6. Priority treatment of pool vehicles at toll booths;
7. Provision of safe, convenient, and well-signed park-and-ride lots;
8. Changes in zoning ordinances to discourage the use of large areas for employee parking;
9. Tax credits for employers, as well as employees, who participate in carpooling;
10. Priority access to fuel for pool vehicles in time of fuel scarcity;
11. Encouragement of alternative work schedules to permit pooling by employees who previously could not pool because of differences in work hours;
12. Provision of ideas to employers on use of vans during work hours as well as for commuting;
13. Provision of information on employee travel allowances to employers; and
14. Promotional efforts with employee labor unions or credit unions.

ACKNOWLEDGMENT

The work reported here was financed through funds provided by the Maryland Department of Transportation, the U.S Department of Transportation, and the U.S. Environmental Protection Agency.

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Publication of this paper sponsored by Committee on Ridesharing.

Community-Based Ridesharing: An Overlooked Option

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The neighborhood ridesharing demonstration, which took place in four residential communities in the Albany, New York, area, is described. The project tested whether personalized coordinator techniques could be used at the home end because residential areas offer homogeneous neighborhoods with established social networks. Careful test design and internal recording allowed for a rigorous evaluation and comparison with other approaches. The neighborhood ridesharing coordinator program was shown to be a viable concept. Coordinators were successful in organizing ridesharing from the home end. The advertising methods found to be most successful were word-of-mouth, newspaper articles about the program, and community group meetings. In comparison with employer-based coordinators, neighborhood coordinators were equally effective in the number of placements and in cost-effectiveness measures. Given that employer ridesharing programs gradually rise to a saturation point, a neighborhood program, which has a larger population base and continuous changeover in residents, has possibilities for cost-effective expansion.

Government-sponsored carpooling programs began during the 1973-1974 energy crisis and focused largely on computerized matching services. The main thrust of these early programs was the savings in gasoline and money to be achieved (1,2). Interest fell off sharply as the crisis abated, and two-thirds of the programs initiated were discontinued. For those programs that were continued, promotional campaigns were expanded and the focus was on economic savings. Interest again increased sharply during the 1979 fuel crisis but then subsided as the crisis abated. Review and evaluation of these programs has been difficult. Rarely have such programs accounted for more than 1 percent of areawide work vehicle miles of travel (VMT). Clearly these programs are not having the effect intended by their promoters.

Additional evidence also suggests that the problem of increasing carpooling is far more difficult than first surmised. First, carpooling already involves 19 to 23 percent of work travel in many metropolitan areas (3) and has been stable at that level since at least 1970; these levels are confirmed in the 1980 census (4). Second, research into carpooling behavior (5-8) has disclosed that long-term ridesharing is often a social phenomenon rather than an economic one. Most people are reluctant to contact nonacquaintances to initiate carpools except in the face of a major crisis. Economically oriented carpools are a much smaller group and more transitory than the first group. The emerging picture is that carpooling is a social phenomenon that is largely impervious to government pressure.

One suggested approach to dealing with the reluctance of people to carpool is the use of a carpool coordinator. The coordinator works out of an employment or neighborhood site by using personalized methods to promote ridesharing, match participants, perform introductions, and resolve ridesharing problems. In this way many carpooling difficulties can (in theory) be overcome.

Since mid-1978 the New York State Department of Transportation (NYSDOT) has designed, implemented, and evaluated two ridesharing coordinator demonstration programs: an employer-based program at three New York State agency sites and a residential-based program at four selected sites in the greater Albany area. The former, funded by the New York State Energy Office and carried out in 1979, has been well documented (9,10) and is summarized later in this paper. Careful monitoring and evaluation revealed that, during a period of political and economic pressure on the supply and price of gasoline, the carpool coordinator program was 3 times more effective in carpool formation than the programs in state agencies that did not have a coordinator. The success of this program led to a follow-up project, funded by FHWA, in which a similar concept was tested at the neighborhood level. The findings of this study are summarized here; other reports (11,12) provide more detail.

NEIGHBORHOOD RIDESHARING COORDINATOR DEMONSTRATION

Design

The neighborhood ridesharing demonstration project is organized around the belief that the successful techniques of the employer-based carpool coordinator project can also be used at the home end. Residential areas offer several advantages for ridesharing formation. Neighborhoods are for the most part homogeneous and have established social networks that can be used to gather information about potential ridesharing matches. Moreover, ridesharing coordinators can promote and create ridesharing arrangements for nonwork purposes as well as for commuting to work. The NYSDOT study reported here is one of a number of demonstrations currently under way in Kansas City, Los Angeles, and the Maryland suburbs around Washington, D.C.

The design of the neighborhood ridesharing demonstration was laid out with careful postevaluation in mind (12,13). The goal of this study was to test the concept of the ridesharing coordinators who work from a residential base. Considerations were also given to the type of communities or neighborhoods, the appropriate setting for an office, and the effectiveness of various marketing techniques. Careful internal records were kept to permit comparison with the employer-based carpool coordinator project.

It is well known that national economic and political forces can also affect potential applicants' desire to share rides. To measure these effects, a before-and-after panel survey of residents' mode to work and ridesharing habits was conducted in each of the sites selected as well as in the region as a whole (6). Analysis of these data revealed that, with stable gasoline supply and price, there were no significant differences in carpool formation between the demonstration sites and the region as a whole.

Because future neighborhood ridesharing programs would be more easily sustained if funded by jurisdictions with the power to tax, the town or city appeared to be the logical basis for a ridesharing site. Two types of office sites were tested: home-based offices and town hall-based offices. Other important criteria included (a) distance from major employment sites, schools, and shopping areas; (b) development stage of the neighborhood, including the age of the housing stock, the residential street plan, and the degree of resident turnover; (c) socioeconomic mix of the residents; and (d) availability of transit.

Four communities were selected for the demonstration (Figure 1). The data in Table 1 summarize the

Figure 1. Capital District study area.

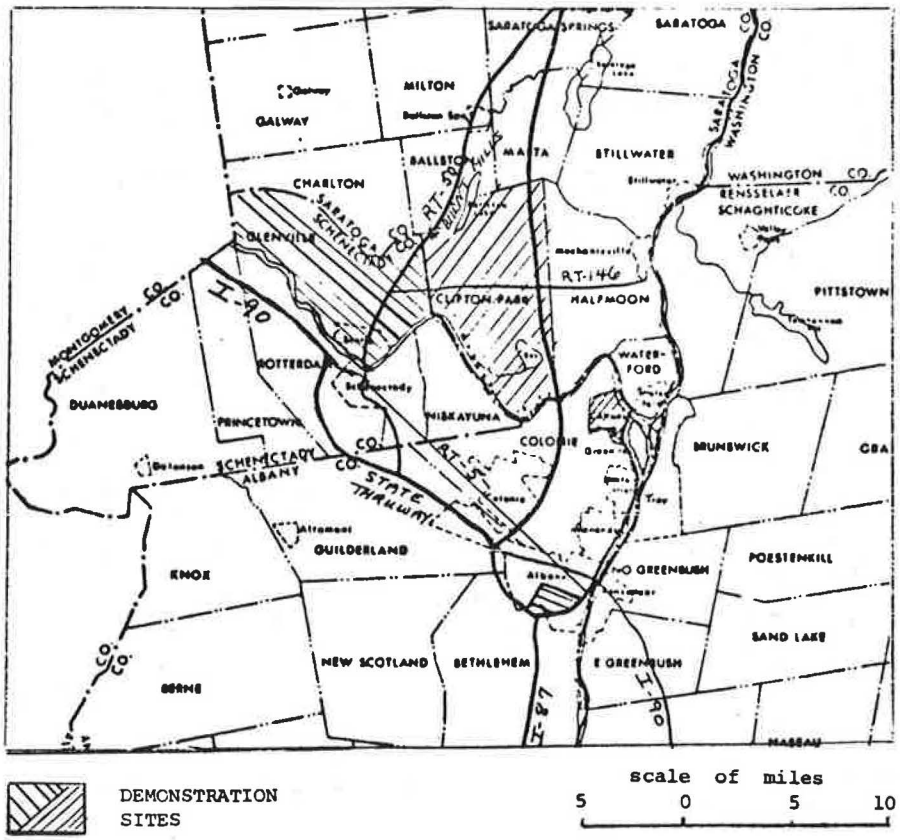

Table 1. Characteristics of sites for neighborhood ridesharing demonstration study.

Characteristics	Suburbs		Cities		
	Clifton Park[a]	Glenville[b]	Cohoes[c]	Albany-South Side[d]	Albany SMSA
Population					
1980	23,989	28,519	18,144	31,071	741,480
1970	14,867	28,636	18,653	30,001	721,910
Difference	+9,122	-117	-509	+1,070	+19,570
Δ (%)	+62	-4	-3	+4	+3
1980 households	7,464	9,840	7,106	15,898	267,428
Median value of owner-occupied housing ($)	65,500	40,100	36,500	37,700[e]	39,900
Transit available	None	Peak hour only	Good	Good	Urban areas, weekdays

Note: SMSA = standard metropolitan statistical area.
[a]Series of developments built entirely since 1960. Two-thirds commute to Albany and one-third commute to Schenectady.
[b]Generally middle and upper-middle class. Most work for General Electric (GE) and Schenectady-based businesses.
[c]Some new development.
[d]Homes of all types.
[e]Median housing value for neighborhood not available. Value indicated is for entire city of Albany.

characteristics of these communities. The table below is a quick reference guide to the study sites:

Type of Setting	Location of Office: Town Hall	Location of Office: Home
Suburb	Clifton Park	Glenville
City	Cohoes	Albany-South Side

Coordinators

The heart of the neighborhood ridesharing study is the coordinator who promotes ridesharing through a variety of specific strategies. Selection of coordinators was undertaken jointly by NYSDOT and the four communities.

The program was initiated in January 1981. Although the newspapers in the Capital District reported the demonstration with enthusiasm, the towns viewed the idea with some skepticism. Part of the problem was that the officials of each site perceived their own locality to have either a major or minor transit problem and believed that the demonstration funding could be better used in addressing these problems. Community auspices were granted after some initial discussion. Once hired, the coordinators were trained for operating the demonstration. These activities included

1. Presentations and discussions of the personalized ridesharing matching approach;
2. Familiarization with the operation of the NYSDOT employer-based demonstration;
3. Presentation of the energy situation in New York State;
4. Presentation by transit authority staff of routes, schedules, capacity, and limitation of currently available service;
5. Schedule and discussion of marketing approach;
6. Instruction and practice in informal presentations; and
7. Equipment, office supplies, and procedures for running an office.

Marketing Strategies and Promotional Literature

As part of the marketing strategy, messages were designed to influence various groups (market segments) to consider ridesharing and the usefulness of the neighborhood ridesharing coordinator. This work was undertaken by NYSDOT by using the results of the before survey, the literature on ridesharing behavior, and the findings for the Albany area (14). The resulting material was developed around the Sweet Car-o-line logo, which featured a clairvoyant fortune-teller who predicts (and helps make happen) a happy ridesharing future. The literature focused on the nonthreatening aspects of ridesharing and emphasized the fun and convenience and the personalized matching of the coordinator.

Applications consisted of a single tear-off card attached to the Sweet Car-o-line flyer. Information obtained from the application included

1. Home and work addresses,
2. Work start and leave times, and
3. Ridesharing request (work, school, shopping, other).

The source of each application (e.g., newspaper, radio, telephone, poster) was also recorded.

The marketing strategies involved five basic kinds of activity:

1. General announcements, newspaper articles, posters, stuff boxes, and so on;
2. Door-to-door and telephone promotion;
3. Group presentations;
4. Promotion through matching activities; and
5. Other (word-of-mouth, friend).

The effect of each activity was evaluated by reviewing the number of applications generated versus the effort and funds involved, and the resulting impact on carpooling and VMT reduction.

Literature marketing strategies were also used, including:

1. Posters (and applications) at community stores,
2. Door-to-door delivery of applications,
3. Literature made available at group meetings, and
4. Newspaper articles, radio spots, and newspaper advertisements.

To the extent possible, without violating individual privacy, the coordinators also recorded data on demographic characteristics.

Progress and Results

Applications and New Carpoolers Attracted

The increase in applications occurred in differing patterns in each of the test sites. The greatest activity was in the Clifton Park area, a community completely dependent on the automobile, where flyer delivery and news articles generated nearly 70 applications at the end of 10 weeks, but then applications grew at the rate similar to the other sites.

The number of applications and new carpoolers in Cohoes appears higher than it actually was because many of the coordinators' friends who were already carpooling registered as applicants. Because it is easier to find matches among a large group of willing ridesharers, these applications were included, although the number of new carpoolers is actually 23 rather than 45. The Glenville coordinator received a slow, steady trickle of applications for work carpooling, primarily from the Glenville area to the Albany area, and from students attending community colleges in the area.

Most applications in Albany came through recreational sports leagues. This is reflected in the climb in applications in the spring and late summer. The two commuter carpools from the Albany area to Schenectady resulted from participation by Schenectady Community College.

Travel Saved

By and large the applicants fell into three categories: new job holders who did not own a car, solo drivers who were looking for riders to share commuting costs, and people from multiple-car households.

The data on work carpools and on school carpools (this includes community college, school, and recreational sports carpooling) were analyzed separately (see Table 2). The latter group cannot be observed on a regular basis throughout the year and this should be observed over a prolonged period of time to determine continued behavior. The weekly VMT saved was twice as high in the suburbs as the urban areas. The application rate in the suburban areas was higher than in the urban areas, but the rate of new carpoolers placed was lower in the suburban areas. However, if the community college bus riders are included, the suburban placement rate is higher. It may be argued here that suburban sites are the preferred targets for neighborhood ridesharing programs. Whereas it is possible to increase ridesharing in urban areas, the existence of transit and taxi services over relatively short distances can serve as alternatives to solo-occupant automobile driving.

Carpool occupancy averaged 2.8 for work trips and 3.6 for school and recreation trips. An automobile occupancy of 2.8 for commuter ridesharing is consistent with 1978 and 1979 New York State agency surveys.

The data in Table 3 summarize the direct program effects of 176 new carpoolers who were attracted as a result of internal efforts; 18,797 VMT/week were saved. Carpools for nonwork purposes (school, recreational, and HVCC bus) involved about 111 new individuals who saved an average of 116 miles/week; work carpools involved 65 persons who saved an average of 90 miles/week. These numbers are comparable to the internal results of the employer demonstration during its first year.

Effect of Marketing Strategies

Analysis of returned applications (Table 4) revealed that most (50 percent) were generated from newspaper articles, and fewer by flyer distribution (21 per-

Table 2. VMT saved per carpooler by purpose and site.

Area	Persons	Carpools	Avg Automobile Occupancy	Total Miles per Week	Area VMT per Carpool per Week	VMT Saved per Week per Ridesharer[a]
Work Carpools						
Clifton Park	23	9	2.5	1,600	177.8	106.7
Glenville	27	9	3.0	1,235	137.2	91.5
Albany	10	3	3.3	191	64	44.6
Cohoes	14	5	2.8	715	143	91.9
Total test	74[b]	26	2.8	3,741	143.9	92.5
School, Community College, and Recreational Carpools						
Clifton Park	2	1	2.0	100	100	50.0
Glenville	17	7	2.4	1,055	151	88.1
Albany	45	8	5.6	337	42	34.5
Cohoes	9	4	2.2	436	109	59.5
Total test	73[b]	20	3.6	1,928	96.4	69.6
HVCC bus[c]	38	1	38	250	250	243

[a]Average weekly VMT saved per ridesharer = [(average automobile occupancy − 1.0)/average automobile occupancy] x (average weekly VMT/carpool).
[b]Includes existing carpoolers who were absorbed with new carpoolers.
[c]HVCC bus = Hudson Valley Community College bus system.

Table 3. Direct program effect.

Item	Cohoes	Clifton Park	Glenville	Albany-South Side	Total
No. of applications received	75	189	80	52	396
Work		115	43		
Community college		74	37		
New applicants					
Work carpoolers	14	23	19	9	65
School and recreation carpoolers	9	2	17	45[a]	73
HVCC bus riders	–	32	6	–	38
Total	23	57	42	54	176
Weekly VMT saved					
Work	1,282	2,454	1,739	401	5,876
School and recreation	536	100	1,498	1,553	3,687
HVCC	–	7,776	1,458	–	9,234
Total	1,818	10,330	4,695	1,954	18,797
No. of hours of effort	1,188	1,174	1,076	854	4,292

[a]Includes 33 persons in recreational sports league.

cent), group meetings (15 percent), and friends (14 percent).

Of considerable surprise was the small number of applications that originated from the neighborhood meetings. Several explanations are possible from the above results, but the most likely, in our view, is that group meetings already have matched people of a common interest and carpooling is already at optimum levels. We therefore would not expect strong results, particularly because most of the applications received were for work travel.

In spite of low response, program awareness was high. The data in Table 5 indicate that between 31 and 52 percent of respondents in a survey conducted in October 1981 had heard about the program. Most respondents remembered news articles or conversations with friends. The flyers and posters generated disappointing results. Considering that there was only one radio interview, the results indicate that radio is indeed an effective marketing device. When compared with the program use rate, results show that lack of program awareness was not a major factor.

COMPARISON OF APPROACHES

Employer-Based Program

The employer-based carpool coordinator program began in fall 1978 in a climate of concern over the adequacy of the energy supply and rising gasoline prices. Three New York State agencies participated; one agency instituted a hard-sell approach and an aggressive personalized matching campaign, whereas the other agencies used less-active approaches. Cutbacks and hiring freezes subsequently reduced the effective time available for coordinator activities assumed by agency personnel, and the program was left in a passive state in December 1979.

With the start of the neighborhood ridesharing demonstration program, the three agencies were asked and agreed to maintain their same level of commitment. Nevertheless, personnel changeovers and increased work loads of the coordinators resulted in changes in the matching approaches among the agencies. One agency [Department of Motor Vehicles (DMV)] developed the most active program by targeting (on a weekly basis) a group of employees who were asked to visit the coordinator's office and review the list of employees' names and addresses for possible carpool matching. This approach was effective enough to totally eliminate the carpool notices on DMV bulletin boards, and it is now used heavily by new employees. The program is being continued by the DMV; less than 10 percent of the coordinator's time is spent on ridesharing activities.

NYSDOT canvassed all of the applicants in their files in November 1981; the results are given in the table below:

Item	Value
Total no. of new carpoolers	106
Total no. of uncovered carpoolers	274
Total no. of carpoolers	380
Total no. of carpools	113
Avg automobile occupancy	3.4
Avg one-way trip distance (miles)	22.0
VMT reduction (%)	
Attributed to circuity (%)	7
Attributed to car left home (%)	5
Weekly VMT saved by each carpooler	135.5

[Note that VMT saved = distance x car left home x circuity x frequency = (22.0 miles) x (1 - 0.05) x (1.0 - 0.07) x (3.4 - 1.0/3.4) x (10 days) = 135.5.] The average trip length of these carpoolers was 22 miles, which is more than 5 miles longer than the average trip [illegible] reported in the fall 1979 sur-

Table 4. Impacts of marketing materials.

	Application Source				Marketing Activities			
Month	Newspaper	Flyer Distribution	Friend	Group Meeting	Articles	Flyers	Meetings	No. Attending Meeting
January	18	0	4	0	14	0	0	0
February	30	20	11	0	4	4,000	1	25
March	21	16	11	5	5	2,000	18	395
April	7	4	5	5	1	1,000	19	236
May	7	0	4	2	1	1,000	12	182
June	8	2	4	5	6	0	6	255
July	4	1	5	4	2	0	4	148
August	0	0	4	4	6	0	6	107
September	3	0	1	1	0	0	5	68
October	4	0	5	3	0	0	3	342
November	1	0	1	1	0	0	0	0
December	0	0	0	0	0	0	0	0
Total	103	43	55	30	39	8,000	74	1,758

Table 5. Awareness of program.

Item	Albany-South Side	Cohoes	Clifton Park	Glenville	Capital District	Total
Overall (%)						
Heard about program	31	32	52	32	18	
Received help	0	0	1.3	0.8	0	
How heard about program (%)						
Newspaper	21.1	15.2	36.3	16.8	13.3	20.4
Radio	2.0	4.6	3.4	4.9	3.5	3.7
Flyer delivered to home	0	1.3	3.0	0.8	0	1.2
Flyer picked up at public building	0.8	2.1	3.4	1.2	0.4	1.6
Speaker at group meeting	0.4	0.4	0.9	2.6	0.7	1.0
Telephone call from coordinators	0.9	2.5	1.3	2.0	1.2	1.6
Friend	7.5	10.1	6.0	6.1	4.3	6.8

vey. The average automobile occupancy of 3.4 is also higher than the 2.75 noted in the previous agencywide survey. [For additional discussions of the results of the employer-based carpool coordinator program, see other reports (9,10).]

Cost Comparison

Table 6 gives the costs of both the neighborhood ridesharing demonstration and the continuation of the employer carpool coordinator project chargeable to the former project. The total cost of the neighborhood ridesharing demonstration program was $96,980, a considerable portion of which was evaluation oriented and would not necessarily be repeated. Note that the $34,710 spent by the four ridesharing coordinators represents the total hours the coordinators were allowed to work, at $4.40/hr plus fringe and leave benefits at 59.08 percent, regardless of whether they were actively seeking applicants or passively waiting by the telephone. On the other hand, the amount charged by the employer-based coordinators represents the part-time costs (including fringe and leave) of the coordinator, whose major responsibility was other departmental work. Aside from the number of hours worked, the difference in these coordinators costs are attributed to differences in salary.

Measures of Effectivensss

The results of the employer-based carpool coordinator program and the neighborhood ridesharing coordinator program were strikingly similar (Table 7), even though the neighborhood program ran for a slightly longer period of time, served a much larger population, and required more input hours. When the program length of the neighborhood program is adjusted to correspond with the employer program, the estimated new ridesharers attracted to the neighborhood program is 154 versus 150 for the employer demonstration. The neighborhood program saved slightly more VMT, mainly due to the community college buspool; but when these savings are adjusted for similar program lengths, the savings and differences even out.

The employer program was more effective in attracting applicants. However, the placement rate was higher in the neighborhood demonstration, which indicates a less difficult matching effort. But it must be remembered that the efforts of the neighborhood coordinators include some passive time, i.e., traveling and waiting for the applications to reach a matchable level. The employer-based coordinators worked only part-time on this demonstration and they were occupied with other tasks when not involved in coordinator activities. Thus, although the application rate is higher in the employer demonstration, the carpool attraction rate is more similar than it might otherwise appear.

The employer demonstration took place during gasoline supply shortages and rapidly rising gasoline costs, whereas a stable economic situation existed in the initial stage of the neighborhood demonstration. It is probable that the employer program would not have succeeded in attracting as many carpoolers in a stable environment; this further reduces the difference in the results. There is no continuation period in which to compare the two demonstrations, but the relatively high effectiveness demonstrated in the employer continuation period suggests that, after initial start-up, this neighborhood program may be more successful. Indeed, the amount of applications received did not

Table 6. Program costs.

Item	Cost ($)		
	Employer-Based Carpool Coordinator Demonstration		Neighborhood Ridesharing Coordinator Demonstration: January 1981-December 1981
	January 1979-December 1979	January 1980-December 1980	
Implementation			
Personnel services			
Administrative salaries	8,369	680	7,580
Support staff	1,426		180
Ridesharing coordinators			
NYSDOT		3,008	34,710
Office of General Services[a]	6,381	21,078	
DVM[a]	125	3,744	
CETA[a]	5,926		
Total	22,227	28,510	42,470
Nonpersonnel services			
Telephone	400		1,120
Printing	3,099		3,507
Supplies	104		865
Computer tabulation	262		
Total	3,865		5,492
Total direct costs	26,092	28,510	47,962
Total charged to neighborhood demonstration		3,688	47,962
Development			
Administration			23,161
Technical support			
Clerical			3,064
Total			26,225
Evaluation			
Administrative and technical support			17,123
Clerical			1,982
Total			19,105
Total NYSDOT cost[b]			96,980

[a]Donated. [b]Period from May 1, 1980 to February 1, 1982.

Table 7. Comparative survey of direct results of employer versus neighborhood ridesharing demonstrations.

Item	Neighborhood		Employer	
	Entire Period	Adjusted to 42 Weeks	Initial Period	Continuation Period
Target				
Time period (weeks)	48	42	42	109
When	January-November 1981		January-October 1979	October 1979-November 1981
Population	101,723	101,723	4,207	4,200
Effort (input)				
Coordinators	4	4	4	3
Hours	4,292	3,755	2,230	1,150
Cost ($)	47,962	41,967	26,092	28,510
Cost per week ($)	999	999	621	262
Cost per hour ($)	11.17	11.17	11.70	24.79
Results (output)				
Applications received	396	346	624	1,264
New carpoolers attracted	176	154	150	163
Avg trip length (miles)		14.4/11.8[a]	18	22
Avg carpool occupancy		2.8/3.6[a]	3.2	3.4
Avg miles per week saved	106.8	106.8	108.9	135.5
Avg gasoline per week saved (gal)	7.1	7.1	7.5	9.0
Total VMT saved per week	18,797	16,447	16,335	22,087
Total gasoline per week saved (gal)	1,253	1,097	1,126	1,472
Gasoline price per gallon ($)	1.38	1.38 | 1.00	1.00	1.25
Savings per week($)	1,729	1,514 | 1,097	1,126	1,840
Effectiveness				
Applications per hour	0.09	0.09 | 0.09	0.28	1.10
Placements per application	0.44	0.44 | 0.44	0.24	0.13
New carpoolers per hour	0.04	0.04 | 0.04	0.06	0.14
Cost per new carpooler ($)	272	272 | 272	174	175
Benefit/cost ratio	1.73	1.52 | 1.10	1.81	7.02

[a]Work/nonwork trip length.

indicate any leveling off when the demonstration ended.

These comparisons are clouded by different cost rates, gasoline prices, backgrounds, and input hours, but it was concluded that neither the neighborhood nor the employer demonstration is clearly superior to the other. In parallel circumstances, both programs are likely to be equally cost effective.

Ease of Implementation

Each of the programs lasted approximately 4 months from the time the sites were chosen until the beginning of the implementation phase. Although help was being provided free to the communities, the officials needed time to assess the possible implications of the program for their constituents. The agencies were asked to cooperate in a new concept that might help their employees at a time of gasoline scarcity; however, each department had to agree to donate the services of an existing employee.

Now that each of these approaches has measurable demonstrated effects, the implementation potential becomes less hypothetical. Ridesharing programs have been shown to be effective wherever top management provides real support for the programs. In these instances, personnel and funds for marketing and parking management have been made available to the program. Management can generally gain by implementation of a ride sharing program (e.g., reduction of parking space, attraction for employees, less need for relocation facilities, easing of labor disputes). When these benefits are not present, employers are reluctant to enter into ridesharing programs. Even when concerns for patriotism or energy conservation have motivated employers, labor contracts may prevent changes in benefits such as parking. Establishing programs in an employer site is difficult unless the employer perceives a real gain.

Implementation in the community may be somewhat easier. Programs may be as flexible as the funding and imagination of officials and program management allow. Labor problems may be fewer; however, establishing programs at this level requires that funds must either be raised through taxes or by diverting funds from other programs. Because elected officials must answer to their constituencies, such a program must be perceived as necessary and effective.

Awareness of Program

Awareness of the program is easier to generate at the employer level because information channels are often well established. Problems may arise with employee perception of the effectiveness of the program; thus the long-term support of weak programs may result in noneffective programs. However, this is directly under the control of management.

Awareness at the community level is somewhat more difficult to develop. Results indicated that flyers delivered door-to-door tend not to be effective. Repeated newspaper articles have more effect, as do presentations at group meetings, but these are not generally under the control of officials or program managers. Eventually, information is no longer newsworthy, and group programs are no longer open to repeated messages about ridesharing. Thus expensive marketing campaigns may have to be added to the ridesharing program budget.

Potential for Expansion

The potential for expansion of the program is greater at the community level than at the employer level. Company programs can and will attract employees who want to reduce commuting expenses and also some who are just entering the work force. However these programs will face a saturation point. That carpooling to work has remained stable over the past several years confirms this finding. Applications may continue to grow, but turnover and dropout rates will reduce gains and ultimately produce a stable total.

Because of the larger base of residents within communities, there is greater possibility for expansion. The communities contain many commuters who may commute to jobs at firms that are too small to have ridesharing programs. These residents may only lack awareness of other community residents who are traveling to close-by locations. The experience of the ridesharing coordinators and the findings of the panel survey indicate that at least half of the new ridesharers are just entering the work force and use this service until they can afford to own and operate their own automobiles. In this respect, ridesharing enables persons to get to jobs they might otherwise be unable to take or keep without difficulty.

Although nonwork ridesharing was difficult to organize, the limited success in organizing ridesharing to schools, recreation programs, and community colleges indicates that ridesharing programs can be successful in either reducing VMT or providing transportation to those who otherwise would not have that option. The limits of such specific programs were not even approached by the coordinators. It is believed that great expansion potential exists within many communities.

In summary, with positive and negative aspects of the program inherent in each approach, it cannot be said that one approach is more effective than the other. The continuation phase of the employer demonstration indicates that sustained effort produces more results for less effort and cost. The neighborhood approach deserves a continuation phase and is worthy of attempts in other types of communities throughout the country.

CONCLUSIONS

In conclusion, it appears that the neighborhood-based ridesharing coordinator program is a viable concept. With the solid support of the communities, ridesharing coordinators can influence ridesharing formation for the residents of those communities. The coordinators were most successful in forming carpools to work and to regularly scheduled activities such as community colleges. In this study, the coordinator was the catalyst for a buspool to a local community college. Ridesharing arrangements for nonwork purposes other than school were found to be informal, socially based, and not a productive target of the coordinators' efforts.

Public awareness of the program was high. The most effective marketing technique appears to be word-of-mouth generated by newspaper articles about the program and brief announcements and flyer distribution at large group meetings. Most nonwork groups were not open to involved discussion about the benefits of ridesharing.

In comparison with the employer-based carpool coordinators, who ran a proven program in a time of rising gasoline prices and fuel supply shortage, the neighborhood ridesharing coordinators were equally effective in the number of placements per hour and in cost-effectiveness measures. Given that employer ridesharing programs gradually rise to a saturation point, a neighborhood program that has a large population base and a continuous changeover in residents has great possibilities for cost-effective expansion. Therefore, additional demonstration programs are recommended.

ACKNOWLEDGMENT

NYSDOT wishes to thank the communities of Albany, Clifton Park, Cohoes, and Glenville for their support and cooperation, as well as the Department of Motor Vehicles and the Office of General Services for their efforts in the project.

The patient typing of Dianne DeVoe, Tedi Toca, Donna Brown, and Linda Unangst is gratefully acknowledged. We, of course, assume responsibility for any errors of fact or omission.

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Publication of this paper sponsored by Committee on Ridesharing.