

Barriers to and Strategies for Transportation Coordination among the Transportation/ Human Service Providers: The Case of the River Valley Providers

Ahmad Rahal, University of Arkansas-Fort Smith

This research note seeks to identify the barriers to and strategies for transportation coordination among the River Valley transportation/Human Service providers (RVTP), in Western Arkansas, for the purpose of facilitating full community access and participation of the transportation disadvantaged as proposed by the Executive Order of Human Service Transportation Coordination signed by President Bush in February 2004. A comprehensive survey of the RVTP revealed that lack of awareness, lack of knowledge, lack of guidance, financial concerns, and false perceptions as the main culprits to the lack of coordination among the RVTP in the River Valley area. As a result, we propose the creation of a permanent local champion position "Mobility Manager" to build cooperation and trust among the RVTP and commit the time and energy needed to develop acceptable solutions to issues of concerns and assist in minimizing duplications, improving efficiencies, and expanding the range of both transportation services (traditional and non-traditional) for the transportation disadvantage.

Transportation is a key element to meeting life sustaining activities (Rosenbloom, 1993) as it facilitates access to employment (Anderson, 1998; Blumenberg and Ong, 2001; Dasinger et al., 2000; Holzer, 1991; Lacombe, 1998), education (McWhirter, 1997), and health care services (Ahmad et al. 2001; McCray, 2000; Straight, 1997).

The Bureau of Transportation Statistics' (BTS) 2009 National Household Travel Survey (NHTS) revealed that 8.7% of the US households do not own a vehicle. The survey also revealed that of those 50 or older, 7.7% do not own any vehicle with 17.5% of them having some kind of disability with a disproportional percentage for the oldest groups (22.6% disability for the 70-79, and 41.3% for the 80-older group).

Given the current state of many of the transportation systems in the United states, it is widely believed that the rapid growth of the older population in the United States (65 or older) will present various transportation challenges as the number of older American is expected to increase from a current of 13% of the U.S. population (about 40 million) to reach 20% by 2030 (or about 72 million) with about 8.8 million being 85 or older in 2030 increasing to about 19 million in 2050 as shown in the Table 1.

Table 1: Projections and Distribution of the Total Population by Age class for the United States 2010 to 2050 (Numbers in thousands)

	2010	%	2020	%	2030	%	2040	%	2050	%
Population.....	310,233		341,387		373,504		405,655		439,010	
Under 20years.....	84,150	27.12%	90,703	26.57%	97,682	26.15%	104,616	25.79%	112,940	25.73%
20 to 64 years.....	185,854	59.91%	195,880	57.38%	203,729	54.55%	219,601	54.13%	237,523	54.10%
65 years and over....	40,229	12.97%	54,804	16.05%	72,092	19.30%	81,238	20.03%	88,547	20.17%
85 or over	5,751	1.85%	6,597	1.93%	8,745	2.34%	14,198	3.50%	19,041	4.34%

Source: U.S. Census Bureau, 2008.

For the economically or the physically disadvantaged (individuals with lower incomes, the unemployed, older adults, people with disabilities), transportation represents a formidable mobility barrier to seeking life sustaining activities and independence in their communities as many are unable to provide or afford their own transportation services (Rosenbloom, 2003) resulting in lower mobility than the general population (Pusher and Renne, 2003). For such groups, transportation, if and when available, is often provided by traditional transportation services such as public transit or by many independently operated nonprofit transportation organizations (social services) resulting in costly, duplicative, and overlapping services with high inefficiencies (U.S. Government Accounting Office, 1999).

The Federal government has encouraged and required transportation coordination plans for eligibility for certain federally funded program such as sections 5310 (Formula Grants for Special needs of Elderly Individuals and Individuals with Disabilities), 5316 (JARC-Job Access and Reverse Commute), and 5317 (New Freedom provision for the disabled) of the 2005 Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETY-LU). Furthermore, research undertaken by several federal agencies (the Federal Transit Administration, U.S. Department of Transportation, U.S. Department of Housing, and the Department of Health and Human Services) have identified that coordination among local and regional transportation providers as the key to serving the transportation disadvantaged (Schlossberg, 2004) and reduce federal transportation program cost. Hence the

Executive Order of Human Service Transportation Coordination (EO13330) signed by president Bush in February 2004, called for facilitating the use and accessibility of the federally assisted transportation by requiring federal agencies to work together and coordinate the federal programs that fund transportation, and called for the development, implementation, and maintenance of responsive, coordinated community and transportation system to maximize benefits gleaned from federally supported transportation resources, and allow the full participation of the transportation disadvantaged and access to community services of in their communities.

As a result, the concept of coordinated mobility or mobility management has grown to address and meet the specific needs of individual customer and provide a platform to improve and stimulate coordination among transportation agencies, minimize or eliminate duplication, and improve the use and efficiencies of available transportation resources.

Research Objective

This research will seek to identify the barriers to and strategies for transportation coordination among the River Valley transportation/Human Service providers (RVTP) in Western Arkansas for the purpose of facilitating full community access and participation of the transportation disadvantaged as proposed by the Executive Order of Human Service Transportation Coordination

REGIONAL DESCRIPTION

Geography

The planning region (Figure 1) covers the counties of: Crawford, Franklin, Logan, Sebastian, Scott and Polk. This is referenced as the “West” district of the Arkansas Planning and Development Districts. This planning region includes the River Valley which, for the purposes of this plan, encompasses the economic region of Fort Smith which extends outward approximately 50 miles.

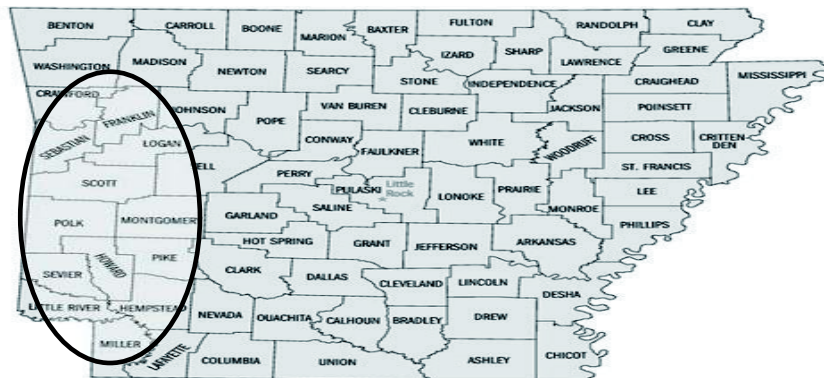


Figure 1: River Valley Demographic Area

Demographics

Except for Sebastian County, the River Valley area is rural with a below average population density. Demographics listed in Table 2 clearly show the following:

Table 2: River Valley Area Demographic Data

River valley Area	Crawford County	Franklin County	Logan County	Sebastian County	Scott County	Polk County	State of Arkansas	USA
Population, 2009 estimate	60,102	18,016	22,342	123,597	11,123	20,259	2,889,450	307,006,550
Persons 65 years old and over, 2009 %	12.7%	17.1%	17.0%	13.1%	16.6%	18.7%	14.3%	12.90%
Persons with a disability, age 5 plus	11,996	4,258	5,514	23,408	2,800	4,867	576,471	49,748,248
Persons with a disability, age 5 plus %	19.96%	23.63%	24.68%	18.94%	23.37%	24.02%	19.95%	16.20%
Median household income, 2008	\$42,112	\$38,192	\$37,034	\$39,573	\$33,458	\$30,994	\$38,820	\$52,029
Per capita money income, 1999	\$15,015	\$14,018	\$14,527	\$18,424	\$13,809	\$14,063	\$16,904	\$21,587
Persons below poverty level 2008 %	15.6%	17.0%	16.6%	17.3%	19.9%	19.5%	17.3%	13.20%
Persons per square mile, 2000	89.5	29.1	31.7	214.7	12.3	23.5	51.3	

Source: US Census Bureau State & County QuickFacts.

- I. Persons 65 years or older in the River Valley area, represent a bigger percentage of the population when compared to Arkansas' or the National percentages.
- II. Persons with disability ages 5+ in the River Valley area far exceeds both Arkansas' and the national level sometimes by as much as 50%.
- III. The median household income is a third (1/3) less than that of the national average, and almost consistently below that of Arkansas.
- IV. The percentage of persons below poverty level is much higher than that of the national average where the difference can be as high as 50% in the case in the case of Scott and Polk Counties.

Partners

A mobility management partnership between the Bi-State Metro-Planning Organization (BS-MPO), the Fort Smith Transit, and the University of Arkansas-Fort Smith (UAFS) initiated contact with the RVTP to determine those interested in becoming stakeholders in the transportation coordination process. Introduction letters were sent and multiple individual meeting sessions were set up to explain the objective of the project, identify needs, and determine potential barriers to coordination.

It is worth noting that many of the RVTP who initially expressed interest in this project anticipated an increase in funding and associated privileges as the Mobility Management project was mistakenly perceived to act as a proxy or an agent for the Arkansas State Highway and Transportation Department (AHTD). Despite multiple meetings between the designated researchers and the RVTP over the duration of this research period, the coordination and cooperation among the RVTP proved to be very challenging.

Methodology

A survey (see appendix) addressing the RVTP was developed to assist in identifying opportunities for and possible local barriers to coordination. The survey was hand-delivered to the RVTP who were asked to provide as much information as possible. Unfortunately, the timing of this survey coincided with an AHTD survey (the 10 year financial plan hence creating confusion among the agencies causing a lower than expected return.

A total of 10 completed and usable surveys were received from Human Service Agencies (4), Senior Centers (4), and Assisted Living (2) with seven agencies (70%) being private non-profit, two federally supported (20%), and one that was privately held and supported. Although only half of the respondents were aware of some coordination plan at the local or the regional level, 80% were not even aware or did not have any knowledge of whether their agency is involved in any coordination plan. Furthermore, the respondents were evenly split on whether their elected officials or transit agencies are interested or committed in facilitating and maximizing the use of available resources for the transportation disadvantaged as proposed by the Executive Order of Human Service Transportation Coordination. The majority of the respondents found the public transit to be the most useful mobility option, but asked for expanded services to cover rural areas.

When asked about the enhancements that are most needed to improve coordination among the RVTP, increased funding and improved traveler information were at the top of the list. As to the greatest barriers to coordination among the RVTP, funding issues, confusing regulations and policies, concerns over insurance, accounting and billing, lack of awareness or understanding of the available services, and lack of information on whom to coordinate with were the common answers. At the end, the respondents were asked about their level of interest in applying some coordination strategies (see attached survey) only half were possibly interested while the rest did not show any interest at all.

Survey Results and Discussion

Further Analysis of the RVTP survey revealed many barriers that inhibit coordination which can be categorized as financial, operational, regulatory, informational, or attitudinal as summarized below:

Regulatory barriers

- The belief that certain federal and state regulations, or organizational policies that disallow cooperation, hence the reluctance on the part of the local representative (s) to devote time and resources to the coordination process.
- The belief that vehicle use is governed by funding or use restrictions, hence limiting coordination abilities.
- The perception that regulatory restrictions and client specialized needs make coordination for the purpose of sharing rides or services very challenging.

Informational barriers

- Lack of awareness or ability of many of the RVTP to identify organizations to coordinate with. This is especially true for agencies where transportation is ancillary, rather than primary.

Financial barriers

- Concerns about billing as many providers are uncertain about the real cost and allocations of funds among the participating agencies.
- Lack of expertise and knowledge of coordination strategies which can be attributed to the high turnover rate of representatives who have previously been exposed to the concept of mobility management.

Operational barriers

- The need by the RVTP to protect transportation resources and facilities as they are not easily acquired.
- Concerns about insurance coverage and liability issues, and accounting imposed by funding sources as a barrier to coordination.
- Concerns about data confidentiality and incompatible client needs.
- Concerns about protecting own service area and avoid turf squabbling.

Further analysis of the survey revealed a great need for the development of a process for disseminating information about the coordination efforts as many of the RVTP respondents either had inadequate information or were not aware of any coordination efforts or processes, or did not know where to find such information.

When asked about the types of enhancements that are most needed to improve the coordination of public and human service agencies, improved marketing and traveler information were the most obvious answers by the RVTP.

Conclusion and Recommendations

The results of the survey clearly show that many of the coordination barriers may be attributed categorized as financial, operational, informational, regulatory, or attitudinal.

As a conclusion we believe the dissemination of information about the coordination efforts is a necessary but not sufficient to achieve the stated goal of The Executive Order of Human Service Transportation Coordination. Hence it is recommended that building and sustaining trust and communications through the creation of a permanent mobility management position might be the key to mitigating the impact of the coordination barriers, and can assist in improving the rate of success of any coordination efforts, and the author strongly believes that time and money spent in developing support, resources, and a framework for coordination such as the creation of an office specifically focused on coordinating transportation will pay off over the long term.

REFERENCES

- Ahmed, S., Lemkau, J., Nealeigh, N., & Mann, B. 2001. Barriers to healthcare access in a non-elderly urban poor American population. **Health & Social Care in the Community**, 9(6), 445-453.
- Anderson J. 1998. **Welfare reform: Transportation's role in moving from welfare to work: RCED-98-161**. GAO Reports, 1.
- Blumenberg, E., & Ong, P. 2001. Cars, buses, and jobs: Welfare participants and employment access in Los Angeles. **Transportation Research Record: Journal of the Transportation Research Board**, 1756(1), 22-31.
- Danziger, S., Corcoran, M., Danziger, S., Heflin, C., Kalil, A., Levine, J., Rosen, D. et al. 2002. **Barriers to the employment of welfare recipients** (No. Report No. 02-508). PSC Research Report (p. 45).
- Gamm, L., Hutchison, L., Bellamy, G., & Dabney, B. 2002. Rural healthy people 2010: Identifying rural health priorities and models for practice. **Journal of Rural Health: Official Journal of the American Rural Health Association and the National Rural Health Care Association**, 18(1), 9-14.
- Holzer, H. 1991. The spatial mismatch hypothesis: What has the evidence shown? **Urban Studies**, 28(1), 105-122.
- Lacombe, A. 1998. **Welfare reform and access to jobs in Boston**. Bureau of Transportation Statistics.

- Mccray, T. 2000. Delivering healthy babies: Transportation and healthcare access. **Planning Practice & Research**, 15(1), 17-29.
- McWhirter, E. 1997. Perceived barriers to education and career: Ethnic and gender differences. **Journal of Vocational Behavior**, 50(1), 124-40.
- Pucher, J., & Renne, J. 2003. Socioeconomics of urban travel: Evidence from the 2001 NHTS. **Transportation Quarterly**, 57(3), 49-77.
- Rosenbloom, S. 1993. **The impact of the Americans with Disabilities Act transportation requirements on older Americans: Will older persons lose mobility?** Consumer Affairs, Program Division, American Association of Retired Persons.
- Rosenbloom, S., & Policy, B. I. C. on U. and M. 2003. **The mobility needs of older Americans: implications for transportation reauthorization.**
- Schlossberg, M. 2004. Coordination as a strategy for serving the transportation disadvantaged. **Public Works Management & Policy**, 9(2), 132 -144.
- US Census Bureau. 2012. **Statistical abstract: Elderly, racial and Hispanic origin population profiles.** Retrieved January 23, 2012, from http://www.census.gov/compendia/statab/cats/population/elderly_racial_and_hispanic_origin_population_profiles.html.
- U.S. Department of Transportation Federal Highway Administration.** 2011. 2009 National Household Travel Survey.
- U.S. General Accounting Office. 1999. **Transportation coordination: Benefits and barriers exist, and planning efforts progress slowly.** GAO/RCED-00-1).
- Wallace, R. 1997. Paratransit customer: Modeling elements of satisfaction with service. **Transportation Research Record**, (1571). Retrieved from <http://trid.trb.org/view.aspx?id=577321>.
- Wallace, R., Hughes-cromwick, P., Mull, H., & Khasnabis, S. **Access to Health Care and Nonemergency Medical Transportation Two Missing Links.** Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.114.4660>.
-

Ahmad Rahal is an associate professor of management at the University of Arkansas-Fort Smith. He received his Ph.D. from University of Central Florida. His current research interests include quality management, supply chain management, and innovation management. He has published in *Journal of Management and Engineering Integration*, *Journal of Technology management & Innovation*, *Journal of Engineering Management*, and others.

Appendix

Transportation Stakeholder Survey

Survey Letter

Dear Transportation Colleague:

To meet the planning requirements of the Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), and the Federal Transportation Administration (FTA), the **Bi-State Metro Planning Organization (BI-MPO)**, the **Fort Smith Transit**, and the **University of Arkansas in Fort Smith** (funding support provided by a grant from the Arkansas Highway and Transportation Department AHTD) have teamed up to identify barriers to and strategies for improving coordinated transportation services between public, private and non-profit transit and human service providers to facilitate improvements of transportation services for persons with disabilities, older adults, and individuals with limited incomes.

Your response to the enclosed survey will assist us in **updating and compiling the inventory** of the existing transportation services in the region, in identifying unmet transportation needs, and in identifying opportunities for and possible local barriers to coordination. Please provide as much of the information as possible, and mail the survey back using the self-stamped and addressed envelope.

If you have any questions about the survey, please contact -----

Sincerely,

Transit Mobility Manager
Fort Smith Transit
6821 Jenny Lind, P.O. Box 1908
Fort Smith, AR 72902

I. ORGANIZATION CHARACTERISTICS

1. Identification of Organization:

- Name: _____
- Address: _____
- Telephone: _____ Fax: _____
- E-mail: _____
- Name of Individual Who Can Answer or Respond to Questions Posed in the Survey:
○ _____
- Title: _____
- Agency Website: _____

2. Is your agency:

- Public
- Private Non-Profit
- Private for Profit
- Other (please specify) _____

3. Please check the box that best describes your organization. (Check only one.)

- Elderly Service Provider (Adult Day Care/ Nursing Home/ Senior Center)
- Education
- Faith Based Organization
- Health Care Provider (Hospital/Medical Center)
- Publicly Sponsored Transit Agency
- Private Transportation Company
- Sheltered Workshop
- Social Service Agency(Government)
- Social Service Agency – Nonprofit
- Other (please specify) _____

4. What are the major functions/services of your organization? (Check all that apply.)

- Counseling
- Health Care
- Social Services
- Transportation
- Other (please specify) _____

5. Please list the counties and cities your agency serves? If you have a map of the service area, please attach a copy to the survey.

6. Does your agency operate multiple sites? Yes No
If "yes" can you please give locations?

7. Does your organization purchase/contract transportation services on behalf of clients from other service providers?

- Yes
- No

8. **Is your organization involved in the direct operation of transportation services for clients?**
 - Yes
 - No (please skip to Section III-Funding on page 7)

9. **Does your transportation program restrict/ limit services? (Check all that apply.)**
 - Clients only
 - Trip purpose
 - Number of rides per month
 - Advanced reservations
 - Other (please specify)
 - None- no transportation restrictions (Please go to question 15)

10. **If your transportation program restricts/limits services, please let us know the reasons?**
 - Funding
 - Federal regulations
 - State regulations
 - Other (please specify)-----

11. **Define the level of passenger assistance provided for users of your transportation service (check all that apply).**
 - Curb-to-curb (Drivers will assist passengers in and out of vehicle only)
 - Door-to door (Drivers will assist passengers to the entrance of their origin or destination)
 - Drivers are permitted to assist passengers with a limited number of packages
 - Drivers are permitted to assist passengers with a unlimited number of packages
 - Provide personal care assistants to those passengers who require such services
 - Passengers are permitted to travel with personal care assistants

12. **How do clients/customers access your transportation services?**
 - There are no advanced reservation requirement (Please go to question18)
 - Clients/customers must make an advance reservation (e.g.' by telephone, facsimile, internet, arrangement through a third party)

13. **If advance reservations are required, what notice must be provided?**
 - We use real-time reservation policy
 - Customers/clients must call for a reservation the day before travel
 - Customers/clients must call for a reservation two days before travel
 - Other (please specify)-----

14. **What is your agency's transportation service strength?**

15. **Thinking of your agency/organization, what transportation needs are not being met adequately? (Please list all that apply)**

16. **What are the barriers/obstacles to meeting your transportation needs adequately? (Please list all that apply)**

17. **Thinking outside of your agency/organization, what coordinated transportation needs are you aware of that are not being met adequately? (could be at the federal, state, or the local level)**

II. FUNDING

18. By source, what percentage of your transportation budget comes from-----% Federal, -----% State, and -----% local funds (*must equal 100%*)?

19. Please check all the funding sources that provide money for your transportation program

a. Federal

- CSBG (Community Service Block Grant Program)
- HHS (Department of Health & Human Services)
- FTA section 5310 (Transportation for Elderly Person and Persons with Disabilities)
- FTA section 5311 (Rural Formula program)
- FTA section 5307 (Urbanized Area Program)
- FTA section 5316 JARC
- FTA section 5317 New Freedom Act
- Title IIIB (Program targeted for older adults at risk for institutionalization)
- Non emergency Medicaid
- Title XX
- Other (please specify)-----

b. State

- Bureau of Public Health
- Bureau of Senior Services
- Bureau of Human Resources for Children and Families
- Division of Public Transit
- Division of Rehab Services
- Lottery Funds
- State car rentals sales tax proceeds
- Other (please specify)-----

c. Local

- County Commission
- Donation
- Fares
- Grants from charity organization
- County/Local Tax
- Other (please specify)-----

III. LOCAL COORDINATION EFFORTS

20. Are you aware if an organization or committee that has been established in the River Valley Area to coordinate transportation?

- No I am not aware of any transportation coordination or organization committee
- Yes- I am aware of any transportation coordination or organization committee which operate at a **regional level**
- Yes- I am aware of any transportation coordination or organization committee which operate at a **local level**

21. Does your institution has or is involved in a transportation coordination plan?

- No my institution does not have and/or is not involved in any coordination plan
- Yes my institution has and/or is involved in a coordination plan with clear missions and goals
- Yes my institution has a coordination plan, but the missions and goals are not clear
- A coordination plan is still under discussion at my institution
- I don't know

- 22. In your opinion, is there sustained support for coordinated transportation planning among elected officials, agency administrators, and other community leaders?**
- No support
 - Yes- Low level of support
 - Yes- Moderate level of support
 - Yes- Good level of support
 - Yes- High level of support
- 23. How do you rate the level of interest and commitment among local elected officials, transit agencies, and human service organizations to coordinating transportation services and maximizing the use of available resources?**
- No commitment
 - Commitment at Low level
 - Commitment at Moderate level
 - Commitment at Good level
 - Commitment at High level
- 24. Are you aware of an on-going process for identifying duplication of transportation services, underused assets, and service gaps?**
- Yes I am aware (please explain the process) -----
 - No I am not aware
- 25. What issues or problems; if any; do you perceive to be a hinder to your transportation coordination efforts? Please check all that apply:**
- None/ No issues
 - Insurance issues
 - Drivers issues
 - Funding issues
 - Billing/ eligibility issue
 - Regulatory issues
 - Volunteers issues
 - Other (please specify)-----
- 26. What elements of the existing transportation network provide the most useful mobility options for your clients?**
- Public Transit
 - Medical Transportation Services
 - Volunteer Programs
 - Other (please specify)-----
 - I am not sure
- 27. What enhancements are most needed to improve the coordination of public and human service transportation in your service area? Please choose three and rank them in order where “1” is the most important.**
- Improve transit (please specify how)-----
 - Increased funding
 - Improve traveler information
 - Improve coordination(please specify how)-----
 - Improve marketing (please specify how)-----
 - Other (please specify how)-----
 - I am not sure

28. What do you see as the greatest barriers to coordination and mobility in your service area? Please choose three and rank them in order where “1” is the most important.

- Insurance/ Liability issues
- Federal Regulations
- State Regulations
- Funding issues
- Scheduling issues (Drivers/Volunteers)
- Turf battles
- Not enough equipment
- Reluctance of transportation providers to coordinate
- Incompatible clients
- Other (please specify)-----
- Satisfied with present transportation program; do not see need to coordinate

Below are a number of possible strategies for improving the coordination among transportation providers. Please indicate your level of interest in each of these strategies by checking the appropriate box.

	Intere sted	Possibly Interested	Not Interested	Not Applicable
1- Providing transportation services, or more transportation services, under contract to another agency				
2- Purchasing transportation services from another organization, assuming that the price and quality of service met your needs.				
3- Coordinating schedules and vehicle operation with nearby transit providers so that riders can transfer from one service to another				
4- Joining together with another municipality or agency to consolidate the operation of transportation services				
5- Highlighting connections to other fixed-route or demand-responsive services on your schedules or other information materials				
6- Adjusting hours or frequency of service				
7- Coordinating activities such as procurement, training, vehicle maintenance, and public information with other providers				
8- Participating in an organized area-wide transportation marketing program				