared to those with no functional limitations, those with fair to poor physical health had 52% greater odds than those with good to excellent physical health, those with 2 or more physical health conditions had 37% greater odds of an ED visit than those with 0 to 1 condition, and individuals who reported a mental health conditions had 28% greater odds of an ED visit than those who did not report any mental health conditions.

Several factors were associated with a lower likelihood of an ED visit. IHAWP-WP members had 28% lower odds and IHAWP-MPC members had 37% lower odds of an ED visit compared to MSP-FMAP members. Individuals in the older age group (45-64) had 34% lower odds of an ED visit compared to younger people (18-44). Those with more than a high school education had 19% lower odds and those with a higher income had a 15% lower odds of an ED visit. Finally, distance to the nearest ED was related to ED use, with individuals 2.0 – 6.5 miles from an ED having a 16% lower odds and those over 6.5 miles from an ED having a 34% lower odds of an ED visit than those who lived closest to their nearest ED (0-1.9 miles).

## Limitations

There are some limitations to this research that should be considered when interpreting the results. First, those who chose to respond to the survey may be different from those who chose not to respond which can create biased results. In this evaluation, respondents were more likely to be older, white, and female as compared to non-respondents, regardless of plan type. Within the MSP-FMAP group, respondents were less likely to come from metropolitan areas when compared to non-respondents. Within the IHAWP-WP and IHAWP-MPC groups, respondents were more likely to be enrolled longer than non-respondents and more likely to be from metropolitan areas but less likely to be from non-metro or rural areas when compared to non-respondents. Second, survey respondents may have difficulty accurately remembering events which may introduce recall bias. This risk may not be high because of the relatively short time period for recalling events (6 months). Third, because administrative data are collected for billing and tracking purposes, they may not always accurately reflect the service provided. Finally, the logistic regression models are limited by the fact that there may be unobserved factors that differ between individuals which we are unable to adequately adjust for in the models. While this may bias our results, the direction and magnitude of any such bias cannot be well predicted.

## Conclusions

There were two main questions of interest in this research, namely, do IHAWP members who do not have an NEMT benefit experience more unmet NEMT need than those who do have the benefit (i.e., traditional Medicaid state plan members) and does plan type (IHAWP or MSP) and/or unmet NEMT need have an effect on getting particular health care services? With regard to the first question, without considering other factors, the findings suggest that individuals who do have the NEMT benefit (MSP-FMAP members) experience more unmet NEMT need than those who do not (IHAWP members) and the differences (MSP-FMAP 16%, IHAWP-WP 13%, and IHAWP-MSP 6%) are statistically significant at the  $p < .05$  level. After considering other factors in a logistic regression model of unmet NEMT need, these results hold with IHAWP-WP having 21% lower odds and IHAWP-MPC having 50% lower odds of unmet NEMT need compared to MSP-FMAP members. Even though they experience less unmet NEMT need, more IHAWP-WP members (22%) report usually or always needing assistance from others getting to and from health care visits when compared to MSP-FMAP members (18%).

When comparing health care utilization among the three groups, we considered three types of utilization, well care visits, acute care visits, and emergency department visits. Without considering other factors, around 15% of members, regardless of plan type, got a well care visit in the 6 months prior to the survey. When we considered multiple factors (including plan type and unmet NEMT need) in a multivariable logistic regression model predicting well care visits, there was a significant interaction effect between being in the IHAWP-WP and having an unmet NEMT need on well care visits. The likelihood of obtaining a well care visit for those in the IHAWP-WP depended on whether or not an individual experienced an unmet NEMT need. Individuals in the IHAWP-WP (compared to not being in the IHAWP-WP) had 39% greater odds (statistically significant) of having a well care visit when they did not have an unmet NEMT need and 16% lower odds (not statistically significant) when they did have unmet NEMT need. Conversely, when looking at the odds of a well care visit for those with unmet NEMT need (compared to those without an unmet NEMT need) within the IHAWP-WP strata, individuals with an unmet NEMT need had 40% lower odds (statistically significant) of a well care visit when in the IHAWP-WP and 2% lower odds (not statistically significant) when not in the IHAWP-WP. In other terms, for individuals not in IHAWP-WP, regardless of unmet NEMT status, about 14% experienced a well care visit. Yet, for individuals in the IHAWP-WP, 12% of those with an unmet need for NEMT had a well care visit compared to 18% of those without an unmet NEMT need (statistically significant difference).

With regard to acute care visits, without considering other factors, over 60% of MSP-FMAP and IHAWP-WP members had an acute care visit while just around 50% of IHAWP-MPC had at least one in the 6 months prior to the survey. When we considered plan type, unmet NEMT need, and other factors in a multivariable logistic regression model predicting acute care visits, there was no significant interaction effect between being in the IHAWP-WP and having an unmet NEMT need. Unmet NEMT need was not statistically associated with obtaining an acute care visit. However, those in the IHAWP-WP had 18% lower odds and IHAWP-MPC members had 39% lower odds of an acute

care visit compared to MSP-FMAP members, independent of unmet NEMT need and after adjusting for other model factors.

Without considering other factors, almost 30% of MSP-FMAP members had at least 1 visit to the ED which was significantly higher than either IHAWP-WP members (20%) or IHAWP-MPC members (16%). When we considered plan type, unmet NEMT need, and other factors in a multivariable logistic regression model predicting emergency department visits, there was no significant interaction effect between being in the IHAWP-WP and having an unmet NEMT need. Individuals with an unmet NEMT need had 45% greater odds of an emergency department visit, independent of plan type, and after adjusting for other model factors. And, those in the IHAWP-WP had 28% lower odds and IHAWP-MPC members had 37% lower odds of an emergency department visit compared to MSP-FMAP, independent of unmet NEMT need, and after adjusting for the other factors in the model.

At first glance, these results on health care utilization (particularly with regard to well care visits), coupled with the fact that IHAWP-WP members self-report worse health, may suggest that having an unmet need for NEMT and not having the NEMT benefit (i.e., being in the IHAWP-WP) leads to members in need of care not being able to obtain care. However, it is worth pointing out that those with the benefit (MSP-FMAP members) experienced more unmet NEMT need than those in the IHAWP-WP. Therefore, without considering the experiences surrounding why individuals have an unmet NEMT need in more detail, it could be premature to reach that conclusion.

When we asked those with an unmet NEMT need for the main transportation-related reason for not being able to get to a health care visit, the most common reason in all three plan types was that the person who usually takes them to visits was not available (MSP-FMAP: 45%, IHAWP-WP: 53%, IHAWP-MPC: 44%). Having a car that broke down (MSP-FMAP: 28%, IHAWP-WP: 15%, IHAWP-MPC: 26%) and other problems such as transportation-related expenses (i.e., cost of gas, bus fare, cab fare, parking, or paying a friend or relative for a ride), lack of informal support (i.e., not having a friend or relative available to drive), or health issues interfering with the ability to seek care (i.e., not feeling well enough to walk or drive) (MSP-FMAP: 21%, IHAWP-WP: 18%, IHAWP-MPC: 21%) were also cited as reasons. There was also some indication from the qualitative responses in the comments that there was a lack of awareness of and some dissatisfaction with the TMS NEMT brokerage program. Further research into these questions is needed to be able to fully understand the causes for unmet NEMT need, how to better promote access to NEMT, and how barriers to transportation affect access to needed health care services.

## **Appendices**

**Appendix A - Survey Instrument**

**Appendix B – Summary of Open-Ended Comments**

# HEALTH PLAN SURVEY

This survey asks about your experiences with your health plan. This information is being collected by the Public Policy Center at the University of Iowa and will be used to give policymakers an idea of how well the health plan is meeting your needs and how things can be improved. If you have any questions about this survey, please call 1-866-363-1984.

**Survey instructions:** Answer each question by marking the box to the left of your answer.

You are sometimes told to skip over some questions in this survey. When this happens you will see an arrow with a note that tells you what question to answer next, like this:

- ☐ Yes  
☐ No → If No, Go to Question 4

If you make a mistake, please **cross out** the **incorrect** answer and **circle** the **correct** answer.

When you have finished this survey, please fold it and return it in the enclosed envelope (no stamp required). If there is a question that you are uncomfortable answering, feel free to skip to the next question. Thank you!

## YOUR HEALTH CARE in the LAST 6 MONTHS

Today's Date: \_\_\_\_/\_\_\_\_/\_\_\_\_  
(month) (day) (year)

1. In the last 6 months, was there a time when you needed a check-up or routine care of any kind? Do not include times when you needed care right away in a clinic, emergency room, or doctor's office.  
☐ Yes  
☐ No → If No, Go to Question 4
2. In the last 6 months, was there any time when you needed a check-up or routine care but could not get it for any reason?  
☐ Yes  
☐ No → If No, Go to Question 4
3. What is the main reason you were not able to get a check-up or routine care when you needed it? Choose only one.  
☐ I couldn't afford the care  
☐ Health plan wouldn't approve/pay for care  
☐ Doctor refused to accept my insurance  
☐ Doctor didn't speak my language  
☐ I couldn't get transportation to the doctor  
☐ I couldn't take time off work/get child care  
☐ I didn't know where to go to get care  
☐ The wait took too long  
☐ Other (write in): \_\_\_\_\_

## USUAL SOURCE OF CARE

4. Is there a place that you usually go to when you are sick or need advice about your health?  
☐ Yes  
☐ No → If No, Go to Question 6
5. What kind of place do you go to most often for your medical care? Choose only one.  
☐ Community or public health clinic  
☐ Family physician's office  
☐ Specialist physician's office  
☐ Hospital emergency room  
☐ Hospital outpatient clinic  
☐ Some other place: \_\_\_\_\_
6. A personal doctor is the person you would see if you need a check-up, want advice about a health problem, or get sick or hurt. Do you have a personal doctor?  
☐ Yes  
☐ No

## EMERGENCY ROOM CARE

7. In the last 6 months, how many times did you go to an emergency room (ER) to get care for yourself?

<sup>0</sup>☐ None → If None, Go to Question 10  
<sup>1</sup>☐ 1 time  
<sup>2</sup>☐ 2  
<sup>3</sup>☐ 3  
<sup>4</sup>☐ 4  
<sup>5</sup>☐ 5 to 9  
<sup>6</sup>☐ 10 or more times

8. Do you think the care you received at your most recent visit to the ER could have been provided in a doctor's office?

<sup>1</sup>☐ Yes  
<sup>2</sup>☐ No

9. What was the main reason you did not go to a doctor's office or clinic for the care you received at your most recent visit to the ER? Choose only one.

<sup>1</sup>☐ I did not have a doctor or clinic to go to  
<sup>2</sup>☐ My insurance plan would not cover the care if I went to a doctor's office or clinic  
<sup>3</sup>☐ My doctor, nurse, or other health care provider told me to go to an ER for this care  
<sup>4</sup>☐ My doctor's office or clinic was open, but I could not get an appointment  
<sup>5</sup>☐ My doctor's office or clinic was not open when I needed care  
<sup>6</sup>☐ I had transportation problems getting to a doctor's office or clinic  
<sup>7</sup>☐ My health problem was too serious for the doctor's office or clinic  
<sup>8</sup>☐ Other (write in): \_\_\_\_\_

## TRANSPORTATION

10. Are you a licensed driver?

<sup>1</sup>☐ Yes  
<sup>2</sup>☐ No

11. How many licensed vehicles were owned or available for regular use by members of your household during the last 6 months?

\_\_\_\_\_ number of vehicles

12. Is there a public transit system in your area?

<sup>1</sup>☐ Yes  
<sup>2</sup>☐ No → If No, Go to Question 14  
<sup>3</sup>☐ Don't know → Go to Question 14

13. Have you used public transportation (such as a bus or government-provided transit) for any reason in the past year?

<sup>1</sup>☐ Yes  
<sup>2</sup>☐ No

14. When you need to get health care, what is the type of transportation you use MOST OFTEN to get to your visit?

Choose only one.

<sup>1</sup>☐ I drive myself, using *my own* vehicle  
<sup>2</sup>☐ I drive myself, using *someone else's* vehicle  
<sup>3</sup>☐ Someone else (such as a friend, neighbor, or family) drives me, using *my own* vehicle  
<sup>4</sup>☐ Someone else (such as a friend, neighbor, or family) drives me, using *their* vehicle  
<sup>5</sup>☐ I take a taxi cab  
<sup>6</sup>☐ I take public transportation (such as a bus or government-provided transit)  
<sup>7</sup>☐ I bike or walk  
<sup>8</sup>☐ I do not have a reliable way to get to my health care visits

15. In the last 6 months, how often did you need assistance from other sources (such as friends, family, public transportation, etc.) to get to your health care visit?

<sup>1</sup>☐ Never  
<sup>2</sup>☐ Sometimes  
<sup>3</sup>☐ Usually  
<sup>4</sup>☐ Always

16. In the last 6 months, was there any time when you needed transportation to or from a health care visit but could not get it for any reason?

<sup>1</sup>☐ Yes  
<sup>2</sup>☐ No → If No, Go to Question 18

17. Thinking of the most recent time you could not get to a health care visit because of transportation, what was the main reason you could not get there? Choose only one.

- ☐ My car broke down
- ☐ The person who usually takes me was not available
- ☐ The transit system was not available
- ☐ Other transportation problem (write in):  
\_\_\_\_\_

18. In the last 6 months, how much, if at all, have you worried about your ability to pay for the cost of transportation to or from a health care visit?

- ☐ Never
- ☐ Sometimes
- ☐ Usually
- ☐ Always

### ABOUT YOU

19. In general, how would you rate your overall physical health?

- ☐ Excellent
- ☐ Very good
- ☐ Good
- ☐ Fair
- ☐ Poor

20. In general, how would you rate your overall mental and emotional health now?

- ☐ Excellent
- ☐ Very good
- ☐ Good
- ☐ Fair
- ☐ Poor

21. Do you have a physical, mental, or emotional condition that seriously interferes with your ability to work, attend school, or manage your day-to-day activities?

- ☐ Yes
- ☐ No

22. Do you have a physical, mental, or emotional condition that seriously interferes with your independence, participation in the community, or quality of life?

- ☐ Yes
- ☐ No

23. Because of a physical, mental, or emotional condition, do you need help with your routine needs, such as everyday household chores, shopping, or doing other necessary business?

- ☐ Yes
- ☐ No

24. Because of a physical, mental, or emotional condition, do you need the help of other persons with your personal care needs, such as eating, bathing, dressing, or getting around the house?

- ☐ Yes
- ☐ No

25. Do you now have any health conditions that have lasted or are expected to last for at least 3 months? *Choose all that apply.*

- ☐ Arthritis
- ☐ Asthma
- ☐ Back or neck problems
- ☐ Bronchitis, emphysema, COPD, or other lung problems
- ☐ Cancer, other than skin cancer
- ☐ Coronary artery disease
- ☐ Dental, tooth, or mouth problems
- ☐ Diabetes
- ☐ High blood pressure
- ☐ Kidney disease
- ☐ Liver disease
- ☐ Overweight / obese
- ☐ Stroke
- ☐ Behavioral or emotional health problems (i.e., depression, anxiety, etc.)
- ☐ Any other chronic health condition (write in): \_\_\_\_\_

**26. What is your age?**

- 1 ☐ 18 to 24  
2 ☐ 25 to 34  
3 ☐ 35 to 44  
4 ☐ 45 to 54  
5 ☐ 55 to 64  
6 ☐ 65 or older

**27. Are you male or female?**

- 1 ☐ Male  
2 ☐ Female

**28. What is the highest grade or level of school that you have completed?**

- ☐ 8<sup>th</sup> grade or less  
☐ Some high school, but did not graduate  
☐ High school graduate or GED  
☐ Some college or 2-year degree  
☐ 4-year college graduate  
☐ More than 4-year college degree

**29. Are you of Hispanic or Latino origin or descent?**

- <sup>1</sup>☐ Yes, Hispanic or Latino  
<sup>2</sup>☐ No, not Hispanic or Latino

**30. What is your race? Choose one or more.**

- 1 ☐ White  
2 ☐ Black or African American  
3 ☐ Asian  
4 ☐ Native Hawaiian or Other Pacific Islander  
5 ☐ American Indian or Alaska Native  
6 ☐ Other (write in):

**Is there anything else you would like to tell us about your ability to get to or from your health care visits?**

[illegible]

# THANK YOU!

**Please return the completed survey in the postage-paid envelope.**

## Appendix B – Summary of Open-Ended Comments

### Overview

At the end of the survey, respondents had the opportunity to leave a comment. Respondents were given the prompt, “Is there anything else you would like to tell us about your ability to get to or from your health care visits?” Of the 8,255 (2,055 MSP-FMAP; 2,980 IHAWP-WP; 3,220 IHAWP-MPC) survey respondents, 1,449 chose to leave a written comment. Of those who left a comment, 354 were MSP-FMAP members, 598 were IHAWP-WP members and 497 were IHAWP-MPC members.

The comments fell into six general themes, 1) Health Status Interference 2) Material Hardship 3) Scheduling 4) Type of Transportation and 5) Issues with their Health Plan (not transportation related), and 6) Positive Experiences. These six themes and their subcategories are described in detail later.

### Methods

In order to interpret the information respondents provided in the open comments section of the survey, the content of the comments were categorized and labeled, or coded, using NVivo software. Coding the comments from the survey assists in the systematic identification and analysis of recurring themes.

In many instances, a comment from an individual respondent covered more than one theme. An example of this is demonstrated in the following comment from an IHAWP-MPC member: *“After having shoulder surgery last July, I was bedridden for 6 months and unable to drive to my medical and physical therapy appointments. My Medicaid did not offer transportation and I did not know anyone from this new neighborhood. I did not have the money for a cab and they did not have buses in my area to take me into the big city for the appointments. The medical staff assume everyone has family or friends to take you back and forth, but we don’t. Never Assume! Thank you!”* The respondent described experiences with two themes: physical health interference and material hardship related to transportation. Within the 1,449 respondent comments, there were 2,419 pieces of material that represented distinct themes.

### Transportation Themes

#### *Health Status Interference*

189 respondents reported a physical or mental health condition that directly interfered with their ability to get to regular appointments. For example, one respondent wrote, *“I had very hard time getting there as I can’t take myself, can’t load self, etc. Couldn’t find help to take me as everyone has jobs and unable to take off work to take me and stay all day.”*

#### *Material Hardship*

311 respondents left comments about some kind of material hardship interfering with the receipt of health care. Fifty-two comments described material hardship unrelated to transportation, such as phone access, prescription and appointment co-pays, paying for childcare during appointments, debt and other bills. A IHAWP-WP member describes, *“Where I am assigned to won’t see me because of past due bill that I paid and they still refuse to see me. It’s the closest and I can reach it easiest location.”*

Of the 311 comments about material hardship, 209 describe costs related to transportation. Respondents reported several costs related to going to and from the doctor’s office, including gas money, compensating drivers, vehicle maintenance, license and registration fees, parking, and bus passes. For example, *“When I can’t get a friend or family member to give me a ride I usually take the city bus, but sometimes I don’t have money to ride the bus and that’s when I miss my appointment.”*

#### **Underutilization of Transportation Services**

125 MSP members left a comment about costs related to transportation. In some instances, survey respondents wrote about struggling with costs that are eligible for reimbursement within their healthcare plan. One MSP-FMAP respondent wrote, *“Most of my appts are with doctors in Ottumwa which is an hour drive one way, so getting a ride that far and money for gas and food if all day appts such is even more difficult.”* There are several possibilities for this underutilization that appeared in respondent comments.

- 1) Members are not aware they are eligible for reimbursement or transportation services:

*"It would be nice to be reimbursed for mileage to and from doctor appointments, so that I may continue to seek healthcare for my conditions."*

*"It is hard getting to and from visits without a reliable car or reliable family or friends willing to help out."*

One member with experience using TMS Management Group (Iowa Medicaid's NEMT transportation brokerage program) supported the possibility that members are not aware of the NEMT benefit, saying: *"I have also used TMS. Through them I can get a monthly bus pass if I have 2 or more appointments throughout the month. It seems many people are unaware of TMS."*

- 2) Members may not have the money to pay for gas up front

*"Stress, no transportation most of the time. Need gas money if I can find a ride to pay them."*

- 3) Members had a bad experience using TMS and/or are more comfortable riding with personal connections

*"Try to use TMS management services for mileage reimbursement. They make things as complicated as possible. They do not know their own rules and are ALMOST always losing the papers sent in via postal mail/fax/email. It is extremely frustrating to deal with them."*

## Scheduling

225 respondents described difficulties with scheduling, which included making appointments for doctor's visits, public transportation, and conflicts with work, school, childcare availability, and personal driver schedules. For example, *"My ride can only take me on days off work or after 4:45 pm and doctors don't stay open late enough or not long enough on Saturdays, and the clinic takes 2-3 weeks to get appointment."*

## Type of Transportation

### Formal Transportation

Eighty-six respondents commented on experiences using formal transportation, such as public transit, taxis, volunteer transportation agencies, or the Iowa Medicaid program's reimbursement agency. For example, an IHAWP-WP member describes using the bus after appointments, *"Almost every visit is a long wait to see doctor. Waiting up to 1 1/2 hours sometimes too late to catch the bus. Bus not running after 5PM."*

### Personal Transportation

255 respondents described experiences using private transportation, such as driving themselves, asking a family member, friend, or neighbor for a ride. A vast majority (n=223) of these comments portrayed an inconveniencing and unreliable process to secure a ride to an appointment. For example, *"My niece takes me to clinic when she doesn't have classes, but sometimes she's busy so I can't make it or I try to find a different person to help me."*

104 IHAWP-WP and IHAWP-MPC members left comments requesting assistance with transportation and related expenses. For example, *"It would be nice to have transportation to your appointment. Because like myself I have a car but no license so I struggle and sometimes miss appointments because of transportation so it would be nice if at your doctor's office you could also get help with someone picking you up and dropping you off at home after your doctor's visit."* And *"If I could get a bus pass it would help."*

## Themes unrelated to transportation

### Issues with their Health Plan

462 respondents left comments about ways they thought their healthcare plan could be improved, or how their needs were not being met. Topics that were covered included: assistance in reading medical documents, language interpreters, appointment reminders, and requests for more information on the plan and how to use it. For example, *"I do not have difficulty getting to health care visits, but I'm not sure what is covered under my plan and what is not. I have not received any information in almost a year, when they sent something saying I was being changed to whatever my plan is presently. I was told more information would be sent soon and never received anything else. So I just show my card and have to wait for the place (providers) where I have my appt. to check. Would be nice if I knew ahead of time what care is covered and what is not, including medical, eye glasses, chiropractic, dental, etc."*

Generally, these comments fell into four subcategories 1) Access 2) Continuity, 3) Coverage, and 4) Perceptions of Stigma.

## Access

181 comments were related to access issues, like whether providers accept Medicaid, and access to after-hours or weekend care. For example, *"I have used the Wellness Plan on numerous occasions and am happy with the services I have received including dental. I have had to go to the ER a few times due to the clinic being closed at the time and have never had a problem."* And *"I don't have very many options when it comes to seeing a doctor, most don't accept new patients. The doctors I could see I don't like. I'm not comfortable at all. So I have to go to the ER when I get desperate."*

## Continuity

Fifty-one comments were related to issues with continuity, like having to switch doctors or clinics to suit their plan. A IHAWP-WP member describes the importance of continuity, *"I have been going to the same P.A. for 15 years for my exams. Going to a different provider because of the Iowa Wellness Plan is so scary to me that I don't want to go. I wish people with Aspergers had the option of keeping their doctor even if they're not on the list."*

## Coverage

171 respondents described instances in which their insurance did not cover needed services. This theme includes: co-pays and prescription payments, behavioral health services, weight loss assistance, vision care, and dental care. For example, *"Would be nice if the plan paid for all my prescriptions, not just most of them. Doctor says I've needed glasses for several years. The plan doesn't pay for them and I can't afford them. Aside from these 2 things I'm very satisfied with the coverage I am provided with."*

### Dental

119 respondents left comments about issues with dental care. For example, *"No transportation problems at this current time. The questions in this survey aren't geared very well to include issues concerning the Dental Wellness Plan. The DWP's tiered approach incorporating waiting periods for certain dental procedures seriously jeopardizes tooth health. Example: an emergency tooth pain requiring a root canal cannot receive a crown for at least a year, allowing further decay or tooth breakage to occur."*

### Uncertainty about upcoming transition to Medicaid Privatization

Sixteen respondents left comments concerning changes to their care during the state's Medicaid privatization transition. For example, *"Didn't feel need to complete this since Governor has interfered and privatizing this - I am upset and have fears of unknown - What will happen? How does it work then? He isn't saying - Doesn't care and says it will save money? Can you help explain this to me?"*

*"Gov. Branstad wants to 'privatize' our State healthcare. I see no advantage in this at all. We already have excellent care in this State. My co-pays are little to none, I can see who ever I want, my meds are paid for, and my care is not limited. I also have dental and chiropractor is covered if I want to go. I don't know how you could do better than that. I think by 'privatizing' it our care will go down hill and I think it will cost a lot more money. Tell him NOT to do it. No one in my situation wants to see that happen. It is a very bad idea! We already have good, affordable, healthcare."*

## Perceptions of Stigma

Fifty-six respondents commented on experiences in which they felt they were being treated poorly because of their insurance status. For example, *"I notice a difference in the way some (not all) doctors, nurses and receptionists treat me when they see what insurance I have. It's like they don't care as much about the care I receive. Some just act rude!"*

## Positive Experiences with Health Plan and/or Transportation

Over two hundred (n=223) respondents left comments indicating high satisfaction with their health plan and/or transportation situation. Many respondents left positive comments about their insurance plan, improved access, and quality care.

### Experiences with NEMT brokerage program

Six MSP-FMAP members left comments about positive experiences using the transportation services provided through TMS. For example, *"I get a bus pass from TMS monthly if I need it. Also they pick me up and bring me home from my family doctor who is not on bus route. I deeply appreciate this and helps me a lot with my health care. Thanks to all who help me as I suffer from anxiety and depression and getting to and from and the ability to get good health care means everything to me."*

## Health Plan

Many members reported ease when using their health insurance plan, getting to appointments, and receiving care. For example, *"I have had no problems with my insurance. It is always easy to use and my regular MD accepts it"* and *"To the best of my knowledge, I have never had a problem ever getting to an appointment. Overall, very satisfied of how my health program is working for me. This health program has been a real blessing to me!"*

## Access

Members reported improvements in access through wider provider networks and affordability. For example, *"The old program I had to drive to Des Moines to a doctor. Round trip over 180 miles. This new program is much better. Living in a small rural county I still have to travel to see a specialist but even that is half the drive as before."* and *"This health plan is a "God send" to me. I would have to go totally into debt and welfare if it didn't exist. Thank you!"*

For some members, IHAWP facilitated access to health services that were unattainable before their enrollment. For example, an IHAWP-WP member said, *"I have never had insurance before. It was very nice to be checked out. I had never had a mammogram or any test like it. Thank you so, so much."*

## Quality Care

Many members reported being treated with dignity and respect while receiving high quality care. An IHAWP-MPC member described their experience, saying, *"I have been fortunate to have amazing doctors who have given me the best care and treatment. They make things easy to understand, are extremely qualified in their fields of doctor, and go above and beyond to make sure my health and recovery is important. I appreciate all they have done and continue to do to make me better. Thank you."*

