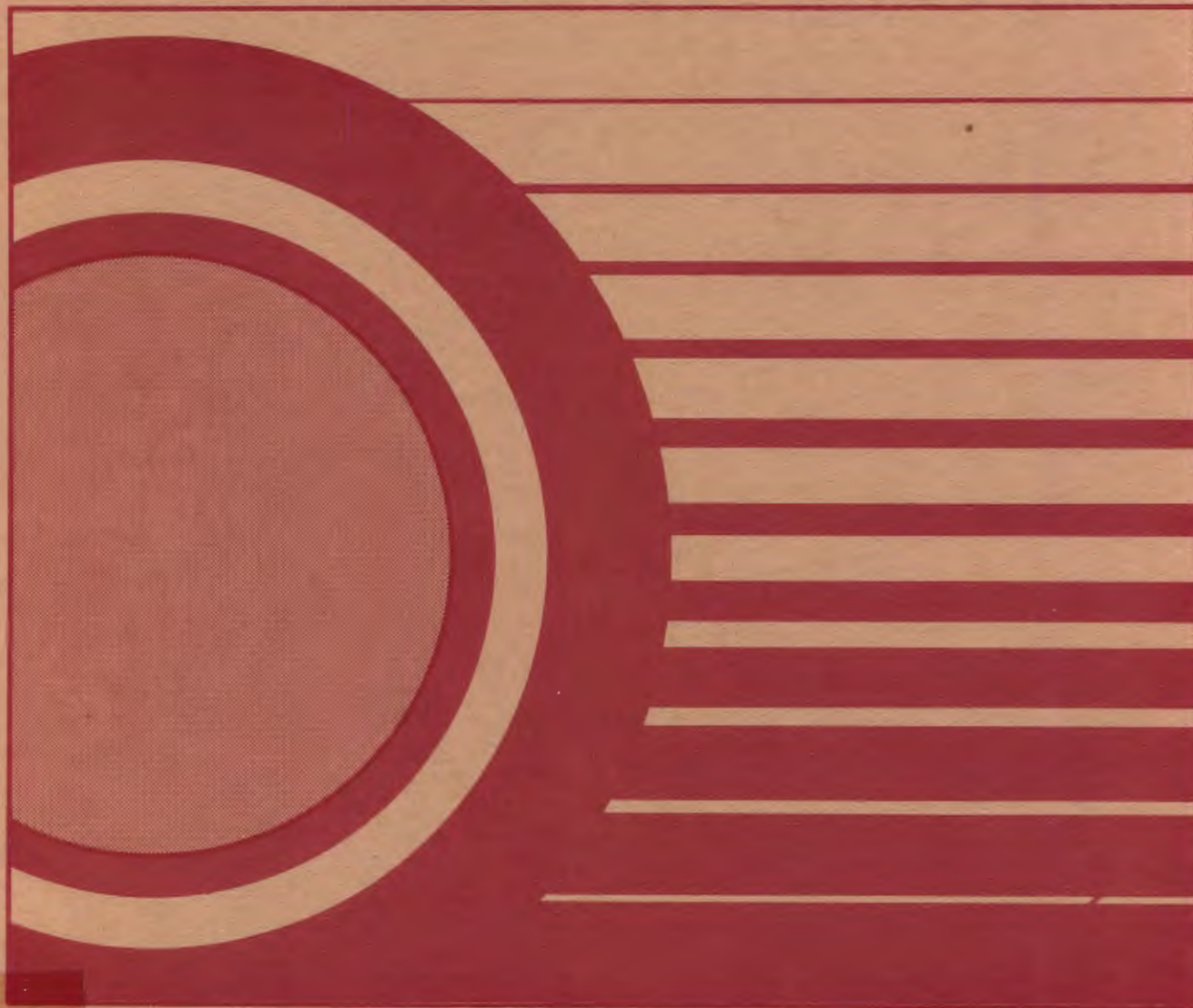


Improving Transportation Services for Older Americans

Volume 1: General Report
September 1980



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NOTE

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The original version of this study contained recommendations for program development targeted at Federal managers. That material has been edited from this printing of the study, as have a few discussions of issues which have been resolved since the original submission of the report.

The document is disseminated in the interest of information exchange. The U. S. Government assumes no liability for its contents or the use thereof.

Improving Transportation Services for Older Americans

**Volume 1: General Report
September 1980**

Prepared by:

**The Institute of Public Administration
in Association with
Ecosometrics, Incorporated**

Sponsored by:

**U.S. Department of Health and Human Services
Office of Human Development Services
Administration on Aging**

Reprinted by:

**U.S. Department of Transportation
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HIGHLIGHTS

Specialized transportation systems designed to meet the diverse needs of the elderly and other groups are operating in communities throughout the country. While these systems have proliferated, no comprehensive study has been undertaken to identify and explore the problems encountered by these systems. In response to the need for this type of information, a study was designed to identify the characteristics and examine the problems of transportation providers serving the elderly including insurance and related problems. The primary objective of the analysis was to identify the scope and nature of the problems and also to identify the solutions and recommend directions for future action.

The study was based upon an assessment of the experience, problems, and solutions of the local transportation providers serving older Americans, and the data for the assessment was drawn directly from the providers and their funding agencies -- mainly the Area Agencies on Aging. The study drew on the available literature, data collected from a telephone survey and in-depth field interviews with a collected sample of providers. These sources served as the core for most of the information on which the findings and conclusions contained in this report are based.

FINDINGS

The Provider Network

- Despite the limitations of data, it is evident that there has been a substantial increase in the number of transportation projects serving older Americans under the sponsorship and funding of Title III of the Older Americans Act. From an estimated level of 1000-1500 transportation projects in mid-1974 to an estimated level of 2800-3200 projects by 1980.
- In response to the "Special Efforts" and planning regulations under Section 16 of the Urban Mass Transportation Act, specialized services have been initiated by many transit authorities. A limited survey conducted by the Institute of Public Administration identified approximately 80 special service projects in which transit was either the operator or initiated the project as a means of meeting the "Special Efforts" requirements. However, this effort has been diverted to meeting the requirements of the U.S. Department of Transportation 504 regulations. Little attempt has been made to inventory and evaluate the impact of these "Special Efforts" projects.

Funding and Budgeting

- An important indicator of growth in service availability is the amount of funds being used for transportation of the elderly. The study estimates indicate that, based on 1979 transportation budgets, programs under Title III of the Older Americans Act were generating transportation expenditures in the range of \$500 to \$800 million dollars in 1979.

- The Older Americans Act has played a major role in developing transportation services for older Americans. However there have been other important sources of funding including Section 16(b)(2) of the UMT Act. The 16(b)(2) program provides funds to private non-profit agencies through a capital assistance program and it has played an important role as capital "seed " money.
- More surprising than Title III and Section 16(b)(2) was the important role played by CETA funds: almost 40 percent of the sample provided noted they were using CETA funds of which mostly the funds were being used to finance a variety of services, especially drivers.
- In terms of budgeting, almost 70 percent of the transportation providers surveyed felt that their budgets were not adequate, and almost two-thirds experienced problems involving funding continuity. Most of the providers were concerned that the problem of funding was restricting their ability to provide existing levels of transportation. They noted that they had not enough funds to meet even present demands or needs and the increased cost of inflation and rising energy costs were being made available. For most projects, budgets have not increased and some have declined, and with inflationary impact the "real" budgets are no doubt substantially reduced.
- Because system capacity was limited or funding was available for limited trip purposes requiring eligibility, all of the sixty surveyed providers reported assignment of trip priorities. Although medical trips received the largest assignment of first priority (by about 50 percent of the providers), a most startling result emerged: one-third of the providers assigned a first priority to personal business and shopping trips; about 50 percent assigned a second priority to these personal trips; and almost two-thirds assigned a third priority to personal business and shopping trips.

Insurance

- A problem that has received considerable attention in recent years is the cost and availability of insurance. Providers (in the sample) were asked to indicate what their insurance experience was in terms of their difficulties in obtaining insurance, cancellation, and cost of premiums. Very few of the projects in the survey had experienced any particular problems.
- Almost 90 percent of the providers in the sample had experienced no difficulty in obtaining insurance; only 5 percent (5 providers) had ever had a policy cancelled.
- Based on reported premiums and vehicle fleets, the average premium cost per vehicle was about \$700 for all providers combined with variations by urban level ranging from about \$500 in rural areas to \$1100 in metropolitan areas. The premium costs appeared to be reasonable in terms of experience generally.

- Some concern was expressed about the use of volunteers in transportation projects serving the elderly because insurance agents tended to regard reliance upon them as posing greater risks than paid employees did. A few of the projects interviewed noted that their insurance agents tried to discourage them from using volunteers. The consensus was that some form of federalized system might be needed since volunteers were so important to providers.

Service

- The findings indicate that, although the existing social service agency transportation providers do a reasonable job, there is evidence that, in the main, they have little experience with the provision of transportation service. This inexperience is reflected in the wide range of operating practices of the providers in the survey.
- Specialized transportation systems comprise the preponderance of systems currently serving the elderly, and most are operating with some form of demand-responsive or dial-a-ride systems -- typically providing door-to-door service. This was confirmed by the study survey with 80 percent of providers indicating they used a door-to-door service.
- There is a substantial desire on the part of providers (and assuming they reflect the needs and desires of the elderly) for greater freedom to provide a wider range of trip purposes particularly personal business and shopping trips. There appears to be a considerable level of latent demand for trip making beyond the medical and nutrition trips specified under categorical programs.
- Based on data drawn from the National Survey of Transportation Handicapped conducted by the Urban Mass Transportation Administration, the elderly (65 or older) have a higher incidence of visual and hearing problems as well as a requirement of mechanical aids in contrast to being wheelchair confined. It indicates that their problems with transit accessibility are somewhat differently focused than the other age groups of urban transportation handicapped.
- Almost 70 percent of the transportation providers indicated that they were acquainted with the United States Department of Transportation 504 requirement with regard to accessible transportation. A much smaller proportion (35% of the sample providers) were actually involved in the process of planning the transition to fully accessible service. A slightly smaller percentage (30% of the sample) were going to be directly incorporated as interim service providers. Thus it appears that although Section 504 is well recognized by transportation projects serving the elderly, their level of involvement may be quite minimal.

Costs

- On the issue of costs, the point was made that multi-purpose agencies providing transportation to the elderly have an unfair advantage compared to single purpose agencies. This was due to the fact that projects in the former category could more easily "distribute" many of their transportation-related costs among other agency functions, which was not possible when transportation was the only project activity.
- Although it is often difficult to obtain accurate data on the costs of transportation operation and compare costs among different projects, it is useful to have at least order-of-magnitude estimates of total costs as well as costs per service unit. In our sample (with 48 projects responding) the median value for cost per vehicle mile was 84 cents, in 1979, ranging from a low of 60 cents in rural areas to \$1.00 per vehicle mile in metropolitan areas. The same distribution of cost differentials by urbanization level were reported for total annual operating costs per vehicle with a median value (for 56 respondents) of \$15,400
- It is quite evident that increased input by transportation specialists and greater levels of technical assistance and training to the social service agencies and their associated transportation providers could produce important benefits in terms of productivity and better service generally.
- Volunteers were very important to the Title III transportation systems. About fifty percent of the projects reported using volunteers and noted that (despite difficulties) they were a vital component of their service. And although projects expressed concern about the uncertainty and variability of volunteer help, they felt overall that this could be stabilized if tax incentives could be implemented by permitting the same mileage deductions for volunteer activities as for business mileage; state availability of tax-free low cost fuel and parts; and dissemination and development of volunteer insurance programs.

Energy

- In terms of the energy crisis almost half of the providers indicated that they have experienced some difficulty during the fuel shortage crisis of the summer of 1979. These impacts included a reduced number of trips provided by the system, reduced number of clients served, and restrictions in the types of trips allowed.
- In order to deal with future fuel shortages, about one-third of the sixty providers sampled by telephone indicated they had been given a special entitlement, in case of future crises. The question that remains is why the other two-thirds had not reported a similar plan. It suggests that the issue of standby plans needs to be investigated and state and federal initiative provided.

- One result of increased fuel prices and reduced availability was a reduction in the willingness of volunteers to offer transportation. To the extent that the aging program relies upon volunteers, especially elderly volunteers on fixed incomes, fuel prices are likely to play an inhibitory role on volunteer transportation activities. The previous comments on tax relief and assistance to volunteers become even more relevant in light of the added disincentives which volunteer help will encounter.

Vehicles and Maintenance

- Providers complained of difficulties and delays associated with funding under Section 16(b)(2) and with vehicle delivery. A number of the transportation providers noted they had problems with their dealer, particularly with vehicle warranties, and most providers were having difficulty with maintenance, especially in obtaining proper maintenance or in having a reasonable maintenance facility of their own available.
- According to the survey responses, transportation projects adhere to a regular maintenance schedule, but there is little indication that they practice preventive maintenance on any consistent basis.
- The most common vehicle was the (modified) van, and providers encountered problems with transmissions, brakes, lifts, shocks, doors, and, in rural areas, the fibreglass fuel tanks, which were vulnerable to gravel on rural roads. Providers in warm climates had problems with their air conditioners but felt this was part of a general pattern of difficulties.
- Providers also commented on the lack of space in the vans for older riders, especially when carrying wheelchair passengers, and noted that the elderly have difficulty moving around in the vehicles. Generally, it was felt that the van was not strong enough to stand up to daily use, and providers expressed disappointment that a better vehicle design was not available.

Monitoring Evaluation and Technical Assistance

- Surprisingly, the elderly had minimal involvement in program evaluation. In terms of the 20 providers interviewed in the field, only 10 indicated that the elderly provided any evaluation of service and half of those noted the elderly's contributions came from their participation on advisory boards.
- Although 77 percent of the providers indicated they prepare management reports, only 37 percent ever receive feedback on the accountability reports prepared for their funding agencies. Thus, there is a high level of self-monitoring at the project level but there appears to be less evaluation of system performance by the funding sources.
- A low level of technical assistance was being utilized by providers -- only 37 percent of the sample providers indicated ever receiving technical assistance for their transportation projects -- principally from state departments of transportation and the AAAs. Most of the transportation providers indicated that they had received little or no technical assistance from their State Unit on Aging.

Urban and Rural Differences

- The similarities and differences between providers operating in urban and rural areas was one of the prime considerations in selecting urbanization as the stratification factor for the analysis. Although differences emerged, there was no consistent pattern to these differences, and, there were more typically greater similarities among the providers irrespective of level of urbanization.
- In general, the rural transportation projects serving the elderly were characterized by smaller budgets, fleets and number of staff. Looking at fleet size, the median fleet in a rural area consists of about four vehicles whereas the median for urban fleets is ten vehicles. With respect to staff, close to 70 percent of the rural providers had less than ten people employed in contrast to urban areas who reported under 60 percent for this size category. Viewed from the opposite perspective, about one-quarter of the urban projects reported having staff of 35 or more; just over 5 percent of the rural projects had staff levels at this size category.
- In many respects, metropolitan areas displayed characteristics similar to rural areas: small number of vehicles and staff levels. This reflected the fact that metropolitan projects were serving very local (neighborhood) demands and a large number of very small projects had obviously been developed as a means of reaching as many neighborhoods as possible.
- As regards trip lengths, the median for all providers was (at a 95% confidence level) about 5-7 miles; the length for the rural areas was 6-8 in contrast to 5-7 for urban and 3-5 miles for metropolitan areas. Of some interest is the fact that areas characterized by a mix of rural and urban locations had a median trip length of 11-13 miles -- reflecting the longer distances required to access urban centers from the more rural locations around these centers.
- Metropolitan and urban transportation projects for the elderly reported the highest (median) insurance premiums in 1979. The median premium per vehicle for all providers in the survey was \$700. However, costs ranged from \$1100 for metropolitan providers to \$500 for those located in rural areas. This difference by urbanization level, probably reflects the actuarial experience and risks attributed to operating environment differences.
- In terms of other characteristics such as, methods of operation, trip priorities, vehicle fleet characteristics, project monitoring, and the other issues examined during the course of the study, no dramatic differences were found by urbanization level.

INTRODUCTION

In the decade that has passed since the 1971 White House Conference on Aging, a wide range of programs concerned with the transportation problems of older Americans have emerged. Special legislation has been passed and programs implemented, and a broader range of funding sources have been developed. There is no longer a problem of "awareness": a flow of studies and reports stimulated by the 1971 Conference has brought (and kept) the issue before Congress, the federal government, and the public.

The network of transportation providers has grown, and there is now in place a substantial infrastructure capable of delivering significant volumes of service. Our estimates indicate that somewhere between 2800 to 3200 transportation projects were being funded under Title III of the Older Americans Act alone, and that estimate is likely to be on the low side. The estimate does not include transportation projects for which primary funding was coming from a variety of other sources such as Sections 5 and 16(b)(2) of the Urban Mass Transportation Act, and Titles XIX and XX of the Social Security Act -- to mention but a few of the funding sources available for transportation. Though it has not been possible to estimate the total number of projects currently serving the elderly under all funding programs, it is quite evident that it is substantially higher than the 2800 to 3200 projects estimated for Title III of the Older Americans Act.

Study Objectives

Specialized transportation systems, designed to meet the diverse needs of the elderly and other groups, are operating in communities throughout the country. But, while these systems have proliferated, no comprehensive study has been undertaken to identify and explore the problems encountered by the systems. In response to the need for this type of information, the Institute of Public Administration in association with Ecosometrics, Incorporated, has conducted a study designed to identify the characteristics and examine the problems of transportation providers serving the elderly. The primary objective of the analysis was to identify the scope and nature of the problems

and also to identify solutions and recommend directions for future action. The study had five specific objectives:

1. To identify the major problems encountered by transportation providers (including possible causes);
2. To identify any solutions applied by the providers to overcome problems encountered;
3. To differentiate between problems encountered and solutions developed by providers according to provider characteristics (degree of urbanization, type of provider, type of service being provided, and size of the provider);
4. To identify possible solutions to problems that merit further testing and demonstration; and
5. To develop recommendations for federal, state, and local decision-makers aimed at alleviating or avoiding the problems of local service providers.

Most of the study was based upon an assessment of the experiences, problems, and solutions of the local transportation providers serving the elderly, and the data for the assessment was drawn directly from the providers and their funding agencies (a detailed description of the methodology follows). The study team drew on the available literature, collected data from a telephone survey instrument, and conducted in-depth field interviews with a selected sample of providers. These sources served as the "core" for most of the findings and conclusions contained in this report.

In developing our approach to the study, it was essential, given the budget and time limitations, to focus on those problems considered to be most troublesome. As might be expected, transportation providers confront a variety of issues and problems some of which are typically encountered as part of daily operations and some of which are unique to a particular set of circumstances and location. Cash flow problems are common to most transportation providers but the cost of energy affects some transportation systems more severely than others depending on their location, organizational status, and other factors. In designing our surveys, we tried to differentiate between these problem categories, and in so doing, focussed our attention on a number of specific areas, including the following:

1. Provider Structure and Organization (including management staffing)
2. Funding and Budgeting Experience
3. Service Provision
4. The Vehicle Fleet
5. Operating Costs
6. Insurance (particularly acquisition of, costs related to, and cancellation experiences)
7. Monitoring Evaluation and Reporting
8. Coordination
9. Institutional Problems (including labor, franchise, energy, outreach, Section 504, etc.)
10. Relationships with the Area Agencies on Aging
11. Planning Problems

The considerable experience of the study team with transportation providers serving the elderly suggested that it was in these areas that major problems were being encountered by the providers. Since an extensive network of transportation service is already in place, the prospects for improving transportation for the elderly were likely to come from improving the volume and quality of the services provided -- hence the focus on the providers. However, equally true is the fact that this focus on the supply side of transportation service delivery does not directly consider user needs and problems -- the demand side of the equation. To consider this aspect of the problem, a separate study was sponsored by the Administration on Aging as a parallel effort.

Report Organization

The results of the study have been brought together into a comprehensive report comprising two main volumes: a General Report (Volume I) and a Technical Report (Volume II). A separate Executive Summary is also available.

The General Report provides an overview of the findings and recommendations emerging from the study starting with an overview of the historical precedents (Chapter I); a review of the present provider system serving the elderly as suggested from the existing literature and identification of gaps and information problems encountered (Chapter II); and an overview of the results of a sample telephone survey of 60 transportation providers and on-site interviews of 20 of the 60 (Chapters III and IV).

Both the transportation providers and the Area Agencies on Aging (AAAs) funding them were interviewed in the field and asked to express their views on how to improve transportation services for older Americans. They responded freely and enthusiastically, and their comments have been summarized and combined with the major findings, conclusions, and recommendations emerging from the survey (Chapter V). In the final chapter (Chapter V) we have highlighted the key recommendations that will need to be considered for the decade ahead. Both the conclusions and the recommendations in Chapter V are an amalgam of the survey results and the more open-ended responses of the transportation providers and the AAAs.

The Technical Report (Volume II) provides more detail on all aspects of the study but relies especially upon the telephone and field surveys. The specific findings, responses and tabulations from these surveys are presented for each major problem area. The Technical Report also includes a more comprehensive presentation of the comments and suggestions made by the transportation providers and the AAAs because they provide a rich source on how the local provider and funder at the local level directly perceive their problem.

The Technical Report also contains a series of Annexes that include the major outputs from the surveys, a complete list of the sites interviewed, and copies of the survey instruments.

CHAPTER I

THE HISTORIC PRECEDENTS: A DECADE OF CHANGE

"Transportation is the life blood of our complex society. It is no less so for the elderly . . . To the degree we achieve success in providing for -- not just survival -- but life with dignity and purpose for the nation's elderly, we will also be contributing to life with dignity and purpose for all of the people." (Committee on Labor and Public Welfare and the Special Committee on Aging, U.S. Senate. Post-White House Conference on Aging Reports, 1973. p. 581.)

Background to the Problem

The transportation problems of older Americans have been extensively documented over the last 10 years but it was not so long ago that their mobility needs were imperfectly understood or even recognized. It was not until the 1971 White House Conference on Aging, that the impacts of the lack of transportation were even included in that particular forum of public expression. "Old age" was, in essence, frequently perceived to be synonymous with age 65 and that meant isolation from daily social and economic activities.

For the elderly, such isolation was exacerbated by, if not attributable to, a lack of adequate public and private transportation necessary to insure access to the goods and services they needed or desired. The mobility needs of older persons (when they entered what was euphemistically called "retirement") was seriously impaired for several reasons. Problems caused by insufficient income to own an automobile or an unwillingness to drive because of physical problems, and the location and design features of conventional mass transit were just a few of the many factors affecting how much mobility the elderly had available to them. Programs designed to provide services and support to older Americans were constrained because they could not reach these isolated elderly -- both in rural and urban areas. These aspects of the problem are, as noted, well documented indeed and need no restatement here. The problem was identified clearly in the 1971 Conference, elaborated in a series of state-of-the-art reports, and most importantly, these resulted in the initiation of programs to help solve the transportation problems of the elderly.

It is clear that much progress has been made over the last decade in the way of providing transportation for older persons. This progress has occurred under pressure from a variety of advocates for older persons -- including delegates who attended the transportation session of the 1971 White House Conference on Aging, human service agencies, and community leaders. It has taken the form of improvements to existing transportation facilities, initiation of new, specialized services for the elderly, favorable legislative changes, clarification of existing legislation, and related transportation improvements.

However, some necessary changes have yet to be made, and although the progress to date has been promising, greater advancements in specific areas of transportation planning, operations, and evaluation are needed. This section is intended to put transportation for the elderly into perspective: it examines where we stand now in relation to events that have occurred over the last 10 years. Particular areas of progress will be highlighted since the 1971 White House Conference on Aging was held, and areas that remain to be significantly addressed will also be discussed. In a subsequent section, a description of current transportation services for the elderly and general user characteristics is presented.

The Early 1970s: A Marked Need for Transportation

The special recognition afforded the problems of the elderly can be traced initially to national conferences convened in 1950 and 1961. The latter date was the year of the first White House Conference on Aging which led to the creation of the Administration on Aging to act as an advocate for Older Americans. In neither of those conferences was transportation a major topical area despite the fact that it was logical to conclude (based upon some preliminary evidence) that the elderly could not take advantage of social services to which they lacked access. At the same time, aging policy and programs at the national level were just beginning to emerge, and it is evident that the extent of the elderly's limited mobility was not yet fully understood.

Early efforts in the 1960s were associated with the "poverty programs" implemented at that time, and service was available to older people only if they happened to be eligible for specific programs. By the late 1960s and early 1970s, some recognition of the problem had surfaced and publications of that period noted that the elderly were relying primarily on their relatives or friends, and less frequently, on agency-sponsored transportation.^{1/}

By the time the 1971 White House Conference on Aging was held, awareness of the importance of transportation had grown substantially, and the Conference itself further contributed to the growing awareness. An indication of this awareness could be observed in the results of a questionnaire on older persons' needs which was written and administered by the Institute for Interdisciplinary Studies (Minneapolis, Minnesota) prior to the commencement of the Conference. Of 194,000 valid responses, close to one-third of the elderly noted that they had transportation difficulties, either because of deficiencies in public transit, lack of a car, or an inability to drive.^{2/} As a result of these findings and similar expressions from the multitude of mini-conferences held at the state and local level as part of the 1971 Conference process, transportation achieved a higher priority level and urgency than originally had been anticipated.

Transportation was one of the nine subject areas considered at the 1971 White House Conference. The Conference had three general objectives, and they bear repeating because of their impact on the transportation section:^{3/} 1) the initiation of guides and recommendations on aging policy at all levels of government; 2) the participation in the conference of older people, aging practitioners, providers, researchers and academicians, public officials, and youth; 3) the broadening of the base of understanding about the process and needs of aging at state and community levels. In

^{1/} For example, the Model Cities sponsored by the Department of Housing and Urban Development offered limited transportation at that time.

^{2/} White House Conference on Aging, Volume I, p.23, November 28-December 1, 1971

^{3/} White House Conference on Aging, Volume I, p. 7, November 28-December 1, 1971

essence, it could be said that the conference, through its formulation of broad policy goals, aimed to exhort attendees and other interested individuals into action.

The objective and approach of the Conference had a particularly happy result for transportation. The delegates to the transportation section of the Conference set forth 22 recommendations covering special transportation needs, design standards, mode choice and the suitability of different transportation modes for use by the elderly, insurance problems, planning issues involving transportation and many other areas (alluded to below).

From "Awareness" to "Action"

To understand the progress made as a result of the 1971 recommendations and to put into perspective the problems remaining, it is useful to separate them into three categories: recommendations that have been achieved; those that have been partially satisfied; and those that remain essentially unmet. Although subject to varying personal interpretations, the result of applying this taxonomy is shown in the matrix of Table I. Brief explanations as to why a particular item was categorized in one or another of the three columns is also included.^{1/}

It is difficult to know with certainty what effect the 1971 White House Conference on Aging actually had on the level and quality of transportation for the elderly. Yet if it had no other impacts, the Conference helped draw attention to transportation problems and thereby, it legitimized the need for action. A closer look at the matrix in Table I supports the conclusion that many favorable changes have been made. Of the 20 recommendations reviewed, only seven remain unmet. Progress has been achieved on nine of the thirteen recommendations, and it can be legitimately said that four of the recommendations have been fully met (numbers 1, 2, 17, and 20).^{2/}

^{1/} It should be noted that only 21 of the 22 recommendations have been included. Recommendation number 22 did not refer directly to transportation.

^{2/} Recommendation number 21, which deals with transportation problems on Indian reservations, has been excluded.

TABLE I

The 1971 White House Conference on Aging --
 Transportation Recommendations Categorized
 by Level of Achievement *

Recommendation Number	Recommendation	Level of Achievement			Explanation
		Met	Partially Satisfied	Unmet	
Rec. #1	Federal gov't policy should increase rural and urban transportation services through series of flexible alternatives. Subsidize providers or users; encourage reduced or no fare transit for elderly; support both capital and operating subsidies	X			Increase of services to a present minimum of about 2800 - 3200 elderly transportation providers. Subsidization through a variety of sources for capital and operating (GAO estimate of 114 Federal programs). Vouchers, tokens, or coupons also provided by some of the same sources. Reduced fare transit mandated under Section 5(m) of 1974 UMT Act.
Rec. #2	Increase support for transportation to all users, with special attention to disadvantaged groups.	X			Support for general transportation has steadily increased since 1971. The allotment under the Section 3 capital grants program (UMTA) increased 320% between 1971 and 1975 (in response to an increase in the Federal matching share), and 15% between 1975 and 1980. The Section 5 capital and operating formula grant program increased over 1000% from 1975 - 1980. The "special efforts" provision under Section 16(a) is more beneficial to elderly and handicapped groups and in one study conducted in 1978, about 1000 specialized projects were identified.
Rec. #3	Require that transportation be included as integral component of publicly funded programs. Require coordination of existing and/or new transportation services.		X		Transportation is included in numerous public programs, but often not as an integral component. Some programs have prohibitive restrictions on use of funds for transportation while others use funds for seed money of transportation projects. Coordination required in some, but not all, programs.

* Recommendations paraphrased for purposes of brevity

TABLE I (cont'd)

Recommendation Number	Recommendation	Level of Achievement			Explanation
		Met	Partially Satisfied	Unmet	
Rec. #4	Provide for interchangeable use of all gov't pax vehicles used by agencies at all governmental levels. Establish area clearinghouse to oversee use of transportation resources and assure needs of elderly are met.			X	For the most part, vehicles owned by one agency are not shared by others, when available. This is attributable to service characteristics, institutional and political considerations, and to regulations prohibiting shared depreciation expenses. No clearinghouse established.
Rec. #5	Federal gov't should take lead role and financially support development of individualized, flexible transportation services for elderly. Special attention to access for health, shopping, social, recreational, religious, and cultural trips. Gov't private enterprise and voluntary agencies should all participate.		X		As in the case of Rec. #1, Federal gov't has taken a very active role in supporting specialized transportation. Not all trip purposes, however, are served equally well, and in terms of participants, private enterprise has not been a major actor.
Rec. #6	Federal, state and local governments should set minimum design standards for equipment design and facilities for elderly as pedestrians, drivers and users of various transportation modes. Authority for enforcement by state and local gov't, unless preempted by Federal gov't.		X		<p>Pertinent legislation affecting design standards include:</p> <ul style="list-style-type: none"> • Section 16(a) of the Urban Mass Transportation Act, as amended • Section 504 of the Rehabilitation Act which mandates full accessibility within 30 years for all grantees receiving DOT monies • Architectural Barriers and Compliance Act, as amended in 1978. Legislation provides authority over fixed facilities, such as bus terminals and shelters, and vehicle design accessibility. Architectural and Transportation Compliance Board oversees implementation of the Act, which partially overlaps Section 504 in intent. Research sponsored by UMTA has also been undertaken in the fields of elderly and handicapped pedestrian improvements, and driver retraining for impaired elderly.

TABLE I (cont'd)

Recommendation Number	Recommendation	Level of Achievement			Explanation
		Met	Partially Satisfied	Unmet	
Rec. #7	Publicly subsidized transportation services shall be barrier-free to provide for total accessibility. This applies to terminals, bus shelters, transit information, traffic control, and crosswalk markings. Use symbols, multilingual signs, etc. where appropriate.		X		Section 504, noted above, assumes primary responsibility for assuring accessible transit and ancillary facilities for recipients of DOT funds. The level of accessibility required may be modified as a result of pending amendments endorsing local option. Other improvements have been made in alleviating travel barriers with respect to sidewalk curb cuts and special symbols for the blind and deaf (tactile, audio, and visual). Pedestrian research sponsored by UMTA is also underway to facilitate "priority accessible networks".
Rec. #8	Authorization legislation to provide half-fares or less for elderly and handicapped on space-available basis for all transportation modes.		X		Section 5(m) of National Mass Transportation Assistance Act mandates half-fare for senior citizens during off-peak hours. This also applies to the handicapped. Air, rail and water transportation do not have similar legislation.
Rec. #9	Federal gov't should increase level of funding available for development and improvement of transportation and foster coordination of all modes at all gov't levels.		X		Level of funding for transportation has increased, as noted in Rec. #2. In addition to the UMT Act, the Older Americans Act has stipulated a higher percentage allotment for transportation as a priority service. New monies have also been provided under Section 18 (UMTA) for capital and operating assistance. Impetus for coordination has come from federal legislative mandates, working agreements, joint task forces, state statutes, and local initiatives. The type, scale, and phasing of coordination varies widely.

TABLE I (cont'd)

Recommendation Number	Recommendation	Level of Achievement			Explanation
		Met	Partially Satisfied	Unmet	
Rec. #10	Congress should adopt legislation which will convert utilization of Highway Trust Fund into general transportation fund for all modes.		X		1973 Federal-Aid Highway Act allowed "inter-state transfers," wherein Trust Fund monies could be used for urban mass transportation systems. No general fund per se has been created.
Rec. #11	Establish nationwide set of driver's licensing standards that do not discriminate against elderly on basis of chronological age.			X	President Nixon encouraged National Highway Traffic Safety Administration to specify licensing standards before projects could be eligible for funding under Highway Safety Act, but this was never accomplished.
Rec. #12	Federal gov't should establish national policy for guaranteed liability coverage for volunteer drivers.			X	New insurance guidelines for social service agency vehicles have been issued (1979), but volunteer drivers are covered only within the context of nonagency-owned vehicles.
Rec. #13	Encourage volunteer drivers by compensating them in one of the following ways: reimbursement for out-of-pocket expenses; tax break; use of publicly-owned vehicles, or assistance with insurance and maintenance of vehicles		X		No total count on the number of volunteer drivers serving the elderly is available. Volunteers are, however, playing a major role in supporting some specialized transportation projects, as suggested by figures for the present study which show that about one-half of the sample of transportation providers use volunteers. Reimbursement for expenses incurred is the most common incentive provided; a tax break was suggested in 1976 by the House Select Committee on Aging, but no action was subsequently taken.
Rec. #14	Appoint an elderly person to assist DOT Secretary in advisory role on transportation needs of the elderly.			X	DOT and AoA have an interagency working agreement to keep abreast of each other's activities, but no special assistant has been appointed.

TABLE I (cont'd)

Recommendation Number	Recommendation	Level of Achievement			Explanation
		Met	Partially Satisfied	Unmet	
Rec. #15	Federal and/or state gov'ts should pass legislation prohibiting insurance companies from increasing auto insurance premiums or cancelling policies on basis of age alone.			X	No such legislation passed.
Rec. #16	Encourage better insurance programs by examining such alternatives as no-fault insurance and government operated insurance.		X		Progress has been made in experimenting with new, less costly insurance coverage. The Federal government has worked with the Insurance Services Office to devise a new classification for social service agency vehicles. Another development is state insurance associations designed to obtain more comprehensive and less costly insurance.
Rec. #17	Federal laws shall be amended to include specific definitions of responsibility for rural transportation by DOT	X			This recommendation has been achieved through the addition of Section 18 to the 1978 Surface Transportation Assistance Act. Capital and operating assistance to rural areas is provided.
Rec. #18	In absence of State or local response to transportation needs of all users, particularly the disadvantaged, Federal government shall be empowered to act unilaterally in their interest.			X	A number of states and localities have taken the initiative to provide for their transportation needs. They have provided monies to match Federal dollars, earmarked taxes dedicated to transit, provided technical assistance, conducted needs assessments, and many other activities.

TABLE I (cont'd)

Recommendation Number	Recommendation	Level of Achievement			Explanation
		Met	Partially Satisfied	Unmet	
Rec. #19	Incorporate individualized and/or public transportation in planning of all privately funded housing projects for the elderly.			X	No such coordination between housing and transportation planning.
Rec. #20	All policies adopted as a result of recommendations shall apply to entire U.S., Puerto Rico, and the Trust Territories.	X			All policies apply, although in many instances where Federal programs are involved, smaller allotments outside the continental U.S.
Rec. #21*	Unique transportation problems of American Reservation Indians shall be dealt with through subsidies for new transportation services that assure access to health care facilities, shopping, and other basic needs.				

*Special provisions for transportation of Indians are handled primarily by the Bureau of Indian Affairs and are not included in this study.

Although progress has occurred incrementally, it is fair to say that as the amount of attention devoted to the transportation problems of the elderly increased, there has been a cumulative improvement in transportation of the elderly. This holds true for legislative changes, alterations in institutional arrangements, and adoption of improved service delivery techniques.

Of additional interest is the fact that, in some cases, the pendulum has begun to "swing the other way", to the extent that changes once thought to hold particular promise are no longer seen as having absolute benefits. A good example of this is the emphasis once put on including transportation as an ancillary component to every other service program. As seen in the recent consolidation of Titles III and VII of the Older Americans Act (of which transportation was just one element), there has been a recognition of multiple funding sources for transportation resulting in overlapping service delivery and duplication of effort.

From the standpoint of technological change, innovations considered at the start of the decade to be solutions to long-standing mobility problems were subsequently found to have less merit. At the 1971 White House Conference on Aging, for example, former Secretary of Transportation Volpe extolled the value of Transbus, a low-floored, wide-doored ramp-equipped bus which would enhance accessibility for the elderly. When plans finally took shape around 1976, the bus specifications and timing for manufacture were rejected by the manufacturers. The failure of Transbus was due to many factors, many of which were not related to the elderly, but the fact that it was perceived to be one of the most promising developments of the decade for the elderly lends insight into how events have changed. Since 1971, and particularly after 1976, the increasingly insistent demand from the disabled for fully accessible line-haul transit, and the issuance of U.S. Department of Transportation regulations in support of Section 504 of the Rehabilitation Act has directed attention toward developing lift-equipped buses for wheelchair users and away from more general issues of mobility and accessibility as embodied in Transbus. The major issue however remains: what is an appropriate balance for the elderly (and other transportation disadvantaged) between generalized special services and line-haul transit -- accessible or otherwise.

Following the 1971 White House Conference, as transportation services for the elderly began to proliferate in the mid 1970s, the issues and problems related to service delivery became much more specific. This was particularly true for the large number of systems operating with only a few vehicles and a considerable lack of expertise. Starting in the early 1970s, these transportation providers became more and more eager to learn how to operate more efficiently. As inflationary pressures and budgetary restrictions increased, what was an urge to provide more effective transportation became an imperative to prevent services from deteriorating. Results from this study indicate that although particular problems are more troublesome than others, special service transportation providers serving older Americans throughout the nation, in both urban and rural settings, are grappling with an array of problems. They include funding, staffing, restrictive barriers to coordination, and inadequate vehicle capacity to accommodate even existing levels of demand. Before turning to these specific problems, however, it is useful to review the major programs that have emerged since the 1971 Conference, and try to get some overall perspective of the size of the present network serving our senior citizens.

The Building Blocks

To obtain insight into the changes that have occurred over the last ten years, Table 2 summarizes (and briefly explains) some of the more notable events in the areas of legislative and policy area that have affected and currently influence the provision of transportation for older persons. A review of the table shows that the most significant events included:

- The passage of the Older Americans Act Amendments of 1973, 1975, and 1978;
- Passage of Section 16(a) of the Urban Mass Transportation Act of 1964, as amended and implementation of the associated "Special Efforts" and planning regulations;
- The National Mass Transportation Assistance Act of 1974: particularly Section 5, and more specifically, Sections 5(m) and 16(b)(2);
- Passage of the Rehabilitation Act of 1973, and particularly Section 504 of that act and the associated U.S. DOT regulations of 1979; and
- Section 18 of the Surface Transportation Assistance Act of 1978.

TABLE 2

TRANSPORTATION FOR OLDER AMERICANS

Major Legislative And Policy Changes Since
The 1971 White House Conference on Aging

1972 -

Year	Event And Description ^{1/}
1973 -	<ul style="list-style-type: none"> ● <u>Post White House Conference on Aging Reports -</u> Provided input to 1973 Older Americans Act Amendments. ● <u>Passage of Older Americans Act amendments --</u> Established Area Agencies on Aging; set forth priority services to which 20% of Title III(b) funds had to be allocated. Transportation one of four priorities. ● <u>Passage of Federal-Aid Highway Act of 1973</u> <ul style="list-style-type: none"> -- Created the Section 147 Rural Highway Transportation Demonstration Program, providing funds for rural and small urban area transportation projects. -- Amended Section 3 of the UMT Act, increasing federal contribution for capital grants from 67% to 80%. Increased amount of general public transportation available. Also provided up to 100% of planning costs. -- Allowed "interstate transfers" from monies allocated to Highway Trust Fund to projects involving public transit. ● <u>Passage of Section 504 of the Rehabilitation Act of 1973</u> One of first legislative mandates setting forth non-discrimination on the basis of handicap alone in programs receiving Federal monies ● Establishment of Architectural and Barriers Compliance Board to oversee accessibility of fixed facilities and (as of 1978) vehicle design.
1974	<ul style="list-style-type: none"> ● <u>Passage of the National Mass Transportation Assistance Act</u> allowing, for the first time: <ol style="list-style-type: none"> 1) operating assistance for transit systems in cities of populations greater than 200,000 2) reduced fares during off-peak hours for the elderly and handicapped (Section 5) ● First interagency working agreement between AoA and DOT

Major Legislative And Policy Changes Since
The 1971 White House Conference on Aging

Year	Event And Description ^{1/}
1975	<ul style="list-style-type: none"> • First year allocation of Section 5 monies distributed on formula basis - \$155.7 million available for capital and operating purposes. • Office of Human Development Services coordination initiatives. • Older Americans Act Amendments of 1975 authorized State or Area Agencies on Aging to enter into agreements with agencies administering programs under the Rehabilitation Act of 1973 and Titles XIX and XX of the Social Security Act. • Publication of <u>Transportation for Older Americans: A State of the Art Report</u> and the <u>Planning Handbook</u> by IPA. • Allocation of \$20.8 million by UMTA under Section 16(b)(2) for capital assistance grants to non-profit organizations to meet the transportation needs of the elderly and handicapped.
1976	<ul style="list-style-type: none"> • Publication of regulations implementing Section 16(a) of the Urban Mass Transportation Act of 1964, as amended. Provided guidelines on how to comply with "special efforts" requirements.
1977	<ul style="list-style-type: none"> • Secretary of Transportation Adams mandated Transbus for all bus purchases after September 30, 1979. • General Accounting Office released major report on hinderances to coordinating federally funded programs.
1978	<ul style="list-style-type: none"> • <u>Older Americans Act Amendments of 1978</u> provided for: <ol style="list-style-type: none"> 1) an increase in amount of monies which had to be spent on priority services, including transportation, from 20% to 50%. 2) consolidation of Title VII, (the nutrition program into Title III(c), with supportive services monies curtailed. 3) Federal match for services provided under Title III increased to 90 - 10 throughout grant period, rather than decreasing match over three years. 4) Maintenance of effort requirements implemented for rural areas to 105% of the amounts grantees spent for services in 1978.

TABLE 2 (Continued)

Major Legislative And Policy Changes Since
The 1971 White House Conference on Aging

Year	Event And Description ^{1/}
1978 (Cont'd)	<ul style="list-style-type: none"> ● <u>Passage of Surface Transportation Assistance Act of 1978</u> allowed for ongoing support to rural and small urban transportation by establishing the Section 18 program. Provides for capital assistance with an 80-20 Federal/local share and 50-50 to defray operating costs. Areas with populations under 50,000 eligible.
1979	<ul style="list-style-type: none"> ● Promulgation by DOT of regulations to implement Section 504 of the Rehabilitation Act of 1973. Mandates accessibility for all modes of transportation receiving public monies within 30 years with additional provisions to be made for providing interim accessible services during transition to complete accessibility. Specialized transportation systems serving elderly and handicapped may serve as interim provider. ● Transbus specifications rejected by American bus manufacturers. ● Formulation of White House Rural Development Initiatives which included provisions for: coordination of social service and public transportation programs; increased van-pooling; assistance to commuter airlines in rural communities; and railroad branchlines rehabilitation.

^{1/} One notable development prior to that time was the inclusion of Section 16(a) in the 1970 Urban Mass Transportation Act, which specified the equality of the elderly and handicapped to use public transit. However, regulations were not issued until 1976.

The details in Table 2 are not intended to be a census of each and every event that occurred over the decade. It does however show that the forces of change were steady, and mounted cumulatively. By 1980, the problem was no longer "awareness": it was not a question of whether older people needed transportation but how much and what kind; who would supply it; and in the face of rising prices and costs, energy shortages, and limited budgets, who and how would we pay for it. These are the questions that need to be answered (and policy direction provided) for the decade of the eighties.

The Results

Clearly, one of the most important impacts resulting from these changes was an expansion in the number of providers offering transportation services to the elderly; this reflected an increase in both the number of programs sponsoring such services, and (at least initially) the amount of funds being dedicated to support them. It is virtually impossible to gauge precisely how many services are now being operated for the elderly as compared to previous years; what is clear is that there has been a significant increase in their number. For example, in Los Angeles, results of a recent inventory indicated that in 1978 approximately 800 agencies were operating 5600 vehicles to provide specialized transportation (although by no means were all serving the elderly). This situation, however, is not confined to large urban areas. For example, a special study by IPA showed that in the small cities and towns throughout Rhode Island, at least 70 social service agencies were offering transportation to their clients -- this in addition to an existing state-wide demand-responsive service for the elderly.

These examples are typical of experience throughout the country. However, they are not intended to suggest that the supply of transportation has grown to meet the existing demand for it. On the contrary, as we will show later, the transportation providers in our study constantly and overwhelmingly indicated that a major problem for them was the excess of demand over their available supply! This also explains their dissatisfaction with the funding levels and process. Furthermore, as concern grew over how much service was available and more and better inventories were compiled, the number of reported providers increased, but some of the apparent increase in numbers was probably "purely statistical", due to better reporting.

Despite these limitations, there can be little doubt that the overall result has been an increase in services. In 1975, the Institute of Public Administration (IPA) estimated that the State Units on Aging were sponsoring somewhere between 1000 to 1500 projects as of about July 1974.^{1/} Though many funding sources were involved, the major sources were Titles III and VII of the Older Americans Act.

In an update in 1976, IPA again surveyed the State Units on Aging and reported that in fiscal year 1975 about 2000 transportation projects were being funded under Titles III and VII.^{2/} The increase appears to be continuing albeit probably at a somewhat lower rate since 1978 given budget restrictions and inflation. As noted earlier, we estimate that as of 1979 there were about 2800 to 3200 transportation projects serving older Americans under Title III (now combined with Title VII). The latter estimate is understated since it does not include projects being funded by programs other than those sponsored under the Older Americans Act. Unfortunately, it is not possible to estimate the degree of understatement but the total number of projects is substantially higher than 2800 to 3200.

Another important indicator of growth in service is the amount of funds being used to support transportation for the elderly. Estimation of funding is even more difficult because of the extensive commingling of funds from different programs and the double counting that occurs as state and local "match" are included. Although there are strong indications of increases over the decade, the evidence is fragmented, not fully comparable, and suffers from the previously enumerated difficulties. Even from the sample survey taken for this study, the budget estimates reported are uncertain.^{3/}

^{1/} Institute of Public Administration, Transportation for Older Americans Final Report, Sponsored by the Administration on Aging, April 1975, pp. 71-72.

^{2/} Institute of Public Administration, Transportation for Older Americans - 1976, Progress, Prospects and Potentials, Sponsored by the Administration on Aging, November 1976, pp. 6 ff.

^{3/} The limitations above do not include any errors contained (understatements or overstatements) in the reported budgets themselves.

Having made these qualifications and warned against indiscriminate use, it still is useful to provide some order-of-magnitude estimate based on the responses of the surveyed transportation providers. Keeping in mind that the study covered only those providers being sponsored by an AAA program (although by no means exclusively), the 55 providers (out of 60 in the survey) who reported their 1979 budget indicated that they spent a total of \$16.4 million on their transportation services. Our best estimates indicate that these respondents represent around two percent of the total provider population (i.e. 2800 to 3200 providers) covered by the survey, and if the proportions hold, the total provider population represented about \$820 million dollars of expenditures in (mostly) fiscal 1979.

It is difficult to assess the validity of the estimate as there are no comparable estimates. Furthermore, estimates of funding for earlier periods have differed both as to amount and the population base they represent. A study by the General Accounting Office estimated that in fiscal year 1976, 58 programs (excluding the U.S. Department of Transportation) spent \$308.1 million for programs benefiting transportation.^{1/} However, they also noted that the estimate "... underestimates the true amount spent yearly on transportation even in the 58 programs..."^{2/} Other studies have suggested up to or more than \$1 billion in these expenditures but again the base for comparison is unclear as is the technique used for estimation.

Our estimate of \$820 million is obviously based upon 1979 transportation budgets as reported by 55 providers. The budgets include not only Title III under the Older Americans Act but a variety of other programs including Titles XIX and XX of the Social Security Act, Sections 3, 5 and 16(b)(2) of the Urban Mass Transportation Act, CETA funds, fares, donations, and local public and private contributions. When this mix (and local match) of federal programs is considered, the \$820 million does not appear to be so awesome an estimate. It seems fairly certain that these federal programs

^{1/} Comptroller General of the United States, General Accounting Office, Hindrances To Coordinating Transportation Of People Participating In Federally Funded Grant Programs, October 17, 1977, Volume I, p. 7.

^{2/} Ibid

spent and indicated matching efforts of over half a billion dollars in 1979, and although a few of the projects in the sample were agencies with very large budgets, even if adjustments are made the estimate remains close to one-half billion for fiscal 1979.

As to the number of programs sponsoring transportation services for the elderly, many different estimates are available. They range anywhere from 25 to 114; the latter being based on an estimate by the General Accounting Office of federal programs which authorize transportation for the elderly as an eligible expense.^{1/} Though one may wonder why complaints about inadequacy of funding are constantly heard by supporting agencies and operators if so many potential sources are available, the answer is simple: many of these potentials are difficult to access. In actuality, only about seven sources are used very extensively to pay for capital and operating expenses of transportation projects serving older Americans: Title III(b) of the Older Americans Act of 1964, as amended; UMTA Sections 16(b)(2), 5 and 5(m); Title XX of the Social Security Act of 1935, as amended; and CETA program used primarily for personnel support. Perhaps eventually Section 18 of the Surface Transportation Act will also be a major source. Recent attention has focused on the possibility of tapping other funds such as Title XIX (Medicaid) to offset high medical trip costs, but so far these cases are more the exception than the rule.

Conclusions

Overall, it may be concluded that the elderly now have access to a higher quality and quantity of transportation than they had when the decade started. In answer to the initial question of where we stand now relative to the situation of the early 1970s (when mobility limitations of the elderly were just beginning to be understood) the results have been encouraging and progress has been made. Progress, however, depends upon what standards are used to measure it, and there are many factors that have interacted since the decade began to diminish the significance of some of the changes. The size of the elderly market as a share of the overall population, for

^{1/} Ibid

example, is growing steadily and even without budget constraints, it would be difficult to supply enough transportation service to meet the need of older persons for it.

There is a substantial network of providers now operating, and from the providers' perspective, new problems have replaced the old ones. As more has been learned about ways to improve the efficiency and effectiveness of service delivery, attention has shifted away from the single aspect of the availability of transportation services to the elderly to such matters as the costs of operating these services, accounting for the costs of operation, barriers to coordination of existing transportation systems, and other concerns. These concerns have been exacerbated by inflation and budget limitations, and in the sections that follow, we will outline and highlight transportation operators' problems as revealed in survey responses. Before moving on to these issues however we will review the scope and character of the present transportation provider system as described in current literature.

CHAPTER II

THE PRESENT TRANSPORTATION PROVIDER SYSTEM

"The transportation or mobility problems confronting the elderly must be considered from two perspectives: those factors that limit the capacity of the elderly to avail themselves of the existing network, and the limitations of the transportation network itself which must be surmounted if the elderly are to be adequately served." (Ninety-fourth Congress, House of Representatives, Select Committee on Aging, prepared by the Subcommittee on Federal, State, and Community Services, Senior Transportation -- Ticket to Dignity, May 20, 1976, p. 10.)

In order to identify appropriate future policy and program directions in the area of specialized transportation for the elderly, it is necessary to assess transportation services currently available. To this end two approaches have been used: a direct survey of the providers themselves and a review of what is already known from the present bank of information. This chapter draws on the bank of literature on transportation systems serving the elderly and will also consider and identify information gaps.

Systems Serving the Elderly

In 1975, the Institute of Public Administration, in its report, Transportation for Older Americans: The State of the Art, identified 920 transportation projects serving the elderly of which 314 could be identified by type of service.^{1/} Five basic service categories were identified as serving the elderly: conventional public transit, typically fixed-route and schedule service; special systems, usually described as some form of dial-a-ride or demand-responsive system; coordinated systems encompassing both fixed-route and dial-a-ride attributes, frequently "route deviation" systems; taxi systems typically operating with some form of reduced or subsidized rate; and a range of volunteer-based programs, usually operated by the private non-profit providers. The dial-a-ride or demand-responsive systems in coordination with the taxi systems and the modified fixed-route systems (all of which represent forms of paratransit), accounted for almost 70 percent of the service providers.^{2/}

^{1/} Institute of Public Administration, Transportation for Older Americans, April 1975, op. cit., p. 73.

^{2/} Ibid.

The importance of these personalized paratransit systems to the elderly was confirmed in the Institute of Public Administration's 1976 update where paratransit systems accounted for 75 percent of the 956 projects reported as funded under Titles III and VII of the Older Americans Act.^{1/} It is quite evident that, as far as the elderly are concerned, paratransit services represent the most frequently selected form of service to meet their needs.

Conventional Public Transit

There are three programs offered by public transit systems to meet the needs of the elderly (and other transportation disadvantaged): (1) reduced fares (mandated by the Urban Mass Transportation Act of 1964, as amended); (2) special services, mainly stimulated by Section 16 and the "Special Efforts" regulations; and (3) incorporation of special features for the purpose of improving system utilization, stimulated by Section 16(a) (initially), and even more so by the current U.S. Department of Transportation regulations relative to Section 504 of the Rehabilitation Act of 1973.

Though the reduced fare program is the most ubiquitous public transit program available for meeting the needs of the elderly -- largely because it is mandated under Section 5(m) of the Urban Mass Transportation Act -- information from the literature assessing the impacts of the reduced fare programs is very sparse.

Most of the evaluations of reduced transit fares on the elderly have focused on counting numbers of elderly riding during peak and off-peak hours and associated changes in net revenue resulting from shifts in elderly ridership from peak to off-peak.^{2/} Because most studies of reduced fare programs focus on aggregate ridership totals and measured cost per trip, there has been a lack of focus on the specific impacts of such programs on specific social

^{1/} Institute of Public Administration, Transportation for Older Americans - 1976, Progress, Prospects and Potentials, op. cit., p. 8, Table 3.

^{2/} Hoel, I. and Roszner, E. "Impact of Reduced Transit Fares for the Elderly", Traffic Quarterly, July, 1972, pp. 341-358.

and economic groups, including the elderly.^{1/} Some work has been done on shifts in trip purpose due to reduced fare programs but few transit authorities have been willing or able to invest in these expensive surveys by themselves. The operational problems of serving the elderly have generally not been addressed in the reports on reduced fare programs. Most typically, they have used a case study approach and concentrated their efforts on describing the different methods of administering reduced fare programs. The gap in our understanding about the impact of reduced fares on the trip making characteristics of the elderly (i.e. trip generation rates, purpose and patterns) continues.

In response to the "Special Efforts" and planning regulations under Section 16 of the Urban Mass Transportation Act, specialized services have been initiated by some transit authorities in addition to reduced fare programs. The literature again is comprised mainly of case studies, and (as in the case of reduced fares) the role of the aging network (the AAAs) and the Administration on Aging (AoA) has been minimal in terms of system development. The only exception has been in the relatively uncommon case where the AAA is located within the Metropolitan Planning Organization and some contact is provided with the transit authority. The aging network may also be more directly involved when a transportation provider sponsored by an aging program becomes a specialized service under contract to a transit authority.^{2/}

No consistent data has been developed on these so-called "special efforts" projects nor has any relevant inventory been undertaken. There is no clear notion of the number of such projects, although it was generally recognized that a wide range of paratransit services emerged in response to the planning and "special efforts" regulations. This was confirmed in a survey IPA conducted in 1979 which aimed to identify special service projects in which transit was either the operator or initiator of the project undertaken

^{1/} Reilly, J. "Efficiency of Transit Subsidies to the Elderly," Transportation for Elderly, Handicapped, and Economically Disadvantaged Persons. Transportation Research Board, National Academy of Sciences. Transportation Research Record 688, pp. 6-10, April, 1978

^{2/} Jones, P., et al. A Report on Services to the Elderly, National Association of Counties Research Foundation, Aging Program, Washington, D.C. 1976.

to meet the "special efforts" requirements. As a result of the limited survey, which relied on data supplied in "Passenger Transport", the transit industry's trade paper, IPA identified almost 80 projects, and this by no means covered the entire population.^{1/} However, much of this effort has been diverted to meeting the requirements of the U.S. Department of Transportation 504 regulations although the overlap and relationship between Section 16 and Section 504 is not clearly defined (nor, for that matter, is the destiny of the U.S. Department of Transportation 504 regulations). One thing is clear, little attempt has been made to examine, profile, and evaluate the impact of these "special efforts" projects.^{2/}

At the same time, it is important to note that many of the "special efforts" initiatives have been overshadowed by the need of transit operators to comply with the U.S. Department of Transportation Section 504 requirements. As the focus of attention has shifted, the relationship between Section 16, which spawned "special efforts" projects, and Section 504 has also been drawn into question. Some of the requirements in these sections overlap one another but there is no delineation of the specific responsibilities each one requires. The problems arising therefrom will probably not be resolved until the destiny of Section 504 is defined.

Even before the U.S. Department of Transportation passed its regulations on Section 504 of the Rehabilitation Act of 1973, Section 16 had already set a framework and stimulus for considering what changes in facility design and service operation would make systems more accessible. Because a large part of the elderly are disabled or frail, they have always had a considerable interest in this issue (for example, recommendations made at the

^{1/} Revis, Joseph S. Public Transportation and Coordinated Transportation Services, paper presented at the American Public Transit Association meeting, Toronto, Ont., Canada. September 25, 1978.

^{2/} An important exception is the monitoring and evaluation work of the Service and Demonstrations Division of the Urban Mass Transportation Administration (UMTA). A good many special service projects have been evaluated for their impacts on the elderly (as well as other aspects of the service). However, most of these are selected demonstration projects and do not include these "Special Efforts" projects.

1971 White House Conference on Aging -- see Recommendations 6 and 7 in Table 1). However, the Section 504 regulations by the U.S. Department of Transportation provided a major impetus to program development albeit, with strongest emphasis on the disabled confined to wheelchairs.

Unquestionably, a substantial proportion of the elderly are disabled -- estimates indicate somewhere between 40 to 50 percent, depending on the definition of disabled and elderly.^{1/} About 5.5 percent of the urban elderly appear to be confined to wheelchairs, and that corresponds to the projection of wheelchair-confined for the urban, disabled population as a whole.^{2/} There is little basis for assuming any differences in rural areas, and one may conclude that the strong bias toward the wheelchair-confined reflected by the U.S. Department of Transportation regulations will impact the disabled elderly differently than other disabled persons only if their mix of disabilities differ.

Table 3, drawn from the National Survey of Transportation Handicapped, conducted by the Urban Mass Transportation Administration (UMTA), summarizes the percentage distribution of the urban transportation handicapped and contrasts it to the transportation handicapped as a whole. As may be seen, the elderly (65 or over) have a higher incidence of visual and hearing problems as well as requiring some type of mechanical aid. It indicates that their problems with transit accessibility are somewhat different than the other age groups of urban transportation handicapped with less concern over wheel-chair accessibility.

^{1/} Revis, Joseph S., and Revis, Betty D. Transportation and the Disabled: An Overview of Problems and Prospects, sponsored by the Department of Health, Education and Welfare, October 15, 1976, see esp. pp. 10-14. Also U.S. Department of Transportation, Urban Mass Transportation Administration, National Survey of Transportation Handicapped, "Summary Report", June 1978, esp. p. 17 and Tables 1-2 and 1-3.

^{2/} Ibid., U.S. Department of Transportation, National Survey of Transportation Handicapped.

Table 3

Percentage Distribution of Urban Transportation Handicapped
by Dysfunction Group and Age Percentage Share
of Each Dysfunction Out of Total Reported Dysfunctions
(thousand persons)

Age & Unit	Total Reporting Specific Dysfunction	Dysfunction				
		Wheel-chair	Mechanical Aid	Visual	Hearing	Other
<u>65 or Over</u>						
Number	4450	188	1008	955	1038	1261
Percent	100.0	4.2	22.7	21.5	23.3	28.3
<u>All Ages</u>						
Number	8989	409	1939	1566	1573	3502
Percent	100.0	4.6	21.6	17.4	17.5	38.9

SOURCE: U.S. Department of Transportation, Urban Mass Transportation Administration, National Survey of Transportation Handicapped People, "Summary Report", June 1978, page 23, Table 1-3.

Although the literature on accessible service is growing as a result of the efforts to implement the 504 regulations, much of the work is still on a case study basis and largely oriented to the wheelchair confined -- ignoring those elderly with less severe transportation impairments or needs.^{1/} However, it is still too early to appraise the impact of the Section 504 regulations issued by the U.S. Department of Transportation. Most systems are still planning for their "Transition Service" as required by the regulations. Furthermore, the difficulties of evaluation are clouded by the fact that Congress is presently considering two amendments that would significantly change the accessibility requirements.

As regards operational or technical approaches for serving the elderly with better transit routing or scheduling, the literature is mainly silent. This may be partly due to the fact that these decisions are typically made as part of an overall Transportation Improvement Plan (TIP) submitted by

^{1/} Planning for the Phase-in of Fixed Route Accessible Buses, Interim Report No. 1: Review of Accessible Transit Services, U.S. Department of Transportation, Urban Mass Transportation Administration, 1980.

the MPO and only limited involvement by the elderly generally occurs. One benefit that may come out of the 504 review process will be the development of techniques for selecting routes for implementation of accessible service that may provide trips to destinations that better serve the needs of the elderly. This route analysis could result in improved service to the elderly to the extent that trip origins and destinations substantially overlap for the elderly and non-elderly handicapped riders. However, it must be re-emphasized that this is prospective: no such route review has been undertaken on a large scale to date.

As a final comment, there is one area of accessibility improvement that has occurred nationally -- the acquisition of kneeling buses. Though the literature reveals many instances of the kneeling buses being purchased, there has been little to no evaluation of the actual use and impact of these vehicles upon the system or users. There have been no reports (of improved transit utilization) that would guide national policy on whether this attribute is an effective means to overcome the system constraints of the elderly and disabled of all ages.

Taxi Systems

Taxis offer an important potential resource for transporting the elderly, and many agencies are already using them as part of their provider system. Taxis often are the most ubiquitous service in many rural and urban areas, and one recent estimate indicated that 2000 communities are served solely by taxicabs.^{1/}

In rural areas, a recent survey of rural transportation revealed that out of a random sample of 380 communities, taxi systems were the most frequently sampled service -- in many instances, the only transportation service in the community.^{2/} This confirms the scarcity of public transportation in rural areas.

^{1/} U.S. Department of Transportation, Urban Mass Transportation Administration, Inventory of Transportation Services in Places of Less Than Ten Thousand Population Outside Urbanized Areas, "Final Report". Report Number NC-11-004. See "Highlights", pp. 1 ff., April 1978.

^{2/} Ibid.

Table 4
Transportation Systems Serving Rural Areas
 As of 1977
 (Sample of 380 Areas)^{a/}

System Category	Number of Reported Systems	Percent of Areas Served	
		By System Type	By System Type Only
Taxi	339	79	16
Specialized Systems	139	34	12
Inter-city	162	42	13
Other Intra-city	26	7	(No Response)
No Service	--	16	16

a/ Places with population between 2,500-10,000.

SOURCE: U.S. Department of Transportation, Urban Mass Transportation Administration, Inventory of Transportation Services in Places of Less Than Ten Thousand Population Outside of Urbanized Areas, "Final Report", Report Number NC-11-004, April 1978. Table 3 and pp. 13 ff.

The role and scope of taxis are well illustrated in Table 4. Seventy-nine percent of the sampled places were served by taxis, and in 16 percent of the 380 locations, taxis were the only source of service. Of considerable interest in the context of the needs of the elderly is the fact that 70 percent of the taxi systems offered two or more of the following services: exclusive ride, shared ride, limosine service, and package delivery.^{1/} Perhaps not so widely known was the fact that 75 percent of the taxi systems in the sample served 3 or 4 places, and 18 percent reported contracts with agencies.

Despite the prevalence of taxi systems, they remain underutilized by social service agencies. The same survey showed that only 18 percent of the rural taxi systems had contracts with social service agencies, and this low

^{1/} Ibid.

level of utilization is confirmed by the earlier findings of IPA's previously cited studies. In a 1975 census of State Units on Aging, out of a total of 956 reported transportation projects, only 9 percent (about 90) were operating through a taxi service.^{1/}

Though the literature is not entirely clear as to why taxi systems are not used more extensively, it is fairly evident that most of the studies on taxi projects as social agency providers indicate that service contracts frequently include a user-side subsidy employing a voucher system and/or shared rides. Since these features generally result in a lower cost to the rider (via the subsidy) and a better level of (taxi) system efficiency (through increased load factor and decreased deadheading), the question remains: why aren't taxi systems used more frequently?

A number of reasons have been proposed and discussed in the literature, and they bear repeating because they suggest clear policy and program directions for federal, state, and local governments. They include the following:^{2/}

1. In many states, taxi services are franchised by the State Public Utility Commission, and operating legislation and controls over fares make contractual arrangements outside of authorized operations (geographic and manner of operating) very difficult and often very time consuming.
2. Recent review of state taxi regulations and the responses of social service agencies in recent surveys indicate that an important barrier to the utilization of taxi systems are the regulatory restrictions against shared rides.
3. A corollary to the restriction on shared rides is the fact that many taxi systems are restricted in offering any form of fare reduction unless they obtain authorization (either from the State PUC or the local municipality -- depending upon the specific state or locality).

^{1/} Institute of Public Administration, Transportation for Older Americans, November, 1976; op. cit., p. 8, Table 3.

^{2/} There is no single report that deals with all aspects of the taxi industry. However, the following bibliography is a good starting point: U.S. Department of Transportation, Transportation Systems Center, Technology Sharing Office, The Taxicab in Transportation: A Bibliography, no date provided.

4. Many taxi operators are unwilling to negotiate shared-ride fares reflecting costs more closely related to marginal costs. However, it is difficult to ascertain the extent to which this is due to non-competitive behavior or behavior that is forced into a non-competitive mode by regulations.
5. The typical taxi system operates with sedans and these are difficult vehicles for the elderly to use. This is especially true if lifts are required for agency clients. However, some taxi operators are incorporating vans into their fleets, suggesting that opening up competition by reducing or eliminating some of the archaic regulations could help substantially.1/
6. At the present time, taxi operators are not eligible to receive funds used to support public transit systems (for example, Sections 3 and 5 of the UMT Act). Though there has been general recognition that taxi systems are part of our public transportation network, they are not recognized for eligible funding support, nor is there at this writing any formal policy position about taxis and paratransit generally. This discourages the development and use of paratransit systems for public transport generally and taxis in particular.2/
7. From an operational point of view, there are a number of difficulties the social service agencies have reported with taxis and that need to be dealt with by the industry directly. They include:3/
 - inefficient dispatching (lack of coordination)
 - driver unwillingness to respond to calls or acknowledging their whereabouts or availabilities
 - insensitivity to the elderly and their needs
 - billing and cost sharing (records and auditing requirements)

The potentials for improving transportation services for older Americans through increased use of taxi systems is considerable. Though the regulatory problems are difficult, they are not insurmountable. Some states have already undertaken studies to implement programs for modernizing taxi regulations and encouraging greater flexibility and responsiveness

1/ Many taxi regulations actually define the type of vehicle that may be used, and the van is not typically covered.

2/ There are considerable difficulties associated with the Department of Transportation issuing a policy statement on paratransit. Such a policy is indeed fraught with controversy. However, some general statement does not appear an impossible task.

3/ Institute of Public Administration, Transportation for Older Americans, April 1975; op. cit., pp. 1155 ff.

to contemporary needs. The taxi industry has also started to initiate changes but it is equally clear that realizing the full potential for taxis as paratransit could require support and action at all levels of government.

Specialized Systems

Specialized transportation systems comprise the major provider currently serving the elderly, and most take the form of a demand-responsive or dial-a-ride system -- typically providing door-to-door service and requiring an advance reservation (usually 24 hours). Our analysis in Chapter I suggests there has been a steady increase of these systems, particularly those funded under Title III (and formerly Title VII) of the Older Americans Act. Estimates indicate that in fiscal year 1975 there were about 2000 transportation projects being supported either fully or partially under these two titles, and by 1979 the total appears to have increased to an estimated range of 2800 to 3200 projects.

The Older Americans Act has played a major role in developing these specialized transportation services to serve older Americans. However, there have been other important sources of funding; for example, Section 16(b)(2) of the Urban Mass Transportation Act has been estimated to have assisted in the purchase of some 3000 vehicles for the elderly and handicapped.^{1/} Since the 16(b)(2) program is designed to provide private non-profit agencies with capital assistance for vehicles, and given the high proportion of private non-profit agency transportation providers funded by the Older Americans Act (typically half to two-thirds), it is quite evident that the 16(b)(2) program has played an important role as capital "seed" money for transportation of the elderly.^{2/} There unquestionably are problems associated with the 16(b)(2) program in that it introduces some fragmentation and duplication of effort, and there have been administrative and other delays associated with the program. However, until a more diverse

^{1/} Willis, Y. "The Effects of AoA's Interagency Agreement Strategy", Transportation for the Elderly and Handicapped: Programs and Practices, pp. 7-10, December 1978.

^{2/} Wozney, M., and Burkhardt, J. An Analysis of Continuation of Services Funded under Title III of the Older Americans Act of 1965, Department of Health and Human Services, Administration on Aging, 1980.

public transit system providing a full range of services is available (i.e. fixed-route and paratransit), the 16(b)(2) program fills an important gap.

The situation is much the same in both rural and urban contexts. The previously cited National Survey of Rural Transportation Services has confirmed the major role that aging services play in specialized transportation services (Table 5). Out of 108 providers for whom information was available, about one-third were being managed by the Area Agency on Aging (a substantially higher proportion were undoubtedly being funded by AAAs). When one considers that Area Agencies are supposed to plan services and are restricted from operating services, the one-third share becomes even more significant. It also suggests that in rural areas there is a shortage of organizations capable to serving as transportation providers.

Table 5

Agencies Managing Specialized Transportation Systems

As of 1977

(Sample of 380 Areas)

Type of Managing Agency	Number	Percent
Area Agency on Aging	35	32.4
CSA	9	8.3
Head Start	2	1.8
Church	0	0.0
Social Service Agency	7	6.5
Regional Authority	7	6.5
Local Government	25	23.1
Other	23	21.4
Totals	108	100.0

SOURCE: U.S. Department of Transportation, Urban Mass Transportation Administration, Inventory of Transportation Services in Places of Less Than Ten Thousand Population Outside of Urbanized Areas, "Final Report", Report No. NC-11-004, April 1978, page 35, Table 30.

Specialized transportation is, however, not confined to rural areas. Projects may be found in both urban and rural areas and one recent estimate indicated that close to 60 percent of paratransit operations targeted for elderly and handicapped were in urbanized areas.^{1/} Thus the aging network's involvement with specialized transportation systems is widespread. Most of these systems operate in the modes described earlier, and older persons account for a significant proportion (often half or more) of their clients.^{2/} A variety of available studies reveal that many social service agencies did not know their full costs and had only limited ridership information available.

A statewide study in Texas surveyed 220 social service agencies, encompassing the range from urban to rural areas, and their evaluation confirmed the latter conclusion.^{3/} Most of the agencies did not know the level of transportation need in their areas nor the level of unmet service need due to lack of access to those services. Most agencies could provide only aggregate trip levels at best.

A more general problem was the overall lack of expertise in transportation. Most of the agencies provided marginal service, and there were problems with duplication and overlap of services between different service agencies -- especially in urban areas. Estimates of the cost of service were generally low, and the lack of accounting expertise compounded difficulties -- especially where services were purchased by a number of agencies from common providers. Different social service agencies had a variety of billing units (e.g. one-way trips, hourly rates, etc.) and these billing confusions, compounded by an unwillingness to mix client groups, led to generally

^{1/} U.S. Department of Transportation, Urban Mass Transportation Administration, Paratransit Handbook, Volume I, "Final Report", December 1979, pp. 1-22.

^{2/} Ibid., Table 31.

^{3/} Rosenbloom, S. and Cox, W. "Social Service Agency Transportation Services in Texas: Potential for Other Paratransit Modes", Transportation for Elderly, Handicapped, and Economically-Disadvantaged Persons, Transportation Research Board, National Academy of Sciences, Transportation Research Record 688, 1978, pp. 6-10.

expensive and inefficient systems.^{1/} It suggested that problems of coordination of effort would not be easily solved. It also confirmed that despite the many studies, there were still substantial gaps in our understanding about how these specialized systems operate and relate to one another. Both of these aspects are discussed in the sections that follow.

Coordination of Transportation

The joint action of aging-services providers and other social service agencies to improve transportation services -- whether through cooperation between agencies, coordination of services, or consolidation of operations -- is potentially a fruitful source for improved transportation for the elderly (as well as other groups). The major objectives of coordination are to reduce capital expenditures, increase the amount of service, improve the use of resources (increased efficiency), and improve the provision of services (increased effectiveness).^{2/} To the extent that coordinated service can achieve these objectives, service agencies ought to consider their coordination options.

The goals of the Area Planning and Social Services Program -- Title III -- are compatible with sharing resources across programs. Program regulations encourage coordination of existing social service systems and establishing cooperative arrangements between agencies. In addition, existing services are to be made accessible through the development and support of services such as transportation. The overall goal of the Title III program is to develop a comprehensive and coordinated service system to serve the elderly.

The strong emphasis of the aging program on coordination of services (including transportation) is translated into specific responsibilities for State and Area Agencies on Aging. State Agencies are required to work toward:

^{1/} Ibid.

^{2/} Burkhardt, J., Knapp, S., and Ramsdell, M. Coordinated Transportation Results, Department of Health and Human Services, Office of Human Development Services, 1980.

(1) joint funding and programming, (2) joint utilization of services and facilities, (3) maximum coordination with programs under Titles XIX and XX of the Social Security Act (among others), and (4) coordination of Title III C nutrition projects in comprehensive service systems.

Area Agencies are also given coordination responsibilities in the area planning process. Within each Planning Service Area (PSA), area agencies are required to include existing planning bodies and provider organizations in their planning process and to coordinate existing services for delivery to their elderly clients. Among the programs authorized for coordination are the Rehabilitation Act, and Titles XIX and XX of the Social Security Act. Furthermore, as mentioned in previous discussions, interagency agreements have led to joint agency reviews of UMTA Section 16(b)(2) applications by private non-profit transportation providers.

Barriers

Studies of the problems associated with coordinating transportation services identify a range of problems and constraints. Figure 1 summarizes the major constraints and barriers that have been identified in the literature.

More directly, in terms of the Older Americans Act, a review of the Act reveals a mixture of incentives and potential barriers to coordination by local transportation providers.^{1/} Although coordination is stressed throughout the Act, a strong barrier to coordination is the perceived assumption that only the elderly may utilize Title III supported services. Because of this perception, some State and Area Agencies have prohibited transportation providers from carrying elderly clients in coordination with non-elderly client groups. AoA officials at the federal level, in contrast, have stated that Title III supported transportation services may accommodate clients of other programs so long as the transportation service quality does not deteriorate and no older person is denied service due to lack of capacity. However, this federal position does not appear to be widely understood throughout the aging network.

^{1/} Cutler, Dolores. Statutory and Regulatory Analysis of Incentives and Barriers to Coordination of Transportation Services for the Elderly and Handicapped, U.S. DOT, Office of Environment and Safety, May 1979.

Figure 1

Barriers to Coordination

- (1) Funding and Associated Problems
 - (a) Lack of Funding Continuity
 - (b) Restrictions on the Use of Funds
 - (c) Insufficient Funds Available
 - (d) Lack of Matching Funds
- (2) System Operating Problems
 - (a) Conflicting Schedule or Route Requirements
 - (b) Conflicts with Franchised Transportation (e.g., taxis, handi-cabs, etc.)
 - (c) Difficulty in Obtaining Insurance Coverage
 - (d) Conflicting Vehicle Requirements
 - (e) Conflicts in Funding Cycles or Accounting Requirements
- (3) User or Client Restrictions
 - (a) User Eligibility Restrictions (based on age, health or income)
 - (b) Incompatibility of Clients (e.g., mixing the elderly with school children)
 - (c) Difficulty of Mixing Subsidized and Non-Subsidized Riders on Public Transit
- (4) Planning and Organizational Problems
 - (a) Lack of Third-Party Coordinating Structures or Operators
 - (b) Lack of Technical Information and/or Expertise
 - (c) Problems of "Turf"
- (5) Conflicting State and/or Federal Interpretations and Guidelines
 - (a) Shared use of Facilities and Equipment
 - (b) Permissible User Fees and Shared Costs
 - (c) Labor Requirements, such as UMTA 13 (c) protection of unionized workers' rights or other wage and benefit requirements.

Source: Revis, Joseph S. "Coordinating Delivery of Rural Services", paper presented at New England Transportation Workshop, March 23, 1979.

Another potential barrier to coordination is the prohibition from charging fees for Title III services (including transportation). If a transportation provider under Title III attempts to coordinate with a profit-making provider, such as a taxi company, the fare charged by the taxi company would constitute a barrier to coordination. The solution to this conflict would require some creative administrative work, such as a purchase of service agreement under which the provider would subsidize the entire cost of the taxi ride. Some sort of voucher system would be required to ensure that the purchased riders were being delivered.^{1/}

A final potential barrier to coordination in the Older Americans Act is the restriction of service to the geographic area of the PSA. This restriction constitutes a barrier in those cases where the geographic coverage of the coordination system conflicts with the coverage of the Area Agency's jurisdiction. In these boundary conflicts, providers must be able to work out agreements with more than one Area Agency or develop purchase of service agreements for the elderly residing in each jurisdiction if these boundary conflicts are to be resolved.

Incentives

In contrast to the potential barriers to coordination, three areas have been identified in the Older Americans Act that provide incentives to coordinate transportation. The first incentive that facilitates coordination of transportation is the explicit identification of transportation, coordination activities, and facilitation of access to other services as services to be promised by AoA. Coordination is defined as a social service for the elderly, allowing expenditure of funds to support transportation coordination activities.

Another area that promotes coordination (and transportation in general), is the explicit allowal of grants or contracts in action programs within the PSA for coordinating the delivery of existing services for the elderly. This support of existing services does not require the Area Agency to fund support transportation services, but, rather, allows for partial support of existing providers that serve the elderly.

^{1/} Ibid.

The final incentive for coordination of transportation is the prohibition of direct provision of services by Area Agencies (other than for information and referral services, and coordination activities) unless no other agency is willing to offer the services. The prohibition against direct Area Agency services, in conjunction with the prohibition against providing direct subsidies for public transit, increases the likelihood that extant (or new) providers will be funded to provide transportation for the elderly.

As the above analysis indicates, there is great potential for coordination within the aging program. Coordination is explicitly addressed in the Older Americans Act and promoted in the regulations. The general categories of coordination revealed in the follow-up to the Institute of Public Administration's State-of-the-Art Report were in the areas of increased cooperation (generally improved working relationships or communication), joint funding and equipment use, and coordination of transportation (especially coordination of routes/schedules, contract purchase of services, or joint program promotion).^{1/} This same report identified barriers to coordination reported by State units on aging that fell into five categories: funding, client restrictions, system operating problems, organizational problems, and conflicting state and federal interpretations and guidelines. The most striking observation made by the barriers analysis was the fact that so few were directly linked to some type of statutory or legal inhibition: about 80 percent of the barriers identified by the state units were considered to be remediable through administrative leadership and assistance -- especially from the federal level.^{2/}

A Government Accounting Office Report confirmed these findings, identifying a number of hindrances to transportation coordination that also fall into the statutory/legal and interpretive/administrative dimensions.^{3/}

^{1/} Institute of Public Administration, Transportation for Older Americans - 1976, op. cit., see esp. pp. 15 ff.

^{2/} Ibid. see Table 10 and p. 23.

^{3/} Hindrances to Coordinating Transportation of People Participating in Federally-Funded Grant Programs, Volume I, General Accounting Office, Washington, D.C., 1977.

The statutory constraints included problems with the categorical grant approach to federal programs and state transportation regulations. The interpretive constraints included concern about funding continuity, perceptions of client incompatibility, perceptions that coordination will adversely affect one's clients, administrative inadequacies, and a lack of a concerted federal effort to coordinate transportation.

Although most of these reports on coordination have assessed the problems at the policy and operations levels, there have been few efforts directed at assessing coordination as a part of the aging program. A report of coordination specifically within the aging program four years ago found few projects actually coordinating transportation services, in spite of the incentives written into the Older Americans Act.^{1/} In general, small agencies without transportation services were enthusiastic about prospects of coordination, but in contrast, larger agencies with well-established transportation programs were concerned about loss of project control or service quality due to coordination of services. Furthermore, recent studies of coordination have focused upon models of coordination rather than the specific interaction of programs. Given their individual constraints within a coordination network, the statutory incentives and barriers revealed above need to be followed up with an assessment of operational and administrative effects in the field.^{2/}

Information Gaps

Despite the considerable amount of information that has been generated over the last decade, our understanding of how the specialized systems serving the elderly operate is still woefully inadequate. We do not fully understand the relationship between operating costs and operating characteristics; the nature of the planning process used to design such systems is hazy and un-

1/ Coordinating Transportation for the Elderly and Handicapped: A State of the Art Report, U.S. Department of Health, Education and Welfare, Administration on Aging, 1977.

2/ Rural Public Transportation Coordination Efforts, U.S. Department of Transportation, Urban Mass Transportation Administration, Washington, D.C., August 1979.

documented (or when documented, frequently concentrates on descriptive process only); the role of management and personnel has not been examined; and monitoring and evaluation are rudimentary in most cases. As we noted earlier, the nature of the elderly user demands has only been studied in a fragmented way and the methods of demand estimation have been generally applied with little modification for the special characteristics of older people.

In reviewing the literature, a broad range of issues were identified that needed further study and analysis. In the context of this study's objective of improving services to the elderly, primary attention was focused on the problems of transportation providers and their funding agencies, the AAAs. Our intent was to set the stage for the survey methodology (described in detail in the Technical Report and Annex thereto) to be used, and to identify the areas for which we needed to elicit data for analysis. Eight general categories were identified:

1. Planning: what sorts of planning activities are undertaken for delivery of transportation to the elderly? Fundamentally, do the transportation providers and Area Agencies have the expertise needed to plan a transportation service, assess its effectiveness, and modify the on-going system to make it more effective and efficient? Is the time horizon for planning adequate?
2. Operations: what types of service are being provided? To what extent are fares being charged; are donations being used? What is the size, age and nature of the vehicle fleet, and what special problems are being encountered with maintenance? With operations generally? How much transportation is being delivered? How much capacity is available?
3. Budgeting and Costs: how are budgets prepared and what is the typical size of budget? How does the budgeting process relate to generating cost estimation and monitoring and evaluation? Are any insurance cost problems being encountered, and if so, to what extent?
4. Administration and Management: how is the management and administrative process working vis-a-vis operations and planning? What role does the AAA play in management, and what is the inter-relationship between the provider and the AAA? Is adequate funding provided for management, and are AAA requirements restrictive?

5. Staffing: are there any special staffing problems? Are they related to skill availability and/or budget for staff? Do providers have a high turnover rate or can they keep qualified staff? How large are typical project staffs, and what is the functional mix (i.e., between management, administration, and operations)? To what extent are the elderly involved in project staffing?

6. Maintenance: There are a variety of aspects of vehicle maintenance that potentially affect effective service delivery; what are the maintenance problems encountered by transportation providers? Are there any new vehicle warranty problems, and if so, what? Are there problems with maintenance of specialized equipment such as wheelchair lifts or air conditioners? What are the costs of maintenance, and are local providers able to arrange for local government support in arranging for sharing of maintenance facilities? What is the age of the vehicle fleets being used, and are providers able to keep their vehicles in regular service?

7. Training and Technical Assistance: what are the training needs of local providers, and what training is available? Of the sources of training available in local communities, how many are actually used? In addition to training, is technical assistance an important component of program improvement that needs to be addressed? If yes, what are the technical assistance needs of providers, and who is currently meeting those needs?

8. Coordination: how are the barriers and incentives to coordination mediated by providers in the field? To what extent are providers at the local level able to coordinate aspects of their operations? Are they constrained by area and/or State administration? Are specific modes of coordination especially appropriate for certain local conditions, and if so, what are the modes that have been successful in improved transportation for the elderly?

Using these eight areas as our basic points of departure, our survey and analysis work was designed to develop information on the problem areas. However, there are other areas of concern that do not fall into the eight programmatic categories above, and these were included in our survey design. This included the transportation operations; the impact of local fluctuations of fuel availability on various aspects of transportation delivery; the role of the AAA in service delivery; how the AAA and the providers got into transportation; the factors that affect the level of service; and what the AAA and provider experience was with coordination. All these aspects were included as elements of the survey administered to providers and AAAs. In the next chapter we will examine the findings.

CHAPTER III

A SURVEY OF TRANSPORTATION PROVIDERS SERVING THE ELDERLY DIVERSITY AND UNIFORMITY

"In most social service-initiated transportation delivery systems, there are few, if any, links with transportation specialists. Projects are developed by persons with minimum transportation skills, and problems are frequently solved on a trial-and-error basis" (Ninety-Fourth Congress, House of Representatives, Select Committee on Aging, Sub-Committee on Federal, State and Community Services, Report, "Senior Transportation - Ticket to Dignity", May 20, 1976, p.31).

The previous two chapters have described the precedents from which the present provider system developed: starting with the various poverty programs of the 1960s through the Model Cities Program, the 1971 White House Conference on Aging, the Older Americans Act of 1973 and legislation under the Urban Mass Transportation Act over the decade of the Seventies. A growing body of literature developed, and though our understanding of this provider network grew, large gaps remained. It was to fill some of these gaps that this study was directed.

The Approach

Our examination of the transportation problems of older Americans over a period of almost two decades indicated that a basic transportation provider infrastructure had been largely implemented. The important issues that remained were whether such systems were adequate to meet the mobility needs of the elderly, and whether these providers encountered any problems for which they needed help. The former issue required a study of the elderly as users of the system, the latter required a study of the providers as suppliers of service. As noted earlier, since the Administration on Aging had already commissioned a parallel study to explore the specific needs and demand characteristics of elderly users, this investigation focused on the transportation providers and their relationships with the Area Agencies on Aging who funded them.

In that context, a survey was designed to cover as wide a range of Title III funded transportation providers as possible, and to that end a stratified random sample of Planning Service Areas was drawn with strata based on the level of urbanization of the PSAs and coverage of federal regions in order to assure geographic diversity. Details of the proceedings are described in the Technical Report. However, to provide a general perspective of the procedure so that the results of the survey may be better understood, a summary of the key steps follows:

1. From a list of 644 Planning Service Areas (PSAs), a number of PSAs were eliminated because they did not appear to be representative of the broad range of experience (i.e. they reflected rather special cases). This included the American Territories, the Indian Reservations, Hawaii and Alaska, and the seven single state PSAs. These areas had problems of their own but given the scope of the project's budget and time available to complete the work, it was felt that these PSAs would be too unique. As a result of these adjustments, the base for sampling was reduced to 590 Planning and Service Areas.
2. The base of 590 PSAs was then stratified into four levels of urbanization defined as follows: (1) Metropolitan areas with PSA populations of 2 million persons or more; (2) Urban areas with PSA populations of less than 2 million persons and 70 percent of the PSA being part of a Standard Metropolitan Statistical Area (SMSA); (3) Urban/Rural areas where at least some, but less than 70 percent of the PSA area, fell into a SMSA; and (4) Rural areas in which no portion of a PSA was part of an SMSA. This stratification dimension was also combined with a matrix of the ten federal regions in which the Planning and Service Areas were located, and the sampling procedure for the next stage was drawn from this matrix of urbanization and federal regions.
3. From this list of regional and urbanized PSA stratification, a random sample of 102 PSAs (Area Agencies on Aging) were drawn representing a sampling incidence of approximately 17 percent. The names, addresses, and telephone numbers of each of the Area Agencies on Aging were collected and a preliminary telephone contact was made in order to obtain information about the characteristics of the transportation providers with whom the Area Agencies contracted for service. From this contact with the 102 AAAs, 556 transportation providers were identified as being funded in 1979 and 1980 out of AAA funds under Title III.

4. The list of 556 transportation providers was adjusted to take into account the fact that the large number of providers reported by several large metropolitan areas (New York and Chicago) could not be verified as being providers, and also to adjust for the PSAs with no reported Area Agencies. The list of 556 providers was adjusted to 332, and from the adjusted list, a second stage sample of 60 providers was drawn. These 60 providers became the base for an intensive telephone survey for which a special survey instrument was designed (see Annex AN-2).^{1/}
5. Comprehensive phone interviews were completed with each of the 60 providers, and the results coded and programmed into a computer. The output from the interview became the basis for much of the findings and description that follows. A full set of descriptive tables may be found in Annex AN-3.1.
6. Based on a review of the findings from the comprehensive telephone survey of the 60 providers, a number of problem areas were identified for which supplementary information was needed or for which the telephone interviews had been unable to provide answers. Two supplementary survey instruments were developed to be used for field interviews: one for providers and one for the AAA funding the provider. A final group of 20 transportation projects and the relevant AAAs were selected for on-site field interviews. The results of these interviews were tabulated and used to supplement the telephone survey findings. Details are provided in Annex AN-3.2. Although this final sample was not random, the projects were selected with the objective of representing a range of provider characteristics that were revealed over the course of the comprehensive telephone interviews.

A final note is warranted before discussion of the findings. Retrospectively, it appears that the telephone survey represents a relatively small sample. In view of how little was known about the population size, it would have been difficult to predict ex ante what an appropriate sample size should have been. Furthermore, the limitations of budget alone would have made it impossible to enlarge the sample size of 60 providers to say 300 (if for example, a 10 percent sample was to be used) or even an increase to somewhere around 100 to 120 providers in order to move out of the general spectrum of a small sample. For largely similar reasons (discussed in the Technical Report) some of the "randomness" of the sampling had to be abandoned.

^{1/} Estimates indicate that the 60 providers represent somewhere between 1.5 - 2.0 percent of the total provider population estimated to be between 2800 to 3200 at a 95 percent confidence limit.

However, a review of the data from both the telephone and on-site interviews indicate that they appear representative of experiences (and problems) encountered throughout the country (a full explanation of the implications is provided in the Technical Report). As in the case of any small sample, there are sometimes substantial variations in some of the distributions, and considerable care should be taken against overinterpretation. However, we feel that the general results are valid, and, not surprisingly, they reflect both diversity and uniformity.

The findings confirm a good many of the views and operational features that have long been held to be true for these provider systems. Conversely, a number of long-held beliefs appear to be either invalid or questionable, and some of these warrant further study. As part of the on-site interviews, we asked the AAAs and the transportation providers to comment broadly on their problems. They responded enthusiastically and their views are revealed in terms of the problem faced by local providers trying to deliver service in the face of confusion and misunderstandings about rules and regulations. One misunderstanding which is worthy of clarification before proceeding to discuss our general findings pertains to the issue of insurance. Based on an analysis of data from this study, insurance problems -- long considered to be a major impediment to the adequate delivery of transportation for the elderly -- did not emerge as one of the most serious problems with which projects had to cope. On the contrary, few providers had experienced difficulty obtaining insurance, paying for it, or maintaining their policy once acquired. Because of this, as well as the fact that projects were trying to deal effectively with so many other priority problems, our discussion of insurance is limited to particular sections of the report where we feel it has had an impact upon project operations such as in the area of obtaining volunteer insurance coverage. General findings and conclusions about insurance are presented in Chapter V.

An Overview

From the survey of the 60 providers emerges a general picture of the transportation network serving Older Americans, particularly as funded under Title III of the Older Americans Act. Before moving on to a more detailed

description of key system attributes, a general overview of the "typical" provider will be presented. The overview is, of course, subject to the limitations described above, and there is considerable variation around the central tendency used to represent the prototypical provider.

As noted, our estimates suggest a population of at least 2800 to 3200 transportation projects funded under Title III and distributed over both rural and urban locations. Table 6 and Graph I summarize selected characteristics. The typical transportation provider being funded under the Older Americans Act is small with a fleet of about 7 vans and a staff of less than 10 persons. The provider is operating as a part of a private non-profit agency in which transportation is a support service to other activities, and the budget is around \$80,000. Given the scarcity of funds priorities are assigned to specific trip purposes, and, medical trips are usually assigned a first priority closely followed by personal business and/or shopping trips. Service is provided throughout the week with services often available on the weekend for special events. More detailed highlights are shown in Table 6 and the following findings.

1. Over 90 percent of the providers are operating as public or private non-profit organizations, and about three-quarters are multi-service agencies of which transportation is but one service (Table 6, items 1 and 2).
2. Most of the projects are relatively small with half of the providers reporting staffs of under 10 persons. The small size of the projects is confirmed by the fact that 1979 budgets were \$80,000 or less for 50 percent of the providers. One must be cautious here because of the considerable variability; this is reflected in the fact that the (weighted) mean budget was \$275 thousand itself reflecting the impact of a number of large providers (for example 25 percent of the sample providers had budgets of \$200 thousand or more) (Table 6, items 3 and 5).
3. Not surprisingly, 72 percent of the projects reported funding from Title III (B) of the Older Americans Act. Not so widely known is the important role played by CETA funds and Section 16(b)(2) of the UMT Act. (Table 6, item 4).

4. In terms of specific services, 97 percent of projects reported the elderly as eligible clients served by their service with the handicapped important clients as well. Most of the projects (93 percent) operated some part of their service themselves and only 22 percent reported using service purchase as an operating method. (Table 6, item 6).
5. The major part of the service provided was typically personalized and door-to-door, and though not shown in the table almost half of the providers indicated their demands for service were in excess of their available capacity. (Table 6, item 6).
6. A by product of the shortage (at peak periods) of available capacity was the general pattern of setting trip priorities. Providers were asked to show their first three trip priorities, and medical trips were ranked first by 47 percent of the providers in the survey. Once medical priority was set, personal and shopping trips were assured a relatively high priority: 48 percent of the providers assigned it a second priority and 62 percent a third priority level. One third of the providers actually assigned personal business and shopping trips first priority -- reflecting the considerable latent demand for such trips by the elderly who obviously want to get out and around beyond medical and nutrition trips. (Table 6, item 7).
7. Generally, systems were being operated with 8-12 passenger vans (75 percent of the fleet of 730 vehicles reported by the 60 providers) and half the projects had 7 vehicles or less in their fleet. Typically, systems operated 8-9 hours a day, five days a week (weekdays) (Table 6, items 8 and 10). There were a substantial number of projects reporting the provision of week-end and evening services; the most significant proportion of week-end and evening services were being provided in the metropolitan and rural areas. Approximately 70 percent of the systems in the metropolitan areas and 80 percent of the rural systems responded that they provided some kind of week-end service.
8. Most of the systems reported one of two specific peaking characteristics: two peak periods, one in the morning (typically between 7 - 11 a.m.) and the second in the late afternoon (2 - 5 p.m.) or a single peak occurring most typically around the midday (somewhere from 11:00 a.m. to 2:00 p.m.). About one-third of the providers reported each type of peak. (Table 6, item 8). 1/

1/ These two peaking characteristics may also be found among systems operating within a region. For example, studies made by IPA in Rhode Island showed the same mix with the possibility of capacity trade-offs in terms of service coordination.

Table 6

A Profile of Area Agency-Funded Transportation Providers

Selected Characteristics - 1980

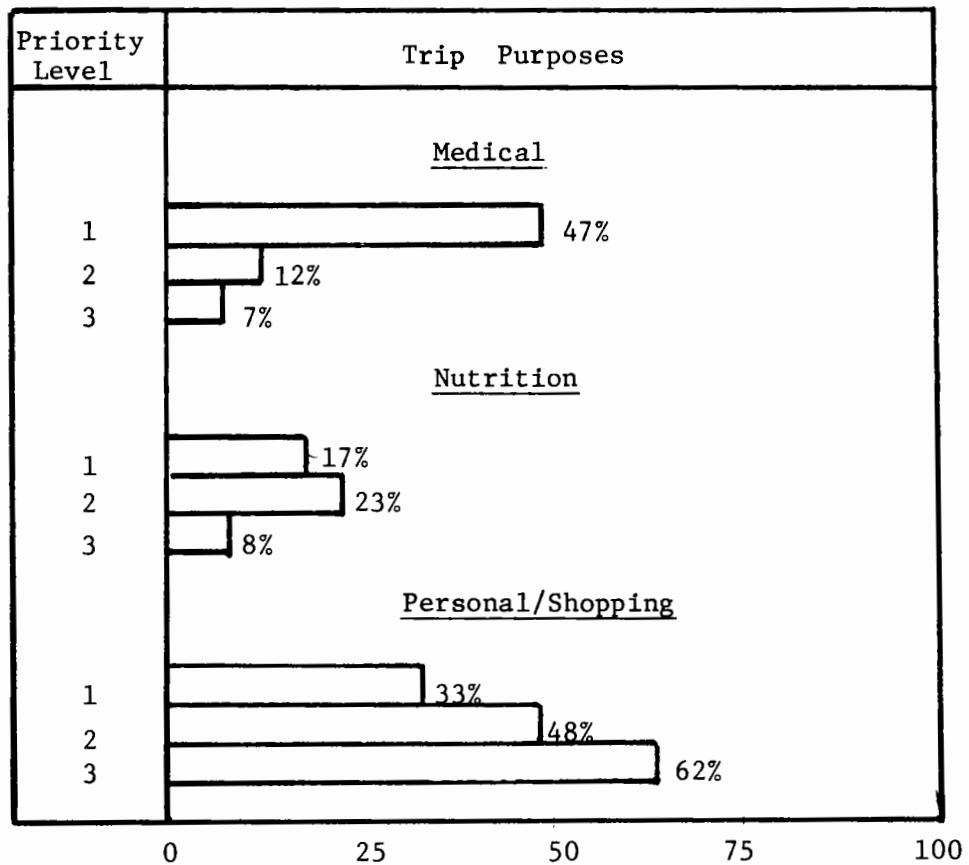
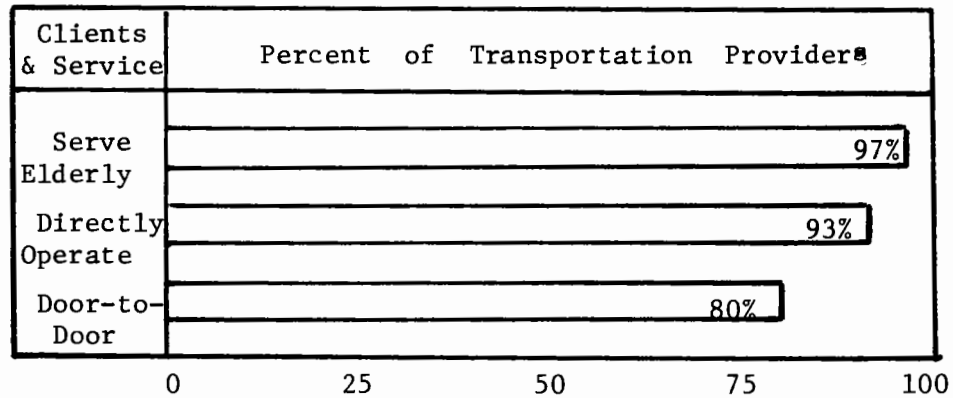
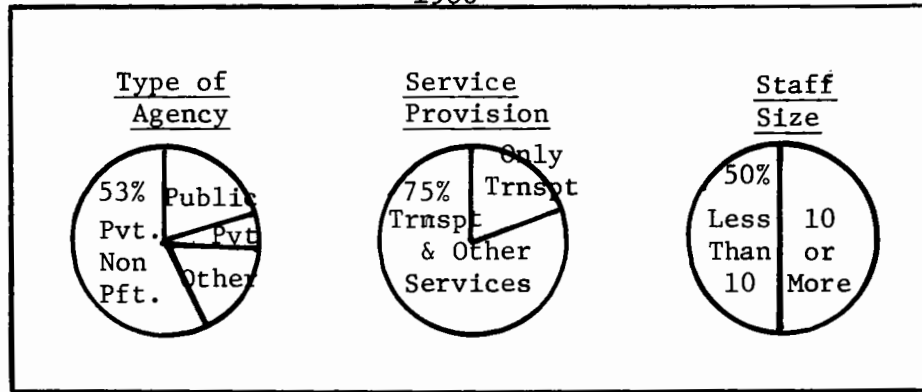
(Based on Sample Survey of 60 Providers)

Characteristics	Percent of Providers
1. <u>TYPE OF AGENCY</u>	
Public	38
Private Non-Profit	53
Private-for-Profit	5
Other	4
2. <u>PROVIDE SERVICE OTHER THAN TRANSPORT</u>	
	75
3. <u>STAFF SIZE</u>	
Under 10 (Median 10)	50
4. <u>FUNDING</u>	
Using Older American Act-Title IIIB	72
Section 16(b)(2) UMT Act	27
CETA Funds	37
5. <u>BUDGET SIZE</u>	
\$80 Thousand or Less (Median \$80,000) (Mean \$275,000)	50
6. <u>CLIENTS & SERVICE METHODS</u>	
Elderly Served	97
Handicapped Served	70
Directly Operate Service	93
Purchase Services	22
Provide Door-to-Door Service	80
7. <u>TRIP PRIORITIES</u>	
a. <u>First Priority</u>	
Medical	47
Nutrition	17
Personal Business & Shopping	33
b. <u>Second Priority</u>	
Medical	12
Nutrition	23
Personal Business & Shopping	48
c. <u>Third Priority</u>	
Medical	7
Nutrition	8
Personal Business & Shopping	62
8. <u>HOURS OF OPERATION & CHARACTERISTICS</u>	
<u>CHARACTERISTICS</u>	
Weekday - 8-9 hours	62
Bimodal Peak (A.M. & P.M.)	32
Mid-day Peak Only	31
9. <u>TRIP LENGTH</u>	
Six Miles or Less (Median = 5.8 miles) (Mean = 7.2 miles)	50
10. <u>FLEET CHARACTERISTICS</u>	
Seven Vehicles or Less (Median = 7 Vehicles)	50
Between 1-5 Vehicles	42
81,000 miles Year or Less	50

SOURCE: Institute of Public Administration, Survey of Area Agency Suggested Transportation Providers, June 1980.

Graph 1

A Profile of Selected Transportation Characteristics
For Transportation Providers Funded By Area Agencies on Aging
1980



9. Based on the projects able to provide estimates of average trip lengths (40 providers), over half indicated average trips of six miles or less (the median being 5.8 and the mean 7.2 miles). (Table 6, item 9).
10. Most of the projects were unable to provide consistent data on passengers or passenger trips. However, data on unduplicated number of persons served indicated that the "typical" project served somewhere between 500 - 1000 persons per year, indicating that projects were small.
11. With regards to insurance, 88 percent of the transportation providers interviewed (53 projects) indicated they had not had any difficulty obtaining insurance, and 95 percent said that they had never had their policies cancelled. Private carriers most frequently insured transportation projects in our sample, accounting for 71 percent of the responses, with units of government being the next most favored option for 22 percent of the sample. The median insurance cost per vehicle was \$700, but projects in metropolitan areas were paying about \$600 more per vehicle than were those operating in rural areas.

For almost every aspect of the network, there were differences between urban and rural projects. These differences are discussed in the following section.

The Provider Network: Highlights of Key Problems

Though the projects in the survey reflected considerable uniformity, there was a substantial amount of diversity in terms of size of the projects, operating patterns and rural and urban differences. A complete analysis of these differences is provided in the Technical Report. However, in order to provide some sense of the variability, highlights covering each major aspect of the provider system will now be reviewed.

The Precedents

As noted earlier, funding under the Older Americans Act of 1964 has been a major contributor to transportation systems serving older Americans. Starting in the early 1970's, with the Amendment of 1973, transportation was specified as a priority service for the first time: this meant that a designated share of Area Planning and Social Services monies could be allotted to transportation. Similarly, the 1975 amendments emphasized coordination of transportation services.

Tables 7 and 8 illustrate the impact of the Older Americans Act and the Amendments in 1973 and 1975. Table 7 shows that about half of the agencies were between 5 to 7 years old (i.e. organized between 1973 and 1975), and 48 percent have been providing transportation services for over 6 years -- mostly since 1973. The period of 1975 and 1976 were also active years with almost 40 percent more of the survey providers indicating start of transportation services in those years. Thus, transportation was initiated by about 85 percent of the providers over the period from 1973 to 1976. There were, obviously, services developed prior to that time but it is quite evident that the period 1973 to 1976 was marked by rapid growth. It is also clear that the period since about 1978 has been marked by very little growth in the number of agencies providing services under Title III.

Table 7

IMPROVED TRANSPORTATION SERVICES STUDY

Age of Agency or Organization Providing Transportation Services

As of June 1980

<u>Age</u>	<u>Number</u>	<u>Percent</u>
1 year or less	4	6.7
2 - 4 years	5	8.3
5 - 7 years	29	48.3
8 - 10 years	12	20.0
11 - 15 years	4	6.7
Over 15 years	6	10.0
TOTAL	60	100.0

SOURCE: Institute of Public Administration Special Telephonic Survey of Sixty Transportation Providers, March 1980

Table 8

IMPROVED TRANSPORTATION SERVICES STUDY

Period of Time for Which Agency or Organization

Has Been Providing Transportation

As of June 1980

<u>Period (Years)</u>	<u>Numbers</u>	<u>Percent</u>
Less Than 1 Year	1	1.7
1 to 2	1	1.7
2 to 3	3	5.0
4 to 5	9	15.0
5 to 6	13	21.7
Over 6 Years		
TOTAL	60	100.0

SOURCE: Institute of Public Administration Special Telephonic Survey of Sixty Transportation Providers, March 1980

Provider Structure and Organization

Transportation services for the elderly are primarily provided by private non-profit or public agencies, with little participation by private, profit making organizations (Table 9). The survey of the 60 providers revealed that just about half were private non-profit organizations and the bulk of the rest were public agencies (38 %). The high proportion of private non-profit organizations is typical of agencies providing service to older Americans (in terms of transportation), and Section 16(b)(2) of the Urban Mass Transportation Act is especially relevant to their needs.

TABLE 9

IMPROVED TRANSPORTATION SERVICES STUDY

Type of Agency or Organization Providing Transportation

<u>Agency</u>	<u>Number</u>	<u>Percent</u>
Public	23	38.3
Private - Non-Profit	32	53.3
Private - For Profit	3	5.0
Other	2	3.4
TOTAL	60	100.00

Source: Institute of Public Administration Special Telephonic Survey of Sixty Transportation Providers, March 1980

About 75 percent of these organizations were multi-purpose agencies for which transportation was only one of a number of services provided. Previous studies by IPA and others confirm this finding, and also indicate that offering multiple services creates problems for agencies that often they do not have the skills needed to plan and operate transportation services. This was further verified by our survey responses which showed that two-thirds of the providers had developed special training programs for transportation.^{1/}

In terms of staff, projects were small. Graph 2 illustrates the distribution of staff by size and level of urbanization. As may be seen, for all providers combined, 25 percent have staffs of less than five persons, and 50 percent had staffs of less than ten. Some differences also appear between urban and rural projects.

In general, rural projects have smaller staffs compared to urban locations: about one-quarter of the metropolitan and urban projects had staffs of 35 or larger in contrast to about 7 percent of the rural providers.

^{1/} See Annex AN-3.

On the other side of the scale, about two-thirds of the rural providers had under ten people on their staff in contrast to smaller shares for this interval at the urban/rural and urban areas.

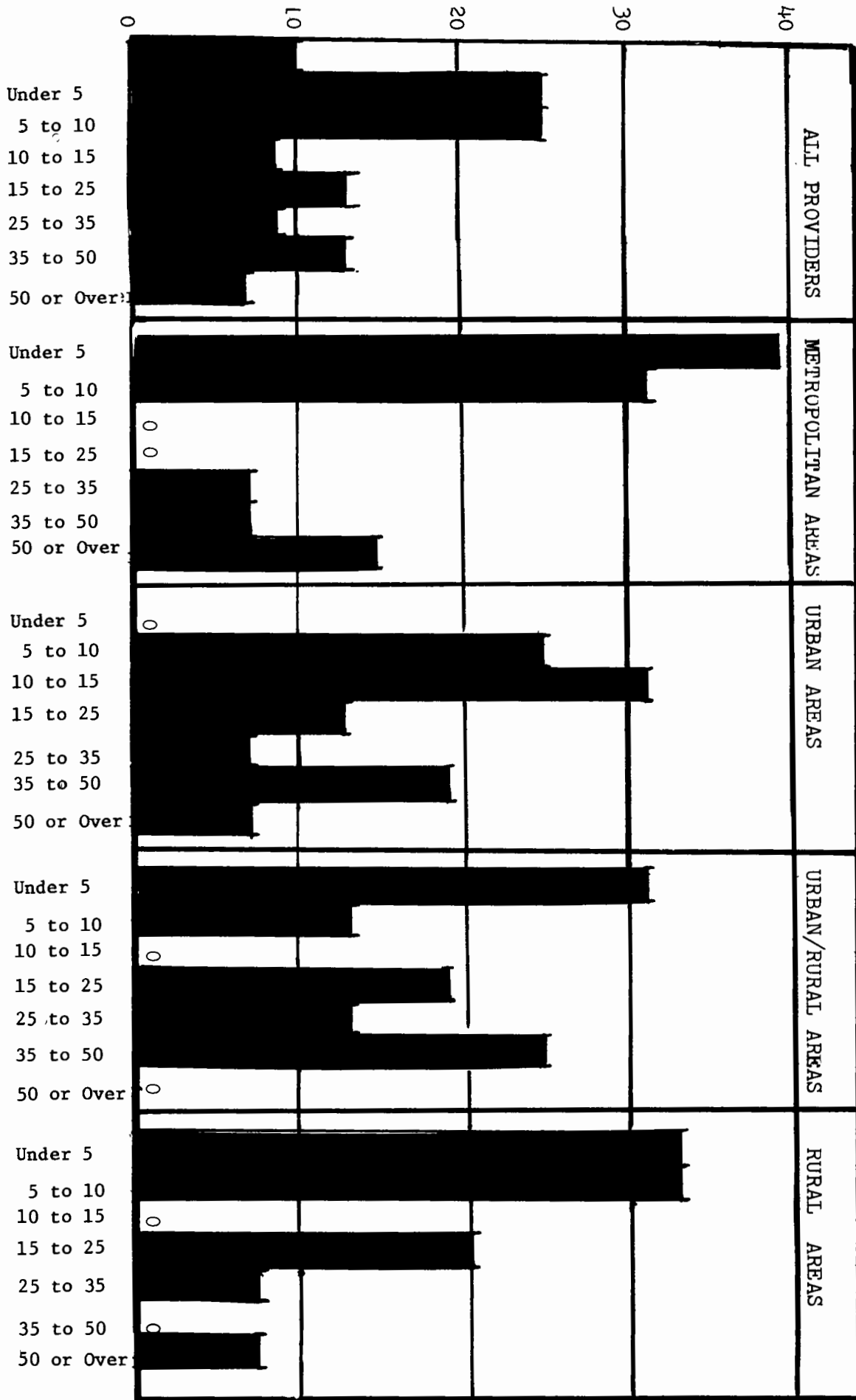
Of some interest in this context, is the fact that almost 70 percent of the providers in the metropolitan areas reported patterns of very small staffing levels. Our analysis of and conversations with the AAAs confirmed that the large metropolitan areas are characterized by a mix of very small projects (usually one or two vehicles) and a few very large projects. The mix may reflect: 1) a generally greater degree of neighborhood orientation of the service agencies; and 2) the fact that the very densely populated metropolitan areas felt that they could better handle transportation through a large number of small (local) systems, given the population density of relatively small geographic units within the metropolitan area. Another factor affecting metropolitan staff sizes is the presence of relatively ubiquitous public transit. This could result in the development of small systems designed to meet rather specific trip needs for trip origins and destination that are not well served by transit.

A final factor that might be noted is the importance of volunteers. About 50 percent of the projects reported using volunteers, which were said to be an important component of their service, despite some difficulties. In view of the rising costs of fuel and vehicle use, projects indicated that volunteers were a good source to help provide their transportation services. They did express concern about the uncertainty and variability of volunteer help but, on balance, felt that this could be stabilized if tax incentives could be implemented (i.e. permit the same mileage deduction for volunteer activities as for business mileage; assure state availability of tax-free low cost fuel and parts; and disseminate volunteer insurance programs).

Funding and Budgeting

Not surprisingly, the Older Americans Act was reported most frequently as a source of funds for the provision of transportation services -- 73 percent of the survey providers reported using Title III B and 48 percent relied upon

Graph 2
 Transportation Provider Staff Size
 By Urbanization Level
 1980



Title III C (Table 10). In addition, these funds were dedicated primarily to transportation operations, with almost 80 percent of the providers (using Title III B) indicating they were using the funds for operating expenses.

Perhaps more surprising is the important role played by CETA funds: 22 of the providers (almost 40% of the sample) noted they were using CETA funds and, of these, about 90 percent were using the funds to pay for operations. These funds are frequently used to finance a variety of services but especially drivers.

Generally, there appeared to be less capital support available. Section 16(b)(2) of the UMT Act provided important "seed" money in this direction. In this context, Section 16(b)(2) plays a significant role in providing transportation services to older Americans (and other transportation disadvantaged as well). UMT Sections 3 and 5 play a substantially less significant role with only four providers reporting these as a source of funds.

Non-federal sources were also important for funding transportation services -- about 65 percent of the surveyed providers indicating local public sources, close to 30 percent noting local private sources, and close to 50 percent citing donations as a source.

Although the telephone survey did not break down the local funds into specific sources, the field interviews did investigate the specific sources of local funds. Out of the 20 on-site interviews, thirteen of the providers in the field reported local public funding (65 percent of the on-site providers surveyed): five of the providers receiving county funds, five local funds, and three a mix of both county and local funds. The most common source of county/local funding was either for operating expenses or for matching federal funds; only two projects in the field interviews mentioned capital cost as an allowable local expense and one of those was a match for a 16(b)(2) grant.

Funding Sources	Uses of Funding Received by Transportation Providers from Specified Sources						Agencies Using Indicated Funding Source	
	Capital Only		Operating Only		Capital & Operating		Number	Percent of All (60) Agencies
	Number of Providers	Providers as a Percent of All Providers Using the Specified Funding Source	Number of Providers	Providers as a Percent of All Providers Using the Specified Funding Source	Number of Providers	Providers as a Percent of All Providers Using the Specified Funding Source		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
<u>Older Americans Act</u>		(1)/(7)		(3)/(7)		(5)/(7)		
a. Title III(B)	2	4.5	34	77.2	8	18.2	44	73
b. Title III(C)	1	3.4	23	79.3	5	17.2	29	48
<u>Social Security Act</u>								
a. Title XIX	1	25.0	3	75.0	0	0	4	7
b. Title XX	0	0	8	80.0	2	20.0	10	17
<u>UMT Act</u>								
a. Section 3	2	100.0	0	0	0	0	2	3
b. Section 5	0	0	1	50.0	1	50.0	2	3
c. Section 16(b)(2)	16	100.0	0	0	0	0	16	27
<u>Surface Transportation Act</u>								
a. Section 18	1	25.0	3	75.0	0	0	4	7
<u>Federal Highway Act</u>								
a. Section 147	1	33.3	1	33.3	1	33.3	3	5
<u>CETA</u>	0	0	19	86.4	3	13.6	22	37
<u>Local</u>								
a. Public	4	10.2	23	59.0	12	30.8	39	65
b. Private	1	6.3	7	43.7	8	50.0	16	27
<u>Fares</u>	0	0	2	20.0	8	80.0	10	17
<u>Donations</u>	0	0	12	41.4	17	58.6	29	48
<u>Other</u>	0	0	5	55.6	4	44.4	9	15
TOTAL RESPONSES	29	---	141	---	69	---	239	---

SOURCE: Institute of Public Administration, Special Telephonic Survey of Sixty Transportation Providers, March 1980.

Sources and Uses of Funds for Transportation Services for Older Americans (1979)

IMPROVED TRANSPORTATION SERVICES STUDY

Table 10

-61-

Only five of the field interviews revealed any state or regional assistance. The sources generally fell into three areas: earmarked tax revenues mandated by a state legislature to be spent on general transportation expenses; state assistance through specific programs for transportation, usually being restricted to transit authority development; and through legislation dedicating funds to Senior Citizens' programs. However, these programs were reported at only five sites in four states and are therefore a very limited source.

After local public funds, donations were the next most frequently employed non-federal source of funds. Just under one half of the telephone sample providers reported using donations as a funding source. However, the level of funds from donations were generally so low that most providers in the field survey were unable to assign a dollar amount.

As regards Section 18 of the Surface Transportation Act providing for rural transportation, it is not possible to make a reasonable appraisal of the importance of that funding source at this time. In most cases, funds have just started to get into the field, and only a limited number of agencies have indicated that Section 18 has played a part, for 1979 or 1980 budgets. However, in the future, if Section 18 expands, it will undoubtedly play a relatively important part of transportation in the rural areas.

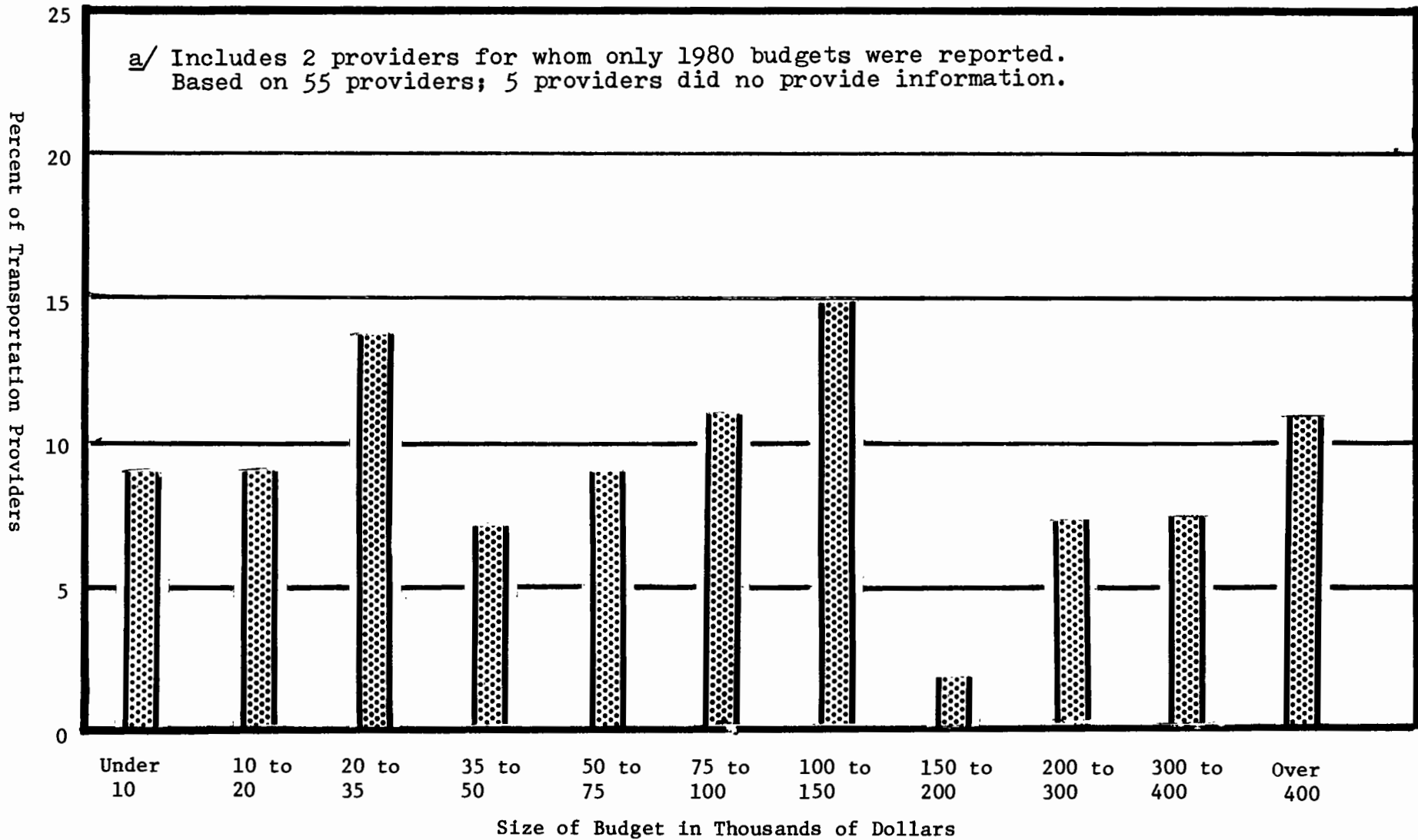
An examination was undertaken of the funding sources by urbanization level but no consistent relationship was indicated. The contributions of Title III appear to be in proportion to the number of AAAs located in rural and urban areas. The same balance was not quite apparent for other major sources: for example, there was a somewhat higher use of 16(b)(2) in smaller urban areas and urban rural mixed areas. This may reflect state criteria used in distributing these funds.

As part of the telephone survey, projects were asked a number of questions relating to the size and character of the budget for transportation services. Graph 3 shows the distribution of the budget, as reported by 55 of the providers for which such information was available. Considerable

Graph 3

Distribution of Transportation Provider Budgets
by Size of Budget

1979^{a/}



variation was found among the projects varying from under \$1,000 to \$6 million per year. Because of this variation, measures of central tendency were considered unreliable. Even using the more conservative median as a measure (\$80,000 per year) must be considered subject to considerable variation: the inter-quartile range covered the class interval of \$20,000 to \$300,000 shown in Graph 3.

Analysis of the budgets by level of urbanization suggests that rural areas have smaller budgets, essentially consistent with the finding that they also have small projects. The median budgets are distributed by urbanization levels as follows:

<u>Urbanization</u>	<u>Median Budget</u>
Metropolitan	\$ 72,000
Urban	\$162,000
Urban/Rural	\$ 84,000
Rural	\$ 55,000

The small budget for the metropolitan areas reflects the configuration of small projects described earlier. In other respects, the relationship between urbanization and budget size is readily apparent. However, even the simple hypothesis that rural projects have the smallest budgets is somewhat offset by the fact that large budgets may be found in rural areas: one of the two budgets in excess of \$1 million is in a rural area.

Providers were asked a number of questions with respect to their budget problems, and Table II summarizes the results. Three major questions were posed:

- Was their transportation budget adequate?
- Had they experienced any problems in terms of funding continuity that impacted their ability to provide service?
- Did they have budget problems that were related to the restrictions on the use of funds?

As may readily be seen in the Table, almost 70 percent of the providers felt that their budgets were not adequate, and almost two-thirds had experienced problems involving funding continuity. Many of the providers were concerned that the problem of funding was restricting their ability to provide even existing levels of transportation. Two major reasons were given as explanation of budget inadequacy by about one-third of those providers who responded to the question: not enough funds to meet even present demands (needs) and increased costs due to inflation and rising energy costs (Table 11). One can reasonably argue that these two reasons are really one and the same problem. For most projects, budgets have not increased and some have declined, and with inflationary impacts the "real" budgets are no doubt substantially reduced. Budget inadequacy for transportation services under the Older Americans Act is a real problem, and a basic policy decision will need to be made soon if transportation services for older people are not to be allowed to seriously deteriorate.

Table 11
IMPROVED TRANSPORTATION SERVICES STUDY
Selected Budget Problem Areas
Identified by Transportation Providers

1980

A. Identified Budget Problems

Budget Problem Area	Respondent's View			
	Y E S		N O	
	Number	Percent	Number	Percent
1. Is transportation budget adequate?	19	31.7	41	68.3
2. Have you experienced funding continuity problems?	23	38.3	37	61.7
3. Any restrictions on use of funds?	50	83.3	10	16.7

SOURCE: Institute of Public Administration, Special Telephonic Survey of Sixty Transportation Providers, March 1980

Service Characteristics

The previous overview provided some insight into the service characteristics of the 60 surveyed transportation providers, and there is no need to repeat these elements (detailed discussion may be found in the Technical Report and the Annexes). In this section attention will be given to specific aspects of service not previously discussed or on supplementary considerations for those that have.

Methods of Operation

Most of the providers directly operate their own transportation service (about 90% of the providers surveyed). This is reflected in Table 12 which shows that out of 56 providers directly operating their own transport service, for 84 percent (47 providers) this was the exclusive mode of operation. A much smaller share of the providers (22%) reported using a purchase-of-service method of operation (13 out of 60), and when it was used, it was generally a supplement to some other mode -- direct service operation. In fact, only 3 of the providers in the survey indicated that service purchase was the sole method for operation (Table 12). Furthermore, in neither the telephone nor the field survey did the operation methods vary with urbanization level.

Table 12

IMPROVED TRANSPORTATION SERVICES STUDY
Transportation Provider Operating Methods

Method of Operation	Number of Providers			Number of Providers Using Specified Method by Estimated Percent of One-Way Trips					
	Total	Using Method	Not Using	0%Trips	1 to 30%	30 to 60%	60 to 80%	80 to 100%	100% of trips
1. Directly Operate Service	60	56	54	4	2	0	2	5	47
2. Purchase Service	60	14	46	47	7	1	1	1	2
3. Other	60	0	60	60	0	0	-	-	0

SOURCE: Institute of Public Administration Special Telephonic Survey of Sixty Transportation Providers, March 1980

Turning to service characteristics, Table 13 confirms our earlier finding on the importance of door-to-door service -- about 80 percent of the providers were offering this type of service. However, a broad range of service options were being used by the projects, usually side by side.

For example, 32 percent (19 of the projects in the survey) indicated they were using some form of regularly scheduled (subscription) type service and a similar share (16 projects) were using a fixed route/fixed schedule system. The Table shows that the service requirements for the elderly fall into three major categories: (1) a relatively large component of users and/or clients that need door-to-door service of a highly personalized character; (2) a component of elderly and other special clients that require personalized door-to-door service but more typically trips that are more regular and can be scheduled and developed into some form of subscription service; and (3) a fixed route and fixed schedule service. The potential for developing a mix of fixed routes and fixed schedule services along with a subscription and demand responsive door-to-door service provides an important opportunity for more effectively using capacity -- particularly given the limitations imposed on vehicle productivity by "real-time" on call door-to-door service. Most of the projects did not spend a substantial amount of time on planning their services, and there are strong indications that productivity increases could be developed through coordinated service provisions. However, coordinated service requires planning and some effort and time to identify whether a coordination potential exists. But more on coordination later.

Trip Priorities and Service Levels

All 60 providers surveyed by telephone reported lists of trip priorities that identified trip purposes that could be served by the transportation projects. These trip priorities arose for two reasons: either system capacity was so limited that some rule was needed to serve the most important trip purpose, or funding sources limited trip purposes eligible for reimbursement (these two reasons were not mutually exclusive). As noted in Table 6, medical trips received the largest assignment of first priority rankings

Table 13
 IMPROVED TRANSPORTATION SERVICES STUDY
Transportation Provider by Type of Service Provided
 1980

Service Category	Number of Providers Responding	Transportation Providers Using Service Category		Number of Providers Reporting Estimate of Percentage of One-Way Trips Served by Specified Service Types				
		No. of Providers	As % of Total	1-30%	30-60%	60-80%	80-100%	100%
1. Door-to-Door	60	48	80.0	14	8	2	6	18
2. Fixed Route & Schedule	60	16	26.7	4	2	3	4	3
3. Regularly Scheduled (Subscription)	60	19	31.7	3	2	5	6	3
4. Other, Special Feature	60	2	3.3	0	0	0	0	2

SOURCE: Institute of Public Administration, Special Telephonic Survey of Sixty Transportation Providers, March 1980.

(by about 50% of providers) but personal business and shopping trips were ranked only second to medical trips in terms of second and third levels of priority assignment by the projects (Table 14). Nutrition trips were given a somewhat lower priority; however, that may be due to the fact that trips to nutrition sites are (or have been) funded with monies specifically designated for nutrition and not considered, therefore, to be available for a broader range of trip purposes.

The data suggested that to the extent the AAAs and providers were free to provide trips for a variety of purposes, the priorities were based upon the needs of the elderly (at least as perceived by the AAAs and the providers). Our questions on how needs were assessed confirmed that the elderly were involved in an advisory capacity and when the field sites were asked how they had arrived at their priority ranking, the most common response was that the provider's Advisory Council set the trip priorities as they felt appropriate -- often intuitively selecting medical trips as the most necessary purpose. A few projects did indicate that their priorities were based upon need, either based upon a needs assessment or again on some intuitive scale of need.

It is quite evident that in developing their programs the transportation providers and the AAAs need to consider more carefully their trip priorities. Once medical and nutrition trips specified under categorical program needs have been met, consideration should be given to the provision of personal business and shopping trips as well as other activities for which older persons have expressed strong needs.

Projects were also asked to report the number of one way trips provided by trip purpose, but, unfortunately, the data provided did not allow any consistent analysis to be made of the general size and scope of the projects. Somewhat more consistent data was provided on the number of unduplicated passengers served per year (summarized in Graph 4), but again, the lack of response limits the validity of the findings reflected in the Graph (22 of the 60 projects surveyed did not respond).

Table 14

IMPROVED TRANSPORTATION SERVICES STUDY

Reported Trip Priorities

Trip Purpose	Providers Listing Indicated Priority for Specified Trips								
	First Priority		Second Priority		Third Priority		Priority By Rank		
	No.	%	No.	%	No.	%	1	2	3
Medical	28	46.6	7	11.7	4	6.7	1	4	5
Nutrition	10	16.7	14	23.3	5	8.2	3	2	4
Personal Business	17	28.3	19	31.6	30	50.0	2	1	1
Shopping	3	5.0	10	16.7	7	11.7	4	3	2
Social Service Facility/Agency	1	1.7	6	10.0	6	10.0	5	5	3
Senior Citizen Center	0	-	2	3.3	3	5.0	-	6	6
Employment	1	1.7	1	1.7	0	-	5	7	-
Training/Education	0	-	1	1.7	1	1.7	-	7	7
Special Events/Recreation	0	-	0	-	4	6.7	-	-	5
Emergency	0	-	0	-	0	-	-	-	-
Total Providers Reporting	60	100.0	60	100.0	60	100.0	-	-	-
Personal Business plus shopping	20	33.3	29	48.3	37	61.7	2	1	1

SOURCE; Institute of Public Administration Special Telephonic Survey of Sixty Transportation Providers, March 1980

The data does confirm that projects generally served a small number of passengers, with a median value of 850 unduplicated passengers per year. Almost 90 percent of the projects served under 10,000 persons a year. The relatively small size of the projects held over all levels of urbanization. (See Technical Report).

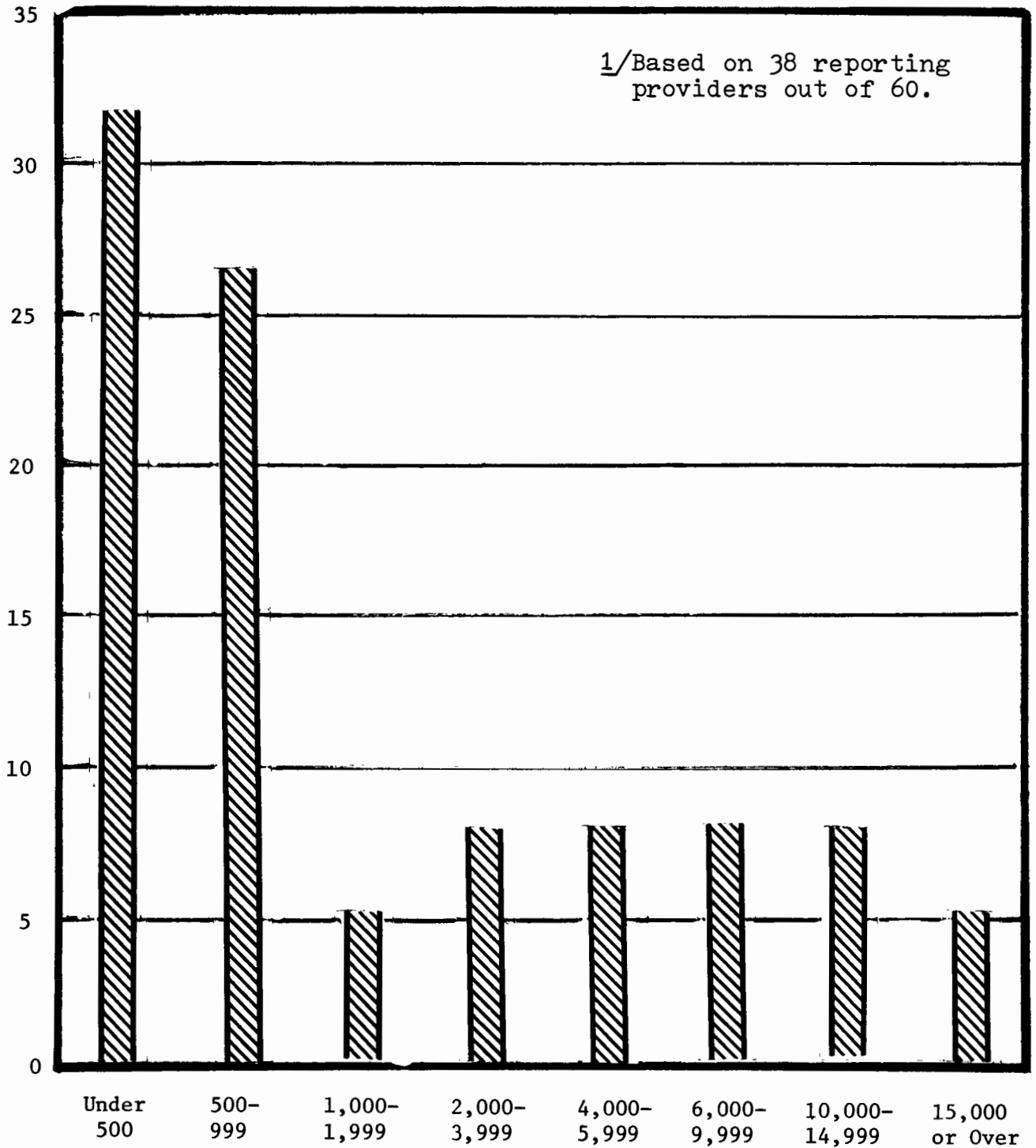
Hours of Operation and Peak Period

Most of the projects were operating 5 days a week, Monday through Friday, typically providing about 8 to 9 hours of service. As noted earlier in the overview, most of the providers reported one of two specific peaking patterns: a bi-model pattern (once in the morning and once in the late afternoon) or single peak period around mid-day (Table 15). Of the 59 transportation providers in the telephone survey who responded to the question on peak periods of operation, almost one-third indicated that two peaks occurred, one in the morning (between 7 and noon) and one in the late afternoon (between 2 and 5). An equal proportion of the providers indicated that they had one peak period that occurred between 11 a.m. and 2 p.m. Overall, about half the projects had a single peaking period, about 40 percent had two peaks, and the remainder just didn't know.

Perhaps the most interesting aspect of these peaking patterns is the potential for coordination implied by the offsetting peak periods. Since the sample represented a national distribution, the question which remains is to what extent these offsetting demand periods are likely to be found within a given region. If projects are operating with roughly the same peak periods, they are not likely to be in a position to do much capacity sharing. There needs to be some offsetting time demands if more coordinated use of service capacity is to be effective or worthwhile (coordination potentials may still exist, of course, with regard to fixed cost and overhead components of service).

In this connection, recent findings by IPA in the state of Rhode Island (based on a survey of 25 providers) tends to confirm these two peaking patterns (Graph 5). The Graph shows that one group of projects had their

Graph 4
Reported Number of Unduplicated Passengers Served per Year ^{1/}
By Transportation Providers Sponsored by
Area Agencies on Aging
1980



Reported Number of Unduplicated Passengers per Year

peak periods from roughly 10:00 a.m. to 2:00 p.m., and a second group of projects had their peak periods from 8:00 to 10:00 a.m. and 2:00 to 5:00 p.m. Since the number falling into each group was roughly equal, there was a potential for sharing capacity by trading capacity during the off-peak periods.

Table 15
 IMPROVED TRANSPORTATION SERVICES STUDY
Typical Weekday Peak Periods
 1980

Period of Operating Peaks	Number of Providers Responding	Percent
1. <u>Bimodal or Full Day</u>		
7:00 a.m. - 12:00 noon / 2:00 p.m. - 5:00 p.m.	16 ^{a/}	27.1
7:00 a.m. - 9:00 a.m. / 4:00 p.m. - 6:00 p.m.	3	5.1
9:00 a.m. - 5:00 p.m. / All day	4 ^{b/}	6.7
2. <u>Point of Day Only</u>		
8:00 a.m. - 12:00 Noon	6 ^{c/}	10.2
8:00 a.m. - 2:00 p.m.	4 ^{d/}	6.8
11:00 a.m. - 2:00 p.m.	18 ^{e/}	30.5
3. Peak Not Known	8 ^{f/}	13.5
Total	59	100.0

- a/ Two of the projects operated within slightly varied times but with the same approximate band of operations.
- b/ Includes project with start-up at 8:30 a.m. and close at 4:00 - 5:00 p.m.
- c/ Includes one project operating from 9:00 a.m. - 12:00 Noon; one from 9:00 a.m. - 11:00 a.m.
- d/ Includes one project that operated from 9:00 a.m. - 3:00 p.m.
- e/ Includes one project operating with a start-up at 10:00 a.m. and close at 2:00 p.m.; one operating from 10:30 a.m. - 3:00 p.m.; and one project that operates from 11:00 a.m. - 3:00 p.m.
- f/ All eight cases where peak was not known were in rural areas.

SOURCE: Institute of Public Administration, Special Telephonic Survey of Sixty Transportation Providers, March 1980.

Annual Fleet Vehicle Miles and Trip Length

Looking at the supply-side characteristics of transportation services for the elderly, Table 16 shows the responses from the telephone sample of 60 providers on total annual vehicle miles of operation. An additional column has been added to the Table in order to show the percentage distribution of mileage excluding the "no response" category.

Out of the 50 transportation providers who reported fleet mileage statistics, a little less than half (21) operated between 10,000 and 100,000 vehicle miles per year. One operator reported vehicle travel of less than 5,000 miles per year (one vehicle), and at the other extreme three reported fleet travel of more than one million miles annually. The considerable variation is reflected in the difference shown for the median and mean values, 81,000 and 190,000 miles per year respectively. Our calculations for fleet size indicate that the typical provider fleet consists of about 5 to 7 vehicles, implying for the median fleet about 12,000 to 16,000 miles per vehicle. A separate distribution of vehicle miles per vehicle (calculated from actual number of vehicles and fleet miles reported by 59 providers) provides a median estimate of about 16,000 miles per vehicle per year, (Table 16B) which suggests that the total annual fleet miles for the typical project is somewhere between the different levels of urbanization with urban areas showing the highest volume of fleet mileage, metropolitan areas the lowest, and rural areas intermediate (200, 30 and 75 thousand median annual 1979 fleet miles respectively). However, because the number of observations in each class is small no consistent interpretation is possible. (See Technical Report for details).

A final comment on trip length. For the 41 providers reporting estimated average trip length, the median and mean distance reported was 5.8 and 7.2 miles respectively. (Table 17). This does not appear to be unreasonable. The fact that trips tend to be shorter in more urbanized areas is not surprising given the higher density of development in these areas and the close proximity of major facilities to which the elderly desire to travel. One final observation is that the seeming discrepancy between urban operators who have the largest median number of vehicle fleet miles (200 thousand) but a low median trip length (5.7 miles) is probably due to their larger average fleet sizes.

Table 16
 IMPROVED TRANSPORTATION SERVICES STUDY
Selected System Transportation Characteristics -- 1979

A. Annual Fleet Vehicle Miles

Vehicle Miles	Number of Providers	Percent of Total	Percent of Respondents (based on 50)
No Response	10	16.6	20
Less than 5,000	1	1.7	2.0
5,000 - 9,999	6	10.0	12.0
10,000 - 19,999	8	13.4	16.0
20,000 - 49,999	5	8.3	10.0
50,000 - 99,999	8	13.3	16.0
100,000 - 199,999	7	11.7	14.0
200,000 - 299,999	6	10.0	12.0
300,000 - 499,999	1	1.7	2.0
500,000 - 999,999	5	8.3	10.0
Over 1 million	3	5.0	6.0
TOTAL Median (N=50)=81,000 miles	60	100.0	100.0

B. Vehicle Miles per Vehicle

Vehicle Miles per Vehicle per Year	Number of Providers	Percentage Distribution	
		All Respondents	Reporting Mileage
Under 5,000	5	8.3	9.8
5,000 to 10,000	12	20.0	23.5
10,000 to 15,000	7	11.7	13.7
15,000 to 20,000	10	16.7	19.6
20,000 to 25,000	6	10.0	11.8
25,000 to 30,000	5	8.3	9.8
30,000 or over	6	10.0	11.8
Sub-total	51	---	100.0
No Response	9	15.0	---
TOTAL Median (N=51)=15,800 miles	60	100.0	---

SOURCE: Institute of Public Administration, Special Telephonic Survey of Sixty Transportation Providers, March 1980.

Table 17
IMPROVED TRANSPORTATION SERVICES STUDY
Reported Average Trip Length by Urbanization Level

1977							
Average Trip Length-Miles	Number of Providers	Percentage Distribution		Providers Distributed by Urbanization Levels			
		All Providers	Responding Providers	Metro Level I	Urban Level II	Urban/Rural Level III	Urban Level IV
1 to 2	7	11.7	17.1	2	1	2	2
2 to 3	1	1.7	2.4	--	1	--	--
3 to 4	7	11.7	17.1	3	1	--	3
4 to 6	6	10.0	14.6	1	3	1	1
6 to 8	2	3.3	4.9	1	--	--	1
8 to 10	2	3.3	4.9	--	1	--	1
10 to 15	5	8.3	12.1	1	1	2	1
15 to 20	2	3.3	4.9	--	1	--	1
20 to 30	2	3.3	4.9	--	1	--	1
30 or over	7	11.7	17.1	1	1	3	2
Sub-total	41	68.3	100.0	9	11	8	13
No Response	19	31.7	---	4	5	8	2
TOTALS	60	100.0	---	13	16	16	15
Median (miles)	5.8 (N=41)			3.8 (N=9)	5.7 (N=11)	12.5 (N=8)	7.0 (N=13)

SOURCE: Institute of Public Administration, Special Telephonic Survey of Sixty Transportation Providers, March 1980.

The Vehicle Fleet

Table 18 summarizes a range of characteristics relating to the vehicle fleet: size, number and types of vehicles used -- including seating capacity and accessibility -- fleet age and fleet costs, and ownership.

Looking at the types of vehicles reported in use by the transportation projects surveyed, six categories were specified: sedans, station wagons, vans, small buses, large buses and school buses (Table 18A). By and large, vans were the most important vehicle type, accounting for almost three quarters of the reported vehicle fleet of 734 vehicles (Table 18B). In considering the size of the vehicle fleet, over 50 percent of the providers, using vans reported that their fleet was in the interval of 1 to 5 vehicles. A similar concentration into this small vehicle fleet interval is found for all vehicle categories.

The data indicated that most of the vans were configured to seat 12 to 16 persons, 26 percent were lift-equipped, and 14 percent had ramps (Table 18B). Unfortunately, the data did not permit us to determine whether both lift and ramp capacity were available but a generous conclusion might be that approximately 40 percent of the fleet had some kind of accessibility device. Ramps appear to be less popular than lifts, and one reason offered was that women drivers could not easily handle wheelchairs on the ramps; lifts, therefore, were considered safer.

Turning to the fleet in terms of vehicle age (as of mid-1980) and confining our attention to the major fleet component -- the van -- it was somewhat surprising to find that a relatively large percentage of the van fleet was reasonably new (Table 18C). For example, almost 70 percent of the van fleet was under 4 years and 35 percent was less than three years. Buses were considerably older, particularly the large buses with life spans of 12 to 15 years. Typically, vans were costing anywhere from under \$10,000 to over \$15,000, depending upon the configuration -- especially in terms of special options such as lifts, radios, etc. About 70 percent of the providers surveyed reported they set their own specifications or get them from other projects, the remainder indicated that the state-set "specs" -- probably reflecting the state role in Section 16(b)(2) of the UMT Act (for details see Technical Report).

Table 18

IMPROVED TRANSPORTATION SERVICES STUDY

Types & Numbers of Vehicles Reported

As of June 1980

A. Vehicle Categories by Fleet Size

Vehicle Category	Number of Providers Reporting Use of Specified Vehicle Category By Fleet Size							
	Vehicle Category Not Used	Fleet of 1 to 5	Fleet of 5 to 10	Fleet of 10 to 20	Fleet of 20 to 30	F. of 30 or more	Sub-Tot.	Total Providers
Sedans	49	7	2	1	0	1	11	60
Station Wagons	46	12	1	0	1	0	14	60
Vans (8 - 12 pax)	6	28	12	6	5	3	54	60
Small Bus (25 pax)	52	5	2	1	0	0	8	60
Lge. Bus (25+ pax)	53	6	0	0	0	1	7	60
School Bus	60	0	0	0	0	0	0	60

B. Seating Capacity and Accessibility

Vehicle Category	Vehicles		Estimated % of Vehicles w/ Average Seating Capacity of						Number of Vehicles Equipped with			
			Less Than 8	8 to 12	12 to 16	16 to 25	25 or Over	Total %	Lifts		Ramps	
	No.	%							No.	% of Fleet	No.	% of Fleet
Sedans	68	9.3	100	0	0	0	0	100	0	0	0	0
Station Wagons	45	6.1	86	14	0	0	0	100	0	0	0	0
Vans (8-12 pax)	532	72.5	2	30	67	1	0	100	137	26	74	14
Small Bus (25 pax)	39	5.3	0	0	25	63	12	100	5	13	0	0
Lge. Bus (25+ pax)	50	6.8	0	0	0	0	100	100	7	14	0	0
School Bus	0	0	0	0	0	0	0	0	0	0	0	0
Total	734	100.0							149	20	74	10

Table 18 (Continued)
IMPROVED TRANSPORTATION SERVICES STUDY
Types & Numbers of Vehicles Reported

C. Fleet Age Characteristics

Vehicle Category	Est. Vehicle Number	Estimated Percent Distribution of Reported Average Fleet Age (%)								Total
		2 years	2 to 3	3 to 4	4 to 5	5 to 7	7 to 10	10 to 15	Over 15	
Sedans	68	12	12	40	12	12	12	0	0	100
Station Wagons	45	14	22	7	29	14	14	0	0	100
Vans (8 - 12)	532	10	25	32	20	4	0	0	0	100
Small Bus (25 pax)	39	14	0	14	14	30	14	14	0	100
Lge. Bus (25+ pax)	50	0	0	60	0	0	0	20	20	100
School Bus	0	0	0	0	0	0	0	0	0	0
TOTAL	734									

D. Fleet Costs - 1980

Vehicle Category	Distribution of Providers by Average Vehicle Cost Reported (In Thousand Dollars)						Total Projects Reporting
	Under 10	10 to 15	15 to 20	20 to 30	30 to 50	50 to 100	
Sedans	4	0	0	0	0	0	4
Station Wagon	9	0	0	0	0	0	9
Vans	26	13	3	0	0	0	42
Small Bus (25 pax)	2	2	0	1	1	1	7
Lge. Bus (25+ pax)	0	0	1	0	0	0	1
School Bus	0	0	0	0	0	0	0

SOURCE: Institute of Public Administration, Special Telephonic Survey of Sixty Transportation Providers, March, 1980.

In terms of maintenance, about 45 percent of the providers reported that they used local private garages; about 30 percent reported using local government garages; and 20 percent indicated that they were doing their own maintenance. Some projects use more than one source of maintenance, and a frequently expressed view was that there would be important benefits associated with centralized (coordinated) maintenance among different providers.

Operating Costs

Costs related to the operation of transportation projects serving the elderly has been a subject of much recent attention. The executive and legislative branches of the federal government, the agencies charged with administering these projects, and the project operators themselves have all been interested in why costs of providing the elderly with adequate transportation have risen so dramatically over the years. Before turning to a discussion of some of the cost information collected for this study, it is important to be cognizant of some of the problems associated with interpreting and relaying cost data.

Basically, in order to make cost comparisons between projects, it is essential to assure comparability in all respects, and this comparability is difficult to attain. There are at least three areas for which comparability must be considered:

1. Comparability of service operation including the number, type and age of vehicles, methods of service provision, service area coverage, terrain and climate;
2. Comparability of accounting and cost measurement particularly as affected by differences in definitions of the cost elements used, the expense object classes which are included in accounting for the provision of service (e.g., volunteer time, depreciation, insurance, etc.) and the actual accounting method adopted by various operators; and
3. Comparability of the time periods covered compared in terms of typical annual, semi annual, quarterly or seasonal cycles.

The data supplied by the providers surveyed could not be verified in terms of the attributes described above, and a good case could be made against presenting their responses. However, it does help projects to have some

notion of the costs encountered by others, and our review of the estimates provided by the systems we surveyed indicate that they fall within the range of previous cost estimates which IPA and its sub contractor have observed in the course of conducting other studies. Obviously, the data must be used with great caution and as order-of-magnitude indicators only.

Providers were asked to make available a range of cost information but only two measurements were found to have any degree of reliability: operating cost per vehicle mile and total operating cost per vehicle. These costs were derived using reported vehicle miles, operating costs and number of vehicles. All costs are for 1979 and are summarized in Tables 19 and 20.

Turning to operating costs per vehicle mile, Table 19 shows the distribution of vehicle costs as reported by 48 providers. The median value for the respondents in the Table was 85 cents per vehicle mile for 1979, and ranged from 60 cents in rural areas to one dollar per vehicle mile in urban areas.^{1/} It is interesting to note that this 40 percent difference runs somewhat counter to the views held by many about the high costs of providing rural transportation to the elderly. However, there are several valid reasons which may account for the observed cost differential. First, higher costs of labor found in these areas. To the extent that wages and fringe benefits account for anywhere from 50 to 60 percent of the cost of providing service, rural systems attain certain economics by operating with lower wage scales and/or more volunteers. Secondly, operators of metropolitan and urban transportation systems are more likely to have greater expertise or technical assistance available, and there is some evidence that cost accounts may more accurately reflect all project expenses. A final note relevant to the issue is that given the greater congestion in urban areas, operating costs will be higher than those in rural areas where fewer traffic delays and frictions are encountered. Obviously, to the extent that average trip lengths are longer in rural and/or urban/rural areas, the cost impact is offset by the previous factors.

^{1/} The overall cost levels in Table 19 appear somewhat low and may reflect inaccurate accounting of all transportation costs. However, there was no way to verify the data.

Alternatively, total annual 1979 costs per vehicle were calculated, and the distribution is presented in Table 20. Rural and urban/rural areas again show lower costs than the metropolitan and urban areas -- at least as reflected in median values. Assuming average vehicle fleets of 5 to 7 vehicles and about 80,000 miles per year for the fleet (about 12 to 16 thousand miles per vehicle), the cost per vehicle mile (at a 95% confidence level) is about 86 to 94 cents per vehicle mile -- contrasted with the median operating cost per vehicle shown in Table 19.^{1/}

TABLE 19
 IMPROVED TRANSPORTATION SERVICES STUDY
Operating Costs per Vehicle Mile - 1979

Interval in Dollars (Operating Costs per Vehicle Mile)	All Providers		By Level of Urbanization (Providers)			
	No	%	Metro	Urban	Urban/Rural	Rural
Under \$0.30	5	10.4	2	0	1	2
\$0.30 to \$0.50	9	18.8	1	2	2	4
\$0.50 to \$0.70	5	10.4	1	3	0	1
\$0.70 to \$1.00	11	22.9	2	2	4	3
\$1.00 to \$1.30	5	10.4	1	2	0	2
\$1.30 to \$1.60	1	2.1	1	0	0	0
\$1.60 to \$2.00	9	8.3	1	0	2	1
\$2.00 or Over	8	16.7	2	5	1	0
TOTALS	48	100.0	11	14	10	13
Median(\$)		0.85	0.93	1.00	0.85	0.60

SOURCE: Institute of Public Administration Special Telephonic Survey of Sixty Transportation Providers, March 1980

^{1/} The median total vehicle cost of \$15,400, at a 95 percent confidence level falls between \$14,000 and \$17,000. Relating these costs to the 12 - 15 thousand miles per vehicle (also at the 95 percent level), the cost per vehicle mile range of 86 to 95 cents is derived.

Projects were asked a number of questions with respect to restrictions which funding sources for transportation projects for the elderly imposed upon their ability to coordinate services with others or to share their project expenses. Details on the responses may be found in the Technical Report. It is notable, however, that 50 of the providers surveyed (83%) reported that funding sources did not restrict cost sharing. This probably reflects the fact that the primary funding sources being used by these projects (Title III, Section 16(b)(2)) directly encourage coordination directly. It may also be that the difficulty of developing cost-sharing approaches may discourage providers rather than any direct funding restrictions.

TABLE 20
 IMPROVED TRANSPORTATION SERVICES STUDY
Total Annual Operating Costs per Vehicle - 1979

Interval in Dollars (Annual Operating Costs per Vehicle)	All Providers	By Level of Urbanization (Providers)			
		Metro	Urban	Urban/Rural	Rural
Under \$5,000	8	2	0	3	4
\$5,000 to \$10,000	8	1	2	3	1
\$10,000 to \$15,000	11	0	5	2	4
\$15,000 to \$20,000	14	5	2	4	3
\$20,000 to \$25,000	6	1	3	0	2
\$25,000 to \$30,000	3	1	1	1	0
\$30,000 to \$35,000	2	1	1	0	0
\$35,000 or Over	4	1	2	1	0
TOTALS	56	12	16	14	14
Median (\$)	15,400	18,000	17,500	12,500	12,500

SOURCE: Institute of Public Administration, Special Telephonic Survey of Sixty Transportation Providers, March 1980.

In this connection, the findings of the General Accounting Office Report: Hindrances to Coordinating Transportation to People Participating in Federally Funded Grant Programs noted that there is widely felt confusion about programmatic and regulatory intent. Without clarification as to uses of program funds, providers appear to follow the most restrictive interpretation which ultimately impacts the quality and quantity of service that can be provided.

Insurance Costs

A problem that has received considerable attention in recent years is the cost and availability of insurance. To provide some insight into the experience of transportation providers, projects were asked three questions about their insurance experience:

1. Whether they had had any difficulties obtaining insurance;
2. Whether their policy had ever been cancelled; and,
3. By whom were they insured.

Projects were also asked to provide data on their premium experience. The findings are summarized in Table 21 and 22 for those questions for which reasonably reliable and consistent responses were obtained. The small sample limitations obviously apply.

To some extent the results were surprising, although consistent with IPA's experience in this area. To begin with, very few of the projects indicated that they were having insurance problems with availability or cancellation (Table 21A).^{1/} Most of the projects (71%) were insured by private companies or a unit of government (22%), and just about all of the latter were county or local jurisdictions (Table 21B). State insurance was obtained in only one instance.

^{1/} During the telephone and field surveys, the few projects encountering problems were asked to identify them. Their responses indicated that cost, availability or cancellation were not among these. One project complained that their insurance company was reluctant to cover part-time older drivers but this was the only case which reported having such a problem.

Table 21
 IMPROVED TRANSPORTATION SERVICES STUDY
Insurance Experience

A. Insurance Eligibility and Cancellation

Item	YES		NO	
	Number	%	Number	%
1. Present Problem Obtaining Insurance?	7	11.7	53	88.3
2. Insurance Policy Ever Cancelled?	3	5.0	57	95.0

B. By Whom Insured

Agency	Number of Responses	Percent
Private Carrier	39	71.0
Self-Insured	2	3.6
Unit of Government	12 ^{a/}	21.8
Other	2	3.6
Sub total	55	100.0
No Response	5	--
Total	60	--

^{a/} Out of the 12 governmental units, 11 were county or local government.

NOTE: Twenty-three (23) sample providers were classified as public agencies.

SOURCE: Institute of Public Administration, Special Telephonic Survey of Sixty Transportation Providers, March 1980

Table 22
IMPROVED TRANSPORTATION SERVICES STUDY

Average Insurance Premium per Vehicle -- 1979

Interval in Dollars (Premium Cost per Veh.)	All Providers	By Level of Urbanization (Providers)			
		Metro	Urban	Urban/Rural	Rural
Under \$500	17	1	3	5	7
\$500 to \$750	6	1	1	3	1
\$750 to \$1,000	5	0	2	2	1
\$1,000 to \$1,250	3	2	0	1	0
\$1,250 to \$1,500	5	2	2	0	1
\$1,500 to \$1,750	3	0	2	0	1
\$1,750 to \$2,000	0	0	0	0	0
\$2,000 or Over	4	0	2	1	2
TOTALS	43	6	12	12	13
Median (\$)	688	1,125	1,000	583	464

SOURCE: Institute of Public Administration, Special Telephonic Survey of Sixty Transportation Providers, March 1980.

Projects were asked to provide information about their 1979 and 1980 premiums in order to calculate the coverage premium cost per vehicle. Tabulations were prepared but because few operators knew their 1980 premium costs, comparisons between these two years could not be made. It was possible, however, to develop these vehicle premium cost distributions for 1979, and the results are presented in Table 22. For all providers combined, the median cost per vehicle was about \$700 with variations by urban level ranging from around \$500 in rural areas to \$1100 in metropolitan areas. These premium costs likely reflect actuarial experience across different levels of urbanization.

Based on the foregoing data, it may rightfully be concluded that insurance is not a very large share of operating costs -- perhaps in the range of 5 percent of total project budgets for providers with 5 to 7 vehicles.

Monitoring and Evaluation

Monitoring and evaluation of system performance are extremely important aspects of administering transportation services. An ongoing program of assessing system operations in relation to programmatic goals can tell the management whether needed service is being efficaciously delivered at acceptable cost levels, and what system improvements, if any, might be warranted.

We asked our telephone sample providers a number of questions to provide a profile of the types of monitoring and evaluation programs used by transportation providers serving the elderly. We hoped to develop an understanding of how providers viewed system monitoring, and to determine where improvement might be made to develop more effective monitoring programs.

The most common records kept by the projects were daily driver logs (reported by 85% of the sample), and though of varying detail, the log generally included, at least, places of trip origin and destination, time of day and number of passengers (Table 23). Far fewer projects required daily dispatch reports; only 37 percent of the sampled projects kept those reports, as driver logs were usually assumed to provide all the requisite information for monitoring purposes.

We were also interested in the extent to which providers prepared operations reports for the purposes of central management as well as the level of feedback provided on those management reports. Although Area Agencies generally require monthly reports on service levels, we wanted to determine the prevalence of mutual (AAA and provider related) monitoring and evaluation systems. In that context, although 77 percent of the providers

Table 23
 IMPROVED TRANSPORTATION SERVICES STUDY
Monitoring and Evaluation Characteristics

	YES		NO	
	Responses	%	Responses	%
1. Require Daily Dispatch Reports	22	36.7	38	63.3
2. Require Daily Driver Logs	51	85.0	9	15.0
3. Prepare Management Reports on Operations	46	76.7	14	23.3
4. Receive Feedback on Accountability Report	22	36.7	38	63.3
5a. Ever Received Technical Assistance	22	36.7	38	63.3
b. From Whom				
	Number	Percent		
State DOT	8	38.1		
Area Agency on Aging	5	23.8		
Transit Agency	3	14.3		
Planning Commission	2	9.5		
Local Government	3	14.3		
Subtotal	21	100.0		
No answer	1	--		
TOTAL	22	--		
6. Number of Different Accountability Reports Provider Required to Prepare	Number of Responding Providers		Percent	
None	31		51.7	
1 to 3	17		28.3	
3 through 5	6		10.0	
More than 5	6		10.0	
TOTAL	60		100.0	

SOURCE: Institute of Public Administration, Special Telephonic Survey of Sixty Transportation Providers, March 1980

indicated they prepare management reports, only 37 percent ever receive feedback on the accountability reports from their funding agencies (Table 23). Thus, although there is a high level of self-monitoring at the project level, there is little evaluation of system performance from funding sources.

Accountability reports are seen by many providers as duplicative and an unproductive waste of time. Although about half of the providers were not required to file different accountability reports, the other half were -- 12 providers indicating 3 or more different ("redundant") reports on the same clients receiving the same service (Table 23). Because projects generally are not provided with funds to cover the costs associated with project monitoring, and very few providers are given feedback on their accountability reports for system evaluation, their complaints about monitoring requirements appear to be well founded.

In addition to a low level of project evaluation by programmatic sponsors, we found a low level of technical assistance being utilized by the providers. Only 37 percent of the telephone sample providers indicated ever receiving technical assistance for their transportation projects -- mostly from State Departments of Transportation and the AAAs (Table 23). Other local agencies that offered technical assistance included the local transit agency, planning commission and local governmental unit.

A final note relates to the role of the elderly in evaluating services. The role of the elderly in program evaluation was surprisingly not very extensive. In terms of the 20 providers interviewed in the field, only 10 indicated that the elderly provide any evaluation of service and half of those were through advisory boards. There were four projects that indicated that the elderly monitored performance via either "advocacy functions" or "complaints", and four others had no specified roles for the elderly. Thus, the elderly clients appear to play a rather minimal role in evaluating the transportation provided for them.

CHAPTER IV
INSTITUTIONAL AND COORDINATION ISSUES

Aside from operational and planning problems, transportation providers encounter a great many day-to-day problems in terms of their interaction with their sponsor agencies, other organizations (both public and private), and broad economic and social changes (such as energy crises, inflation, U.S. Department of Transportation and HHS 504 regulations, etc.) that impact their service. A number of questions were included in both the telephone and field surveys in order to obtain some notion of the impact of these institutional aspects on the provision of service. The discussion that follows relates to the responses to these questions.

Coordination Experiences and Practices

Coordination of transportation services is a potential means of improving upon the aggregate level of service offered by a number of independent providers. Although absolute costs may not necessarily decrease under coordinated services, improved system efficiency and effectiveness are widely agreed upon goals of coordinated systems.^{1/} Because of the potential benefits of coordinated systems, this is an important area of activity to document with respect to on-going aging-service providers.

Providers were asked three questions: what was their experience with coordination; were they required to coordinate and, if so, by whom;

^{1/} Coordination can occur on either the supply side (capacity utilization) or the demand side (assignment of trips among providers by specified trip purposes). Most efforts that have been undertaken have concentrated on the supply side through a variety of forms of sharing capacity and/or the cost of service provision. It has generally been assumed that for the specialized systems involved, demands are, largely, set by the available budget. That may be true for individual providers but on an aggregate basis there are real potentials for affecting or meeting demands by assigning responsibility among a range of providers -- including public transit. That is, in effect, what Congress has done under Sections 504 of the Rehabilitation Act and 16 of the UMT Act. Further potentials in this area need to be explored. This study suggests that if one looks beyond the categorical programs (that define specific clients), there is considerable evidence that the elderly want more

and were they linked to public (mass) transit in any way. Out of the 60 projects in the telephone survey, almost 60 percent indicated they were not coordinating at the present time (Table 24). In terms of the 26 projects that indicated they were coordinating, about half noted they were involved in some form of joint information exchange -- a useful activity but not a direct service and/or cost sharing effort.

At a perhaps more relevant level (at least in terms of service coordination as contrasted to "cooperation"), eight of the providers noted that they were involved in brokerage functions while a scattered number reported activities in the areas of centralized dispatching and maintenance, bulk purchasing, uniform/cost accounts and shared administrative costs (Table 24). The survey indicated that although projects were engaged in a broad range of coordination activities, the most frequent response was that they did so by sharing information. As previously noted, information exchange requires the least commitment of resources from the participants of all the other activities listed, and is likely to have the lowest measurable benefits. However, information exchange is one method to introduce providers to the potential benefits of further coordination and can be considered a preliminary phase of coordination. This cooperative level of information sharing includes joint advisory functions in which experienced providers exchange their expertise with other, less skilled, providers.

Brokerage functions and centralized dispatching involve a high degree of operational integration between providers, as vehicles from a number of providers are dispatched or assigned by a central broker as needs arise. The benefits of centralized coordination are usually enhanced system effectiveness in meeting transportation demand and system efficiency in improved utilization of resources. Operational integration is also implied by centralized equipment maintenance and bulk purchasing of supplies,

trips related to the general needs reflected in the high priorities attached to personal business and shopping trips. Providing some means of meeting these demands (by demand coordination) needs to be considered.

Table 24

IMPROVED TRANSPORTATION SERVICES STUDY
Coordination Experiences and Practices

Coordination Question	YES		NO	
	Providers Responding		Providers Responding	
	Number	Percent	Number	Percent
1a. Presently Coordinating	26	43.3	34	56.7
b. How Coordinating:				
Joint Information Exchange	19	47.5		
Centralized Dispatching	3	7.5		
Centralized Equipment Maintenance	1	2.5		
Bulk Purchasing	2	5.0		
Brokerage Functions	8	20.0		
Shared Administration Costs	2	5.0		
Uniform Cost Accounts	1	2.5		
Shared Advisory Functions	4	10.0		
TOTAL 1b	40 ^{a/}	100.0		
2a. Required to Coordinate	12	20.0	48.0	80.0
b. By Whom				
Funding Sources	4	33.2		
State	2	16.7		
County	2	16.7		
Transit Agency	2	16.7		
AAA/Title III	2	16.7		
TOTAL 2b	12	100.0		
3. Satisfied with Present Coordination Efforts	15	25.4	44	74.6
a. Is Transportation Service Linked to Transit?	15	25.0	45	75.0
b. How Linked?				
As Feeder Service	12	57.1		
As Interim Service for 504	3	14.3		
As Added Service to Outlying Areas	4	19.0		
Receiving Management Technical Assistance	2.	9.6		
TOTAL 3b	21	100.0		
a/ May add to more than 26 projects because projects may use more than one coordination technique.				

SOURCE: Institute of Public Administration, Special Telephonic Survey of Sixty Transportation Providers, March 1980.

although the integration is less extensive than brokerage or centralized functions. The benefits of bulk purchases of supplies are reduced costs per unit bought. In light of these cost saving aspects, it is surprising that so few providers utilize this procedure. Centralized maintenance usually requires at least one provider to have maintenance facilities, a requirement met by few of our telephone sites.

Finally, administrative coordination, through shared administrative costs or uniform cost accounts, was reported by very few providers. The reason for the low level of administrative coordination reflects a variety of factors well discussed in the literature -- not the least of which is a reticence to relinquish project control. Very few of the projects in our sample were willing to enter into any agreements that they felt would endanger the dedication of their service to first and foremost serve the elderly.

We were also interested in whether providers were coordinating on their own or whether they were required to do so. About 80 percent of the providers indicated they were not required to coordinate, and those who indicated they were (12 providers), identified their funding sources and/or state or local agencies as the initiator of the requirements (Table 24). An interesting observation may be made with respect to the linkages noted between the providers and public transit. Only 25 percent of the 60 providers indicated any links with transit, and that was mainly as a feeder service to transit systems. Four of the providers were used to complement transit by providing added service to outlying areas, and three indicated they were to have a role as part of interim services to be developed in compliance with U.S. Department of Transportation 504 regulations.

On-Site Coordination Experience

The field interviews afforded an opportunity to further detail how providers are coordinating, and with whom. We were able to identify a number of coordination modes that have been successfully employed by many

of our field sites; procedures that could probably be successfully applied by other providers. Overall, fourteen (out of 20) of our field sample providers indicated that they coordinated their transportation services, and the agencies with whom they coordinate are most frequently other social service agencies or local governmental units (Table 25). Fewer providers were coordinating with taxi operators, transit or other providers.

Table 25
Coordination Experiences of Field-Site Providers

Coordination Question	YES Responding Providers	NO Responding Providers
1a. Presently Coordinating?	14	6
b. With whom		
Social Service Agency	9	
Local Government	4	
Other Provider	3	
Taxi Operator	3	
Transit Authority	2	

Source : Institute of Public Administration Field Survey of 20 Transportation Providers, June 1980.

Our questions on specific coordination modes fell into three categories: vehicles, operation, and administration.^{1/} Responses by the providers in the field who were coordinating indicated that coordination modes associated with vehicles and operators were used somewhat more frequently than those associated with administration although they were not statistically significant (Table 26). Vehicular coordination most often involved joint utilization of vehicles, including sharing vehicles when one's own

^{1/} The division was based on the fact that coordination efforts from the provider viewpoint are focused (properly) on two aspects: more effective use of the system's capacity and associated changes in variable costs, and spreading fixed costs over as many units of outputs as possible reflected in administrative and similar costs. The categories of vehicles and operations were used as surrogates for variable cost coordination efforts and administration for fixed costs. Obviously, there is some overlap but it provided a convenient taxonomy for the survey.

were "down" for maintenance or repairs. Coordinated vehicle purchases were also prevalent, although it was not clear whether this was due to provider-induced coordination or through the efforts of a common source of funds such as a state department of transportation. The most common operations mode of coordinating was through purchase of service. This mode consists of one provider selling excess capacity to a service provider with clients in need of transportation. In this fashion, excess capacity can be shared across a common pool of users.

As noted, coordination of administration was less frequently reported as an activity although one must be careful in this interpretation because of the small number of respondents involved and the possible range of error. In addition, the activities shown under the administrative category are not entirely independent of the activities and cost impacts implied for the categories of vehicles and operations. The responses to the administrative aspects of coordination do show, however, a more diffuse set of responses spread over a range of management and administrative activities in which providers indicated greater reticence for participation. This reticence to administratively coordinate may result from an unwillingness of these social service agencies to relinquish control over their service programs. Providers appear to be more willing to engage in coordination activities of a lower order over which they retain some administrative control.

Transportation Providers and the Area Agencies

A number of questions were asked in the telephone survey that provided information on the linkages between the transportation providers, the State Units on Aging and the Area Agencies on Aging. These responses were supplemented with questions put to 20 Area Agencies on Aging at the field sites, as described on the following page.

Transportation providers were asked how frequently and for what purpose they were in contact with the Area Agency on Aging or the State Unit on Aging. Almost 70 percent of the 60 providers noted that they are

Table 26

Coordination Modes Used By Field-Site Providers

<u>Coordination Category & Mode Used</u>	<u>Number of Providers Using Each Mode a/</u>
1. <u>Vehicles</u>	<u>13</u>
Jointly utilize vehicles	6
Jointly utilize special equipment	2
Lease vehicles	3
Coordinate vehicle purchases	5
Share vehicles during down time	5
Joint van or carpools	1
2. <u>Operations</u>	<u>12</u>
Purchase service	8
Joint maintenance contracts	2
Joint maintenance facilities	2
Centralized operations	1
Centralized telephone and/or hot line	5
Joint seminars, workshops, etc.	5
Coordination of drivers, dispatchers	5
Coordinated volunteer drivers	1
Shared bulk purchases	6
Shared use of excess capacity	2
3. <u>Administration</u>	<u>8</u>
Coordinated system management	2
Uniform data collection methods	4
Uniform data forms	3
Common monitoring and evaluation	2
Shared legal or technical assistance	3
Uniform service and operating definitions	2
Shared data processing	1
Coordinated third party billing	3
Integrated funding requests	2
Obtain local tax exemptions	2
Fleet insurance rates with other providers	3

a/ Projects may be using more than one mode of coordination.

SOURCE: Institute of Public Administration Field Survey of 20 Transportation Providers, June 1980

in contact with these agencies at least 1-2 times a month, and close to 20 percent indicated 3 times or more (Table 27A). Most of the contacts were for program discussion and information exchange or related to monitoring and evaluation functions and budgeting. These results corresponded (for both purpose and frequency) to the views expressed by the AAAs in the field: out of 16 AAAs responding, six indicated they were in contact with the provider on a daily basis, two said weekly and four monthly (Table 28). Even discounting some optimism on the part of the AAAs, contact seemed reasonably frequent. In this context, it is interesting to note that 11 of the providers (out of 20) in the field noted that they were rarely or never in contact with the State Unit on Aging.

Table 28
Reported Frequency of Contact Between
Transportation Provider and AAA

Agency	No. of AAAs Reporting Specified Contact Of			
	Daily	Weekly	Monthly	Other
AAA	6	2	4	4

Because technical assistance was so frequently cited as a means of dealing with specific technical and policy issues, providers were asked to indicate the value of the technical assistance they received from the AAAs and the State Units on Aging (Table 27C). In terms of "unspecified" technical assistance, 57 of the transportation providers surveyed said they had received no technical assistance from their State Unit on Aging; the response for the AAA was only slightly improved -- about a third had received technical assistance (Table 27C).

In terms of specific categories of assistance, the State Units' record remains poor. The same could be said for the AAAs with the exception of funding and budgeting where half of the providers reported obtaining help. However, the fact that the AAAs were usually one of the primary funding agencies largely explains the result.

Table 27

IMPROVED TRANSPORTATION SERVICES STUDY
 Linkages Between Transportation Providers And
 State Unit on Aging and Area Agency on Aging

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A. Frequency of Contact

No. of Times in Contact (Frequency per Month)	No. of Providers Responding	Percent
No contact reported	8	13.3
1 - 2 times	41	68.3
3 - 4 times	9	15.0
5 or more times	2	3.4
TOTAL	60	100.0

B. Purpose of Contact

Purpose of Contact	No. of Providers Responding to Specified Purpose	Percent
1. Want to discuss program and exchange information	17	40.4
2. Monitoring operations and Evaluation Reports	11	26.2
3. Budgeting, Finances	6	14.3
4. Coordinating Funding and/or Consolidating Program	2	4.8
5. Advisory Board	2	4.8
6. Miscellaneous	4	9.5
TOTAL	42	100.0

C. Type of Assistance Received

Category of Assistance	Transportation Providers Response in Terms of Assistance From The							
	State Unit on Aging				Area Agency on Aging			
	YES		NO		YES		NO	
	No.	% of Providers	No.	% of Providers	No.	% of Providers	No.	% of Providers
1. Technical Assistance -- (unspecified)	3	5.0	57	95.0	19	31.7	41	68.3
2. Funding/Budgeting	1	1.7	59	98.3	30	50.0	30	50.0
3. Staffing	0	0	60	100.0	6	10.0	54	90.0
4. Operating the Service	1	1.7	59	98.3	14	23.3	46	76.7
5. Vehicle Specifications	1	1.7	59	98.3	9	15.0	51	85.0
6. Coordinating with Other Agencies	1	1.7	59	98.3	13	21.7	47	78.3
7. Administrative	2	3.3	58	96.7	15	25.0	45	75.0
8. Other	2	3.3	58	96.7	4	6.7	56	93.3

SOURCE: Institute of Public Administration, Special Telephonic Survey of Sixty Transportation Providers, March 1980.

Most of the providers felt they were getting no (State Units on Aging) to little (AAA) technical assistance. Obviously, the views of the AAAs and the transportation providers differed about how much help was being provided. When 20 AAAs were asked the same question during the field survey, 70 percent (14 out of 20) said they were providing technical assistance "unspecified"; and in terms of specific assistance, 80 percent said they were helping on budgeting and finance, 75 percent reported assistance for providers to coordinate with other agencies, and 55 percent said they were helping on administrative matters (Table 29).

There is no way to reconcile these perceived differences without a considerably more detailed analysis. It is however quite clear that the State Units on Aging provide little guidance or assistance to transportation providers, although in some states their aid comes through the State Department of Transportation and, as such, may not be reflected in the providers' response or understanding. As for the AAAs, there is clearly room for improvement -- assuming they had the expertise and/or the budget to obtain and pay for it. By no means does it follow that the AAAs (given all their other responsibilities) would be the appropriate place for that kind of transportation assistance.

Table 29

Types of Assistance Reported By AAAs Being Provided
To Transportation Providers

Category of Assistance Reported By AAA	No. of AAAs Responding	As Percent of Total AAAs Interviewed (20)
1. Technical Assistance -- (unspecified)	14	70
2. Funding/Budgeting	16	80
3. Staffing	4	20
4. Operating the Service	5	25
5. Vehicle Specifications	5	25
6. Coordinating With Other Agencies	15	75
7. General Administration	11	55
8. Other	4	20

Source: Institute of Public Administration, Field Survey of Twenty Area Agencies on Aging, June 1980

In the early stages of the project some concern was expressed about the shift of Title VII funds of the Older Americans Act to Title III with a resulting elimination of reduction of transportation support from the nutrition program. In this context, the transportation providers in the field interviews were asked if they had experienced any major changes in the level of transportation they provided after the consolidation of Title VII into Title III. The overwhelming response was no (18 out of 20 responding), although part of their response may have been due to the fact that their fiscal 1980 budgets had not been affected as yet. This impact could still emerge in fiscal 1981 and needs to be monitored.

The AAAs, in response to the same question, had differing opinions about the effect: nine out of 17 AAA respondents indicated there had been a change in transportation since the shift. However, when the AAAs indicating a change were asked to identify what the major change was, three indicated that there had been a reduction in the amount of transportation available for nutrition transportation; one AAA indicated there had actually been an increase in transportation funding; and the four AAAs falling into the category "other" indicated no serious change had occurred, at least as far as nutrition projects were concerned. The overall thrust of the responses appeared to suggest that there has not, at this time, been any clearly identifiable reduction in the amount of transportation service available as a result of the integration of Title VII into Title III with the associated regulation changes. However, because transportation is no longer expressly specified as a supporting service, that situation could change in the future, and the comments for fiscal 1981 could hold.

The Energy Crisis

The telephone survey offered a timely assessment of the impacts of recent fuel shortages and price increases upon transportation services for the elderly. There have been gasoline shortages in some cities during the previous summer and the price of gasoline has doubled in the last year. Because social service agency budgets have not increased at the same rate as operating expenses, and given the reliance of some providers on volunteers, providers were questioned about their experience with respect to the energy crisis.

Just under half of our telephone sample of 60 providers (47%), indicated that they had felt some of the impacts of increased fuel prices (Table 30). Providers indicated that they reduced the number of trips provided by their system (reported by eight operators), reduced the number of clients served (reported by six operators), or restricted the types of trips allowed (five providers). In order to deal with future fuel shortages, about 30 percent of the 60 providers sampled by telephone indicated they had been given a special fuel entitlement, in case of future crises. The only question that remains is why all the other providers have not reported similar plans. It is quite evident that if standby plans are to be developed, a State and/or Federal initiative is needed.

One result of increased fuel prices and reduced availability was a reduction in the willingness of volunteers to offer transportation. This is one area where social service agencies, and elderly programs in particular, face a severe challenge. To the extent that the aging program relies upon volunteers, especially elderly volunteers on fixed incomes, fuel prices are likely to play an inhibitory role on volunteer transportation activities.

Table 30
IMPROVED TRANSPORTATION SERVICES STUDY

The Energy Crisis and Transportation Service

Question Coverage	YES		NO	
	Responding Providers		Responding Providers	
	Number	Percent	Number	Percent
1a. Any impact on transportation service due to fuel list increases	28	46.7	32	53.3
b. What impacts:				
Number of trips provided	8	42.1		
Type of trips allowed	5	26.3		
Type of client allowed	0	0		
Number of clients served	6	31.6		
TOTAL	19	100.0		
2. Experienced gas shortage during fuel crisis of Summer 1979	11	18.3	49	81.7
3. Decreased volunteers during 1979 fuel crisis	10	16.7	50	83.3
4. Provided with special fuel entitlement in cast of future crisis	13	21.7	47	78.3
5. Have developed service contingency plans	18	30.0	42	70.0

SOURCE: Institute of Public Administration, Special Telephonic Survey of Sixty Transportation Providers, March 1980.

CHAPTER V

FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

From the transportation providers and the Area Agencies on Aging interviewed in the field and by telephone, a wide range of problems were identified. These have been presented in the previous chapters (and in more detail in the Technical Report). Important additional sources were gained from the comments of the 20 on-site AAAs and providers in response to an open-ended question asking them to identify and discuss the major problems they encountered in providing transportation services. In this section we have combined the findings from the previous chapters with the open-ended comments covering the areas of planning, funding, project managements, staffing, operations, budgeting and costs, vehicles and vehicle maintenance, training and technical assistance and coordination.

Planning

In terms of planning problems, a substantial number of the transportation providers observed that there was often a significant disparity between the interests and perceptions of the various groups providing transportation services. To begin with, typically small systems serving the elderly are generally not integrated into the regional planning process or, for that matter, with the Metropolitan Planning Organization or the transit agency. In rural areas the problem is more acute because of the lack of planning institutions and mechanisms; where available, they tend to be more constrained due to inadequate funding.

An important perceptual problem identified in the survey was the gap between the social service agencies who feel they deal with human problems in contrast to transit and other planners who (the social agencies felt) were concerned with "equipment" and "machines". Both the AAAs and the

transportation providers noted that planning studies are not substitutes for good operational criteria that take into account human needs. It is interesting to note, in this context, that our findings indicated that the AAAs and providers had not themselves enthusiastically embraced the idea of service monitoring by the elderly. In addition, the gap in perceptions of planning between the social service agencies (as transportation providers and funders) and transportation planners reflects the gap in communication and contact -- given the present planning process in most communities, they hardly know one another.

Since most of the systems studied were being operated by a social service agency, an important consideration is whether social service agencies are better equipped to plan and transport the elderly than ongoing transportation planning agencies and providers. Our findings indicate that the existing social service agency transportation providers do a reasonable job. But there is also evidence that many of them have little experience with the provision of transportation service. There is, as a result, a need for increased input by transportation specialists and greater levels of technical assistance and training to the social service agencies and their associated transportation providers. This could produce important benefits measured in terms of productivity and an overall improved quality of service.

In rural areas, the difficulties of planning are intensified by the recognition that both the citizens and social service agencies are less familiar with public transportation. Conventional line-haul transit frequently does not exist, although this gap may eventually be filled by Section 18 of the Surface Transportation Act. In any event, planning processes in rural areas must be improved before any major beneficial changes take place and this, in turn, involves broadening the current base of support for rural planning. Another point expressed in terms of rural areas was that urban planning techniques often did not work well in rural areas and needed to be modified. In view of the recent literature that has emerged on small

community and paratransit planning, this may be a rural variant of the cry for technical help.

Transportation providers and AAAs felt that the planning techniques they used were often inadequate, and their initial efforts to estimate demand often were much too low, resulting in insufficient capacity available for the required service. (There were strong indications, however, that even if they had estimated demand correctly, there would not have been sufficient funds to provide the amount of service required.) Differing and inconsistent interpretations of federal and state regulations were often cited as elements that impeded the planning process and introduced confusion as to what kinds of planning and operating practices and criteria were to be followed. It is quite evident that those interviewed felt that service planning was often a "seat of the pants" approach.

Funding

Unquestionably one of the major issues that emerges from the responses of the AAAs and the transportation providers is the significant shortage of transportation funding and the impact resulting therefrom. The shortage is reflected in a variety of related areas including the more general complaint from transportation providers that they suffered from an excess of demand relative to the supply of service they had available. The result was scarcity of funds for all aspects of their operations, and not surprisingly under the circumstances, a considerable discontent with the agency responsible for planning the distribution and allocation of such funds. There is no easy solution to the question of too little funding since this question cuts across the entire range of governmental services whether they are at the local, state or federal levels. It reflects the impact of priorities selected by Congress in the context of a broad range of national problems. When federal funding is cut back in particular areas, there is a repercussion on state government, especially for programs serving the elderly where the state serves as a primary channel for allocating and administering the program.

One of the most consistent points raised about the funding process was the fact that long-range planning was impossible. Most of the projects expressed concern with the fact that funding was of a relatively "sporadic" nature that defeated serious long-term planning. For example, the program under the present Older Americans Act provides for a three-year planning horizon, but despite the proposed planning cycle, most of the projects commented that they could not plan for a period longer than one year and that made it very difficult to undertake comprehensive efforts to plan for integrated and coordinated services. (It should be noted here that the three-year time horizon is not entirely inconsistent with a broader national need to reappraise both the availability of resources and the priorities to be attached to the particular program. However, it must be conceded that this funding cycle is probably not long enough to plan for coordinated services on a regular basis).

All of the projects interviewed (whether by telephone or on-site) indicated that the current absolute level of funding for transportation services for the elderly was much too low, not only in terms of the demands and needs of older Americans but also to be able to just maintain the present level of service in the face of rapidly increasing costs associated with inflation. In Utah, substantial reductions in service have resulted from a 70 percent cutback in social service funding while New Jersey imposed a five percent "cap" on any annual budget increases which was described by one transportation provider as inadequate given inflationary increases. In New Mexico, the provider indicated that more operating funds are needed, particularly in rural areas.

Funding deficiencies cut across many areas. In the area of staffing, for example, the level of funding did not permit adequate training, particularly sensitivity training (San Francisco), nor the ability to retain competent staff (Columbia, SC). In addition, one provider (Rockville, MD) reported that current funding levels were sufficient to meet only one-third of their indicated need for service.

A number of transportation providers were concerned about the equity of the local funding distribution mechanisms. They felt that funds for transportation should be made available on some specified basis such as number of elderly, a specific ration of transportation dollars to program dollars or some mix of demographics and service measure.

The assertion was frequently made (and confirmed by the survey responses) that funding regulations at the federal level were confusing and that the demands made upon providers were unrealistic. A strong desire was expressed for greater systemization of the funding process with a much more coordinated effort required of all local providers being funded by federal money. Providers complained that the separate funding from many sources of many small providers in a given area resulted in losses in cost effectiveness and substantially reduced the potential for coordination. (It is indicative of the complex, confusing nature of funding as an issue, that equal emphasis was placed by some other providers upon the importance of not cultivating the Area Agency on Aging as the sole programmatic source of funding, reference being made, by at least one provider to the need for a "more diversified pool of resources". This, however, probably reflected the frustration of having to deal with funding shortages and the fact that the AAA is the primary funding agent with which one must deal).

There was considerable discussion calling for more consolidated processes -- perhaps using a cost sharing approach. The entire issue of a more consolidated approach and greater independence by the providers will need to be evaluated in the broader policy context of the role of transit and paratransit.

Project Management

It was the general feeling of transportation providers that both the AAAs and the providers frequently lacked management expertise and experience in transportation. The survey results confirmed that projects often did not understand the purpose of monitoring and evaluation nor did

they have the necessary management information systems on which to make effective management decisions. There were related staffing problems (to be discussed in the next section), and generally both AAAs and providers felt the need for some upgrading of project management. A relatively large number thought that the social service agencies and the AAAs, in particular, should be out of the transportation business.

Staffing

A great many of the staffing problems were associated with the lack of funds for obtaining either a sufficient number of personnel to run the project and/or personnel with adequate skills and background. Transportation providers observed that they had high turnover rates because they could not pay adequate salaries. Both the AAAs and providers noted that transportation service delivery personnel were being paid less than other people in the aging network, and the lack of stable funding frustrated any efforts on their part to develop staff training designed to reduce the high turnover rates.

Though the CETA program has served as an important source of staffing and personnel for the transportation projects (and though they were grateful for the availability of these funds and personnel), it was acknowledged that the CETA programs often provided unqualified staff. Many of the providers felt that because CETA funds were of limited duration, (typically 18 months), they added to their problems and the high turnover rate. However, a few of the systems developed successful training programs for their CETA trainees and reported subsequent permanent employment. However, 18 months was considered to be the minimum training period required.

Operations

A number of different aspects of project operations were identified as problem areas by the providers especially relating to the cost of operations, the role of volunteers, and issues relating to insurance. Our sample of providers and AAAs indicated, however, that no major insurance

cancellations had been experienced nor was insurance particularly difficult to obtain. Some concern was expressed about the use of volunteers as they affect the ability to obtain insurance and the related cost of doing so. A few projects reported that their insurance agents were trying to discourage them from relying upon volunteers. The consensus was that some form of federalized system might be needed since volunteers were so important to the providers.

Some of the projects indicated that the new social service insurance classification had had a favorable impact, but the evidence was conflicting. A project in Ohio indicated that their insurance costs had been reduced by half because of the new classification whereas in Vermont the AAA provider found that the new social service insurance classification put them into a commercial carrier group and their insurance costs doubled. The net impact of the new classification will obviously vary from project to project depending upon what basis they obtained their insurance earlier and actual accident experience.

In terms of operations generally, many of the projects indicated that they were harrassed by insufficient capacity in terms of the demands being put upon them. They had to turn away certain trip purposes and a twenty-four hour advance reservation system to try and handle the trip loads. Most of the providers indicated that they were interested in using a computerized dispatching system but were not clear at what point a computer dispatch system would result in greater efficiency relative to the cost of installation.

Budgeting and Costs

In terms of budgeting and costing, a wide range of problems were identified, mainly concerned with the procedures of the processes and what were considered to be a confusing array of regulations. Auditing requirements were also considered to be burdensome and not entirely consistent between agencies. There was a universal plea for simplification, reduction in the amount of paperwork required, and elimination of the duplication of forms (all requiring the same information).

It was fairly evident that the budget process was not so much difficult as time consuming, although many of the project directors and staff interviewed noted that they did not always understand what was expected of them. They felt some training would help considerably. A closely related problem voiced regularly by providers was that they lacked training in the techniques of making budget estimates, and urged better guidelines be developed at both the state and federal levels.

Transportation providers observed that they frequently encountered the problem of varying fiscal periods and budget periods so that it was difficult to plan any integrated effort among the programs funding the service. They urged that budget guidelines be made consistent from year to year, and asked for a "hot line" to the "top" of the federal agency so they could get "straight" answers to their questions. They suggested a sort of regulatory "ombudsman".

It was suggested that while "clearing up" the inconsistencies in budget and fiscal periods, the auditing requirements of the various funding agencies should also be reviewed. Repeatedly, transportation projects noted that they were uncertain about what the audit requirements were, and the requirements varied from agency to agency. In this context, it is worth noting that earlier surveys conducted by the Institute relative to the problems of coordination indicated that inconsistencies in budgeting, fiscal, and auditing procedures were significant deterrents to coordination efforts.^{1/}

Budgeting and costing procedures were closely related to project management and monitoring and to evaluation of the service. Projects voiced a need for uniform definitions of costs, service standards, and accounts. They did not always understand (by their own admission) the

^{1/} Institute of Public Administration, Transportation for Older Americans-1976, op. cit. November 1976. See especially Table 10, p. 21 where these specific elements were reported and also p. 31 of the same report where witnesses at hearing held by the Commissioner on Aging (in early 1975) identified repeatedly restrictive guidelines and administrative interpretations of federal programs as key barriers to coordination.

usefulness of cost information and indicated that it would be helpful if some sort of training sessions were available. An example of a cost issue which confused transportation operators was how to account for depreciation charges among agencies sharing their vehicles. Other examples of problems included how to treat in-kind contributions, volunteers, or the allocation of overhead costs vis a vis public and private non-profit agencies in contrast with for-profit agencies.

In a related area, the transportation providers noted that it would also be helpful to have uniform billing procedures with the federal or state governments developing several alternative models. Providers recognized that one model would not be good for everyone but they thought several models could be developed -- each illustrating a particular format for billing (for example, billing on the basis of vehicle miles and operating costs or some other combination of services and cost sensitive measures).

There was considerable discussion on the differences between the private for-profit and the private non-profit organizational forms, particularly as they relate to funding and budgeting procedures. Most of the transportation providers surveyed were private non-profit organizations but the budgeting and accounting techniques they are using have been, in the main, developed for private for-profit organizations. These providers expressed a need for the development of some modifications of these systems in order to make them more applicable to non-profit and public agencies along with some explanation of the differences when applied to these respective organizational forms. How to allocate specific overhead costs, as previously noted, was one area of particular concern in this regard.

In connection with costs, the issue of multi-purpose agencies versus single purpose agencies was raised. Providers who were solely concerned with transportation felt they were being unfairly criticized in terms of their operating costs when compared with multi-purpose agencies. These agencies were able to "distribute" or "hide" many of the transportation overhead and administrative costs in other agency functions -- something they could not do as transportation providers alone. This relates to the earlier point

made about developing uniform cost accounts. There is little question that different providers often allocate costs in different ways, and comparisons between them are not particularly valid. There is little doubt that providers would welcome some consistent set of cost account definitions and a consistent set of rules or guidelines on how to use the accounts and make allocations of overhead where there are several agency functions being served (i.e. for the multi-purpose agency). In addition, some standard definitions of units of service would aid providers in determining costs of service delivery for budgeting evaluation.

Vehicles and Vehicle Maintenance

The transportation providers, when asked about their problems with vehicles and vehicle maintenance, identified a number of specific areas. Shortcomings with respect to vehicle specifications generally and difficulties with state specifications set under the Urban Mass Transportation Administration's Section 16(b)(2) program specifically were raised. Providers complained of difficulties and delays associated with funding under Section 16(b)(2) and problems associated with vehicle delivery. A number of the transportation providers noted they had problems with their vehicle dealers, particularly with vehicle warranties. Many providers were having difficulty with maintenance, especially in obtaining proper maintenance or in having a reasonable maintenance facility available of their own. Maintenance is undertaken fairly regularly, according to the survey responses, but there is not much indication that providers are practicing preventive maintenance on any consistent basis. The most common vehicle was the (modified) van, and providers encountered problems with transmissions, brakes, lifts, shocks, doors, and, in rural areas, the fibreglass fuel tanks vulnerable to gravel on rural roads. Some providers in warm climates also had problems with their air conditioners.

Providers commented on the lack of space in the vans for older riders, especially if carrying wheelchairs, and noted the elderly have difficulty moving around in the vehicle. The view was expressed during several interviews that vans were best suited for recreational purposes. Generally, it was felt that the van was not strong enough to stand up to daily use, and providers expressed disappointment that a better vehicle design was not available. This confirms previous study findings indicating that an im-

proved small vehicle design could increase the quality of transportation and lower the costs of maintenance.

As noted, there was widespread dissatisfaction with the vehicle purchasing process under Section 16(b)(2) of the UMT Act: state delays and contract specifications made it difficult to get started. State specifications were often considered either too restrictive or inflexible, and projects noted that they were not always consulted when specifications were set. There was some concern expressed about the low bid process which was felt to sometimes result in poor vehicle quality and warranty problems, and did not consider costs over the life of the vehicle. One solution might be to develop a life-cycle cost bidding process to assure that all aspects of vehicle costs are considered over the vehicle life (life cycle cost estimate could be based on experience).

There was some concern about the age of vehicles, particularly vans. Projects were reporting vans that were 4 to 7 years old. However, the survey sample indicated that at least half the van fleet was less than 3 to 5 years old (in both rural and urban areas) and almost 70 percent of the reported van fleet was under 4 years. It is likely that vehicles were perceived as being old in the context of all the mechanical and operating difficulties described above.

A number of the projects, particularly where some form of brokerage was involved, expressed the view that often their vehicles or the vehicles of participants in their broker system were sometimes given a low maintenance priority among other vehicles of other local providers. Some transportation providers indicated that they were obtaining service through county maintenance departments. Because the county maintenance divisions were often understaffed (and all county vehicles were being serviced there), obtaining quick service was very difficult. There were several providers who were obtaining maintenance from city motor pools but they did not appear to be encountering any delays. Experience suggests that maintenance is a problem and there is no easy solution other than careful follow-up of service.

Training and Technical Assistance

As noted in the previous comments and recommendations, a considerable need for training and technical assistance was identified by both providers and the AAAs. This expressed need is directly related to the range of planning and operating problems already discussed. We will not repeat the specific areas of training and assistance already identified in the previous sections but will rather stress general issues raised by providers on the problems of training and assistance.

It was consistently and repeatedly indicated that both the transportation provider and the AAAs needed more training covering a wide range of functions and activities. Providers indicated that the state departments of transportation in conjunction with the state human services agencies should provide more technical assistance and training to social service transportation programs. In this regard, it should be noted that the Administration on Aging sponsored an extensive technical assistance and training program including the development of information and training modules which have been distributed to the State Units on Aging and many of the state departments of transportation. There does not appear to be any indication from the survey responses that the state human services agencies have been playing a particularly active role.

Although many of the providers do offer training to their drivers and other staff when first employed, they stressed that training and re-training are continuously necessary in order to insure the steady professional growth of their employees. However, many projects expressed concern because they had limited budgets and time availability in which to offer adequate training.

Stress was placed on the special need for training programs in rural areas where the availability of technical assistance was more limited than in urban areas. In the survey, rural providers indicated that they received very little assistance from anyone, even though they certainly needed it. The projects we interviewed generally felt that their states were in the best position to provide such training, and that with federal initiatives, the role of their states could be stimulated and expanded.

Coordination

Whether in terms of service or funding coordination, savings in variable costs or fixed costs, or just the intuitive feeling that coordinated transportation efforts could be more cost effective, almost all of the providers and the Area Agencies in our sample saw coordination as an opportunity to stretch otherwise limited budgets. However, although not all of the providers saw coordination in the same way or even as having the same potential, they consistently identified and recommended approaches and directions for implementation ranging from federally and state mandated requirements to specific suggestions for broad changes in regulations, and the removal of specific institutional obstacles. The willingness and desire for coordination occurred in both rural and urban contexts, and was considered one of the only alternatives to the fragmentation that characterized so many of the provider networks in this study.

With all of the widespread agreement on the benefits of coordinated transportation services, the question arises as to why coordination is not more universally found. The answer lies in a complex set of countervailing forces that have been well described in the literature.^{1/} Suffice it to say that in contrast to the considerable interest and enthusiasm expressed by most of the transportation providers and the Area Agencies on Aging on the potentials and benefits of coordination, many conflicting problems arise such as those emanating from providers:

- determination to retain control over their project.
- unwillingness to cooperate with transit authorities in coordination.
- reluctance to share the use of their vehicles with anybody else even if capacity was available.

These ideas are symptomatic of the fact that although projects often indicate a willingness to coordinate, they are not always equally willing to translate these desires into action. It reflects a schizophrenic tendency

^{1/} See the coordination studies cited in the bibliography for more details on the specific obstacles, hindrances and barriers identified by these studies, and the discussion in Chapter II.

among transportation providers and the AAAs, which is generated by the multitude of objectives with which each of them must deal. For many of the projects, coordination means solving all of the restrictions and variations in funding periods as well as differences in objectives. This represents a loss of time, staff and added costs, none of which projects typically have available. Fear of the coordinated project being discontinued because one provider drops out raises the spectre of "multiple jeopardy". Concern that a coordinated system will not well serve their clients' needs or convinced that their clients cannot be "mixed" with other riders adds further frictions to implementation.

Despite all the difficulties, transportation projects for the elderly are increasingly attempting to coordinate their services, using a variety of different models that have been developed experientially. Providers have indicated that coordination needs to be made mandatory but there is no clear evidence that statutory transportation coordination will work any better than any other type of coordination that has been mandated by statute (of which there are many unsuccessful examples). However, there is some evidence that mandating coordination (at the state and/or federal level) could provide an important psychological impetus that would help to overcome some of the agency perceptions, misconceptions, and reluctance. If coordination is to be encouraged, it is essential to do so in clear recognition of the difficulties and realities of what needs to be done.

For coordination to succeed a number of initial conditions are necessary. If any or some reasonable combination of these conditions can be achieved, there is some prospect of success. These necessary conditions, as noted, are experiential in that they are drawn from successful examples of transportation coordination. They include the following:

- There must be a significant component of local, state, and other public funds involved in providing specialized transportation services.
- There must be clear and unmistakable evidence of local support for the coordination effort. Such support must come from the highest political levels.
- There should be at least one (and hopefully more) multipurpose agency for whom transportation is an ancillary service, who is receptive to any program that could reduce their

cost, and/or is willing to give up some autonomy over their transportation project as a means of getting better service without having to run the service themselves. One can coordinate without such a provider but experience indicates that such a provider can serve as the "core" for a more coordinated effort.

- There should be a broad range of clients currently being served by disparate routes and services who would directly benefit from some rationalization of service.
- There should be a basis for some capacity (service) trade-offs as measured in terms of off-setting peak periods or otherwise underutilized capacity.
- If a transit authority is operating in the area, their support should be elicited, at least at the level of technical assistance.

All of the above conditions may not be attainable in any given area. Without them, however, coordination becomes difficult and tends to resolve itself into information sharing and other levels of cooperation that are useful, but not likely to generate enough benefits to motivate agencies and providers to work towards solving the very real difficulties they may expect to encounter.

If one or all of these conditions can be met, providers will need to consider a range of more specific problems and issues. Some of these specifics are elicited below, although they may not into account particular "local" conditions which also affect the success of coordination. They include:

- Formation of an organization, committee, or task force to serve as a focus of all activity with a specific agency and/or agency group taking the lead.
- Specific commitment or staff to follow through and carry out the detailed work that will be required.
- Clear recognition and identification of the objectives of the coordination effort specified in terms of service coordination potentials (variable cost related elements) and administrative and management coordination (fixed cost related elements) potentials with detailed enumeration of the options available in each category.
- Quantification, to the extent possible, of the specific benefits that would accrue from each of the options identified.

- A written plan and program for implementation which provides for time phasing, estimates of costs and input, and the benefits and costs associated with each option. Such a plan should spell out incremental steps for achieving stated coordination objectives and options.

These are by no means all the steps that are needed once the first stages necessary for implementation have been achieved. They are however basic, and most projects or areas that have succeeded in coordinating -- using whatever model -- have had to meet both sets of conditions described above. They also bring together (hopefully in an organized way) the problems and approaches suggested by the transportation providers and Area Agencies surveyed in this study.

