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An Exploratory Survey of Potential Community Transportation Providers and Users

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16. Abstract (Limit: 200 words)

This report describes a large survey that was administered with the objective of better understanding specialized transportation resources and how they are being used. The survey had two key characteristics. The first was to question both organizations that provide transportation, and those that do not provide it but are actively involved in purchasing or arranging it on behalf of their clients. The second was to be comprehensive; that is, to survey any organization that might be involved either in providing or arranging transportation.

The most significant finding is that about 45% of the diverse organizations that were surveyed provide transportation in some form, and another 20% actively arrange transportation for their clients. This implies that there are more than 3,000 specialized transportation providers in Minnesota. The vast majority of these are social service agencies and housing providers. This confirms the common belief that the true size of the specialized transportation "system" is far larger than the formal network that is known to transportation funders and regulators. The report also contains numerous recommendations regarding how the findings of this survey can be used to develop more focused and definitive surveys of this type in the future.

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Executive Summary

This report describes a large survey that was administered with the objective of better understanding specialized transportation resources and how they are being used. The survey had two key characteristics. The first was to question both organizations that provide transportation, and those that do not provide it but are actively involved in purchasing or arranging it on behalf of their clients. The second was to be comprehensive; that is, to survey any organization that might be involved either in providing or arranging transportation.

The survey was motivated by two major objectives. The first was to develop a broad-based inventory of the specialized transportation resources in the state and how they are used, as well as an understanding of the needs of organizations that use transportation but do not provide it themselves. The second was to begin to explore the range circumstances in which transportation is provided and used, as an initial step in the future development of more focused and revealing surveys of this type.

The survey was administered in two parts. A one-page pre-survey was sent to about 5,500 organizations in Minnesota, and generated about 1,500 responses. This was used to estimate the total state numbers and types of transportation providers and organizations that arrange transportation for their clients. A longer survey was then sent to about 950 of the pre-survey respondents who had indicated some involvement in transportation. We received about 450 responses to this survey, which explored the characteristics of transportation providers and arrangers in much more detail.

The results fall into two broad categories. The first is the actual survey findings, which provide a broad and comprehensive overview of the types of transportation-related activities that organizations are engaged in. Most significantly, about 45% of the diverse organizations that were surveyed provide transportation in some form, and another 20% actively arrange transportation for their clients. This implies that there are more than 3,000 specialized transportation providers in Minnesota. The vast majority of these are social service agencies and housing providers. This confirms the common belief that the true size of the specialized transportation “system” is far larger than the formal network that is known to transportation funders and regulators.

Because the survey was intended to be broad and exploratory rather than focused and definitive, the findings generally fall short of providing clear answers to specific questions. However, they are often provide considerable insight into the types of details that future surveys should address with respect to various issues. Given this, perhaps the more important results are conclusions about how the findings of this survey, and the insights that they generate, can be used to develop more focused and definitive surveys of this type in the future.

1 Introduction

Many agencies at all levels of government, and a much larger number of local organizations, are involved in providing transportation services to individuals who, because of disability, poverty, or other reasons, are unable to routinely arrange for their own transportation. The belief that this "system" is both wasteful of resources and somewhat unsuccessful in accomplishing its objectives seems to be as old as the activity itself (General Accounting Office, 1991). As a partial remedy to this situation, studies in recent years have provided examples of actions by governments or individual providers that can serve as examples of possible improvements (Burkhardt, J., 2000; 2003)).

While improvements by particular organizations are one aspect of increasing efficiency, discussions with providers and funders inevitably turn to a more subtle aspect of the problem. This is the notion that a substantial fraction of the potentially available resources are in the hands of small organizations focused on non-transportation missions, which do not have either the demand or the expertise to use these transportation resources efficiently (Spanhake, D. 2001; Barnes, G. 2003).

This is not so much a criticism of those organizations as of the lack of a more general structure to the provision of transportation services. Because there is not a well-developed "market" for these services, the argument goes, small agencies are often forced to acquire their own vehicles and train drivers. The result is objectionable in two ways: from a system standpoint valuable resources are being underutilized; while the agencies themselves are forced to maintain a transportation infrastructure that in many cases draws substantial resources away from their primary mission.

At a time of simultaneously tightening budgets and increasing need as the population ages, it is hard to ignore the possibility that there may in fact be plenty of resources available if only they were better organized and managed. The problem is that that while anecdotes of vehicles driven "500 miles a year" come up frequently in conversation, it is hard to find any objective and comprehensive study that describes the available inventory, who controls it, and how it is being used.

Thus, we administered this survey to get a sense of some of these issues. The primary objective was to develop a basic understanding of the types of organizations that provide or use transportation services and their inventories, operations, and attitudes. A second, and equally important objective given the exploratory nature of the project, was to also use the results to develop insights into how to improve future surveys of this type.

Our approach to the survey had two key characteristics. The first was to question both organizations that provide transportation, and those that do not provide it but are actively involved in purchasing or arranging it on behalf of their clients; with an eye to better understanding the relationships between resources and needs. The second was to be comprehensive; that is, to try to survey any organization that might be involved in either in providing or arranging transportation. The existing literature, as well as more informal discussions, tended to focus on the traditional transportation community known to government funders and regulators. We wanted to reach these organizations, but also to

find the small social service agencies, housing service providers, and communities of worship for whom transportation is just an adjunct to a different mission.

Because we would be surveying agencies without a transportation focus, we did not have much idea of what we would find, either in terms of how many there would be or of what kinds of answers they would give. This affected our methodology in two important ways. First, we did a one-page “pre-survey” to get a general idea of the number of organizations falling into the categories of provider, arranger, or neither, and used this to better target the mailing list for the full survey. Second, the questions on the full survey were very general. While this made it hard to develop definitive answers to specific questions, it seemed more important to focus first on understanding the general “lay of the land.” We and others can use this understanding to develop more targeted and effective surveys in the future.

This paper has three parts. The first outlines the general methodology of the survey, discusses the pre-survey results and how they were used, and gives an overview of the questions on the full survey. The second part discusses the results of the survey, broken out by whether the organization provides or arranges transportation. The third part, and an important one given the somewhat experimental nature of this survey, is a discussion of lessons learned.

2 General Methodology and Pre-survey Results

The survey (including the pre-survey) was conducted throughout the state of Minnesota between November 2004 and April 2005, with data entry continuing into the summer.

Because of our desire to reach any organization in the state that was involved in transportation, we constructed a very large mailing list from a variety of different sources. These fell into four broad categories, each of which was addressed with lists from one or more sources:

- Known transportation providers (Department of Transportation, Department of Health)
- Human service and other charity-based organizations (from several lists, primarily United Way)
- School districts and related programs (Department of Education)
- Churches and other religious organizations (Council of Churches, Lutheran Social Services, and Jewish and Islamic umbrella organizations)

This list, after removing duplicates, was over 11,000 names, mostly from the human services and religious categories. Our expectation was that a large fraction of organizations on our list would not be involved in transportation, so to save some expense and increase the eventual full-survey response rate, we decided to do a preliminary screening with a one-page pre-survey. It also seemed that our objectives could be realized with a much smaller sample than we had available, so to help keep the project manageable given our labor resources, we randomly divided this list roughly in half. The division was based on the number of letters in the organization name being odd or even; we flipped a coin and sent the pre-survey to the roughly 5,500 names on the "odds" list. The pre-survey consisted of three questions:

- Type of client (from a list)
- Organization mission (open question)
- Transportation role: provider, arranger (could choose both), or neither.

If the respondent indicated that the organization was not involved in transportation, then a sub-question asked for reasons (from a list).

We received about 1,500 responses to the pre-survey; about a 30% response rate. This may have been somewhat limited by the fact that the pre-survey went out during the holiday season, and perhaps because a printing snafu omitted the postage-paid from the return envelopes.

Pre-survey Results

The primary objective of the pre-survey was to use a large sample to develop a general understanding of how organizations of different types relate to transportation issues, and in particular how many organizations actually have the capability of providing transportation. Because we did not know in advance how organizations would naturally group into categories, and especially how the very large social service category would

break down, we asked an open question about the organization mission. We used the answers to group the respondents into five broad categories:

- School districts (7.5% of total)
- Transit and paratransit agencies (4.5%)
- General social service (41%)
- Housing services/assisted living (30%)
- Churches and worship-based (17%)

We classified some social service agencies as transit if providing transportation was the primary purpose of the organization. The "general social service" category could perhaps be broken down further, although no obvious divisions presented themselves, aside from housing services, which made up a very large fraction of the total.

A significant finding from this pre-survey was that over 65% of the respondents are involved in transportation either as providers or arrangers. Excluding churches, which primarily either arrange transportation or are not involved, about 45% of the remainder actually provide transportation. Given our initial list, of which around 7,000 were not churches, this implies that there are about 4,500 organizations in Minnesota that are involved in transportation for their clients, and more than 3,000 of these actually provide transportation.

Breaking the results down by organization type shows that these general findings hold across the board (Table 1). Over 50% of churches, 60% of social service agencies, and 70% of agencies providing housing services are involved in providing or arranging transportation for their clients. This is especially remarkable in light of the fact that there was no pre-screening; we did not restrict the mailing to large organizations or those that seemed likely to have transportation involvement. This provides striking confirmation of the widely-held belief that there is a large transportation market, both of providers and users, that is largely outside the "formal" government-regulated system.

Table 1 Transportation Involvement by Organization Type

	School	Transit	Social	Housing	Church
Provide	47%	70%	12%	20%	11%
Arrange	24%	6%	26%	25%	36%
Both	28%	24%	22%	28%	4%
Not involved	0%	0%	40%	27%	49%

Considering the fraction of respondents that fall into each organization type, the implication of Table 1 is that 75% of the organizations that provide transportation (the sum of "provide" and "both") are not schools or agencies that specialize in providing transit, that is, the organizations that are typically thought of as transportation providers and formally included in policy discussions.

We were concerned that our response rate was relatively low and that perhaps organizations with transportation concerns might have been more likely to respond to the pre-survey, thus skewing the above results. To increase our confidence in these findings, we followed up with a smaller mailing to a new group of 200 recipients, and focused on

attaining a much higher response rate. In this effort we got a 50% response rate but with identical results. In particular, the first 30% to respond were no different from the next 20%. This led us to conclude that willingness-to-respond was probably not a significant source of bias for these results.

For those organizations that were not involved in transportation, we asked for reasons why (from a list with non-exclusive choices):

- Clients arrange own transportation (50%)
- Beyond scope of organization (36%)
- No money available (35%)
- Too expensive (24%)
- No vehicles available (24%)
- No demand (16%)
- Too difficult to coordinate (15%)

We also asked a question of all respondents about the characteristics of their organization's clients. The responses to this were enlightening in that almost everyone checked several boxes:

- Age 65 and older: 79%
- Age 18 and younger: 56%
- Physical disability: 73%
- Mental disability: 76%
- Low income: 68%
- Homeless: 24%
- Other: 32%

It should be noted that this is not a measure of the number of clients that fall into each category; we simply asked the respondents to check any categories that they regularly encounter. Thus a school would serve primarily young people, perhaps only a few of whom may have disabilities or low income. Nonetheless, this indicates that transportation-disadvantaged clients tend to be disadvantaged in multiple ways, and organizations must have the capability to deal with this. This hints at support for the common provider complaint that funding targeted to very specific client characteristics can be hard to accommodate within normal operations; providers do not distinguish between their clients in this way.

Full Survey Methodology

After analysis of the pre-survey, we sent the full survey to those that identified themselves as a provider, arranger, or both; we excluded those that were not involved in transportation as the full survey did not ask any additional questions of this type. Providers and arrangers from the pre-survey gave a full survey mailing size of about 950. We received about 450 responses to the full survey, an acceptable rate of nearly 50%.

The full survey was divided into two main parts, one for transportation providers and the other for organizations that arrange transportation from others. After a few initial

descriptive questions, respondents characterized their organizations as providers and/or arrangers and were directed to the appropriate part of the survey. Those who were both filled in both parts.

The provider questions were focused on understanding issues of vehicle resources and use, and attitudes to coordination. The user questions were focused on client use of transportation services, and again, attitudes to coordination. Many of the questions were open-ended because we did not have a clear idea of what categories would be appropriate; this allowed us to develop categories after seeing the answers that were given. This did, however, create a coding and analysis challenge. The provider questions fell into three broad categories.

- Vehicles and their use (e.g., number of vehicles, passengers per week, schedule and hours of actual use)
- Passengers (e.g., transportation barriers, common destinations)
- Resources and Coordination (e.g. resource adequacy, funding sources, attitude to collaboration, known barriers)

Many of these questions were based on an implicit idea of a social service agency with clients to whom it would sometimes provide transportation. However, because we subsequently took a more inclusive approach to sending out the survey, some of the questions may not have been appropriate, or appropriately phrased, for other types of transportation providers such as transit agencies and school districts.

Transportation arrangers were defined as agencies with clients for whom they play some role in arranging or paying for transportation. Specific examples that we gave included purchasing transportation from another organization, reimbursing clients for costs such as bus fare or mileage, renting vehicles for events, and using employees or volunteers who drive own vehicles. The types of questions included:

- Nature of arranged transportation
- Passengers
- Resources and Coordination

With the exception of questions about vehicles, which only applied to providers, many of the questions were the same or very similar between the two parts. Because many organizations filled out both parts, this may have led to some confusion on the part of respondents, or to the two activities being mingled together in the responses, when we intended the questions to be addressing different issues.

3 Full Survey Results: Providers

This group includes all organizations that answered yes to the descriptor "We provide transportation…" Some of these also purchase or arrange transportation from other agencies, but the answers given by those organizations did not differ meaningfully from those who were providers only.

There were 262 organizations in this category; over 170 were either general social service agencies or housing providers. As noted earlier, the generic nature of the survey questions meant that they might not apply to certain situations, and indeed the response rate for any given question was usually considerably less than the full number of survey respondents. In the tables below, the results are restricted to those respondents that actually answered that particular question; the only exceptions are a few questions that were yes/no, and we had to take the absence of a positive response to mean "no." These are noted where they occur. In other cases we provide counts of the total number of respondents to that question; sometimes the number that didn't answer is interesting information in its own right.

Vehicles and Usage

This part of the survey explored several issues:

- Vehicle inventory
- Vehicle occupancy
- Scheduled hours and actual use
- Busiest times
- Trip distances
- Service area restrictions

Vehicle inventory

To better visualize the distribution of vehicle inventories, we grouped the reported number of vehicles into five categories. Table 2 shows the number of organizations of each type that fell into various categories of vehicle inventory. This table is based on the total count of vehicles of all types for a given organization.

Table 2 Total Number of Vehicles

	1	2 to 5	6 to 10	11 to 20	> 20	Unknown
Church	5	3	4	1		2
Housing	29	22	6	2	4	17
School		4	1	11	4	1
Social	16	31	13	13	13	11
Transit	5	12	3	9	6	3

(Entries show number of organizations in each category)

One interesting point here is that the majority of providers own five vehicles or fewer; between them they have a substantial inventory. Another observation is that a considerable number of social service agencies own a large number of vehicles. Some of

this could be agencies that own vehicles that are primarily used for other purposes, or agencies that have a social service mission but a strong transportation specialty.

We asked organizations to list the number of vehicles that they owned or leased by the type of vehicle. Table 3 shows the average number of each type of vehicle by organization type. Here, any organization with any type of vehicle is counted in the denominator for all vehicle types; for example, the average number of vans owned by churches is calculated based on all churches that own any kind of vehicle, not just those that own vans. These averages are also based only on organizations that own 20 or fewer vehicles; the small number with more than this skew the results and obscure the characteristics of the vast majority of small providers.

Table 3 Average Number of Vehicles by Vehicle Type

	Cars	Mini-vans	Vans	Buses	Total Responses
Church	3.0	0.3	0.8	0.5	13
Housing	1.0	0.8	0.8	0.5	59
School	0.8	1.8	1.1	9.4	16
Social	1.1	1.4	1.9	1.0	73
Transit	2.4	0.7	0.5	3.8	29

There were two unexpected ambiguities in the answers to this seemingly straightforward question. The first was that some answers led us to wonder if some agencies were counting staff's personal vehicles in their counts; although we had tried to make clear that these were not to be counted. The second problem we had not anticipated at all. This was that some agencies appeared to own large numbers (or small numbers) of vehicles whose primary purpose was not to transport passengers. This particularly included agencies specializing in delivering goods or services to clients' homes; but who perhaps sometimes took the clients somewhere else. This led to implausibly low ridership per vehicle in these cases; a misleading statistic since the vehicles presumably are in fact being heavily used.

Vehicle occupancy

We asked agencies about the average number of passengers that they transport each week. Again, we grouped the answers into categories to better visualize the distribution of answers (Table 4).

Table 4 Total Passengers per Week

	<20	21 to 100	101 to 1000	>1000	Unknown
Church	10	2	1		2
Housing	42	20	9		9
School	1	1	7	9	3
Social	24	31	26	7	9
Transit	4	6	15	10	3

(Entries show number of organizations in each category)

Perhaps the most noticeable point in this table is the large number of organizations providing housing services that own vehicles but provide relatively little passenger transport. The average auto owned by a family carries more than 20 “passengers” per week.

We used this information combined with the number of vehicles by agency to calculate the average number of passengers per week by vehicle (Table 5). Again, we grouped the results into categories so as to maintain information about the distribution of outcomes.

Table 5 Passengers per Week per Vehicle

	<3	3 to 10	10 to 50	50 to 100	>100	Unknown
Church	3	5	4			3
Housing	12	24	16	1	2	25
School	1		7	4	6	3
Social	11	19	31	14	3	19
Transit	3	6	8	3	13	5

(Entries show number of organizations in each category)

Vehicles carrying fewer than three passengers per week we have to assume belong to organizations that primarily use them for other purposes. Still, very few organizations, especially outside of the school and transit categories, carry more than 50 passengers per week per vehicle, which is roughly one per hour assuming a five-day week. And given that most organizations carry at least some group trips (discussed below) it appears that most vehicles do in fact sit idle much of the time. This doesn’t mean that these vehicles could be made available for other purposes, but it does at least indicate the theoretical possibility.

We also grouped the counts by passengers per week per vehicle based on the number of vehicles owned by the agency rather than by the agency type (Table 6).

Table 6 Passengers per Week per Vehicle by Number of Vehicles

Number of Vehicles	<3	4 to 10	11 to 50	51 to 100	>100	Unknown
1	7	18	20	4	3	4
2 to 5	11	21	24	7	9	6
6 to 10	5	6	5	4	2	6
11 to 20	2	7	11	4	9	4
> 20	8	4	9	4	2	2

(Entries show number of organizations in each category)

As expected, most of the organizations with low average vehicle occupancy have a small number of vehicles. However, some organizations with a small number of vehicles have a very high occupancy rate, indicating that small size need not necessarily be inconsistent with high output. Conversely, some agencies with many vehicles carry few passengers per vehicle; again, some of these may be cases where some or all vehicles

are used for purposes other than transporting passengers. Of course, this could also be the case for some of the smaller low-output agencies.

Scheduled hours and actual use

One of our key questions asked organizations about the hours that their vehicles were scheduled to be available for use, either running a pre-set route or available for spontaneous requests. We categorized the answers based on whether they represented full or limited hours on weekdays, evenings, and weekends (Table 7).

Table 7 Operating Schedules

	Limited weekday	Full weekday	Limited evening	Full evening	Limited weekend	Full weekend
Church	45%	18%	27%	0%	82%	0%
Housing	33%	67%	11%	26%	21%	38%
School	68%	32%	5%	0%	5%	5%
Social	32%	67%	14%	18%	20%	24%
Transit	15%	85%	12%	15%	18%	21%

The numbers within each time category (weekday, evening, weekend) add up to 100% or less; if they add to less it means that some organizations do no offer service during that time frame at all. For example, almost no schools offer evening or weekend service. In general, relatively few organizations offer evening or weekend service, especially in the key categories of housing, social service, and transit. Many vehicles seemingly do sit entirely unused for substantial periods of time. Presumably some of this has to do with lack of demand, yet anecdotally at least, there is demand (elsewhere) for evening and weekend service that cannot find supply to accommodate it.

Another critical question in this vein asked agencies how many hours their vehicles were actually in use in a given day. That is, a nursing home vehicle might be available for its residents to use 14 hours a day, but might only be used for one or two hours. This sort of situation is common in anecdotes but we knew nothing about its prevalence in reality.

The notion of a vehicle being underutilized in this context is a function of the number of hours it is scheduled to be in service. Thus we considered two categories of organizations: those that reported but no evening service, and those that reported full weekday and at least some evening service (Table 8).

Table 8 Hours of Vehicle Use Compared to Scheduled Hours

	Full daytime service only		Full daytime and any evening service	
	Average hours of use	Number of orgs	Average hours of use	Number of orgs
Housing	3.6	19	4.6	32
School	4.2	5	5.3	6
Social	5.4	27	6.2	43
Transit	7.2	13	8.2	21

Even organizations providing housing, who might be expected to have the most limited demand for transportation and hence the lowest level of vehicle use, still report that their vehicles are in use nearly half the available hours on weekdays. Other types of organizations use their vehicles even more intensively. This indicates that focusing on periods when vehicles are not used at all, such as evenings and weekends, might be a more promising tactic for increasing transportation supply, if demand exists during these times. During the day, while vehicles are not always in use, there do not appear in most cases to be large periods of time when the vehicles might be available for other purposes, even in theory.

It is notable, however, that those organizations that offer evening service use their vehicles only about an hour more per day on average. This may indicate that there is not in fact much demand for services during this time.

There may also be a significant number of exceptions to the general rule that vehicles are well used. About a quarter of the agencies offering full weekday service reported that they actually used their vehicles less than three hours per day on average.

We also examined the subset of organizations that offer full day and some evening service, and that only own one vehicle. The premise was that small organizations with one vehicle might have lower or less consistent demand and hence less efficient usage. Only housing had a usable number of organizations that fell into this category, and for them the average of 3.9 hours was slightly lower than the full sample, but not strikingly so. Again, this indicates that small organizations are not necessarily less efficient than larger ones.

Busiest times

We asked respondents to describe their busiest time of day, of the week, and of the year. These were open-ended questions; we grouped the answers into categories based on natural grouping in the answers (Tables 9a, 9b, 9c). In all these tables, percentages for a given organization type can add to more than 100%. In some cases an organization's answers overlapped categories, and in other cases they claimed to be equally busy at all times.

Table 9a: Busiest Time of Day

	Commute	Other daytime	Evening
Church	0%	100%	8%
Housing	10%	91%	19%
School	81%	24%	5%
Social	51%	52%	15%
Transit	34%	71%	0%

There are a couple of interesting results in this table. The first is that housing organizations are rarely busy during the commute hours; this raises the possibility that these resources could complement the needs of low-income workers. Another striking

point is that most transit agencies report that they are most busy outside of commuting hours. This could be because many of our transit agencies are paratransit or social service agencies with a transportation specialty, rather than traditional fixed-route transit, which tends to be far more heavily used for commuting in most places. Again, this could suggest some possible complementarities.

Table 9b: Busiest Time of Week

	Weekday	Weekend
Church	21%	86%
Housing	94%	12%
School	100%	0%
Social	95%	10%
Transit	96%	4%

The interesting point in this table is that with the obvious exception of churches, very few organizations report that they are busy on weekends. People who are self-sufficient in transportation tend to make about as many trips on weekends as on weekdays, but the same does not seem to be true of transportation-dependent people. This raises a question of whether the services being offered are well matched to the needs or desires of the target population. Obviously the expense of offering weekend service plays a role in this too, but there does seem to be a question that is worth considering in terms perhaps of how funding is allocated.

Table 9c: Busiest Time of Year

	Winter	Spring	Summer	Fall
Church	78%	78%	78%	78%
Housing	61%	57%	83%	56%
School	80%	100%	0%	85%
Social	90%	69%	64%	67%
Transit	82%	61%	14%	50%

Again here, there appear to be possible complementarities in that the busiest seasons for housing organizations are the opposite of those for social service and transit agencies. It is not clear why so few transit agencies report summer as a busy time.

Trip distances

We asked providers about the average length of a one-way trip (Table 10). Because we thought that some organizations might not know an exact average, we asked for an average or a range of trip lengths. Unfortunately this led to ambiguity in the answers, since if someone wrote “15 miles” we could not know if this was meant to signify an average or the upper bound of a range. Another problem was that for organizations that run a route rather than transporting specific trips, this question had little meaning. Some schools, for example, simply wrote the average length of the entire route, and we wondered if some social service agencies did something similar, given the large number who reported an average trip length in excess of 20 miles.

Table 10: Average Trip Length

	<5 miles	5 to 10 miles	10 to 20 miles	>20 miles	Unknown
Church	12	2		1	
Housing	43	18	10	6	3
School	5	1	2	10	3
Social	26	25	20	19	7
Transit	12	6	5	9	6

(Entries show number of organizations in each category)

Generally the average trip length is fairly short, as it is for non-transit-dependent people. However, a surprisingly large number of agencies, especially in the social service and housing categories, report average trip lengths in excess of ten or even twenty miles. Again, we are not sure if this reflects a real phenomenon or simply misunderstanding of the question.

Service area restrictions

One problem that is frequently cited by providers is that legal or administrative restrictions in the areas to which they can provide service prevent them from serving certain customers, or create a need for time-consuming coordination to transfer the passenger to another provider. We asked a question to determine the prevalence of this situation (Table 11).

Table 11 Presence of Service Area Restrictions

	Percent with service area restrictions
Church	60%
Housing	71%
School	90%
Social	77%
Transit	82%

A substantial majority of all provider types indicate that their service area is restricted. Unfortunately, we did not probe this theme by asking if the restrictions were legally- or self-imposed, or merely guideline; or about the extent to which the restrictions actually interfere with operations.

Client Characteristics

This explored three aspects of the clients of transportation providers:

- Characteristics and barriers
- Destinations
- Group trips

Characteristics and barriers

We asked providers about the specific transportation challenges faced by their passengers (Table 12).

Table 12 Passenger Characteristics

	Elderly	Youth	Mental disabilities	Low Income	Immigrants Refugees	Wheelchair use	Other physical disabilities
Church	100%	53%	40%	47%	27%	33%	40%
Housing	76%	15%	69%	58%	15%	61%	58%
School	0%	95%	67%	38%	10%	33%	38%
Social	75%	36%	80%	56%	25%	53%	62%
Transit	95%	76%	92%	74%	55%	74%	84%

Again, with a few obvious exceptions (schools don't carry many elderly, nursing homes don't carry many youth), most types of transportation challenges appear at least occasionally to a considerable fraction of providers.

Destinations

We asked providers to rank the most common destinations for their clients. Here we provided seven choices, which the respondent ranked in order. Thus a lower number indicates a higher rank, or a more common destination (Table 13).

Table 13 Most Common Destinations

	To and from organization	Work	School	Medical	Shopping	Social & recreational	Personal & other
Church	1.4	6.1	5.3	3.6	5.4	3.1	3.0
Housing	3.8	5.6	5.7	2.0	3.4	2.9	4.6
Social	2.5	4.1	5.3	3.4	4.1	3.7	4.9
Transit	6.7	3.3	3.7	2.2	3.6	4.2	4.4

(Entries show average rank for that destination, given the organization type)

Schools are not shown in this table because they don't serve most of these destination types; they all ranked "school" or "to organization" first, and many did not even rank the others.

There does not appear to be a clear hierarchy of destinations. In most cases there are certain destinations that are clearly at the top or bottom for a given organization type, for obvious reasons, and most of the other destinations are about equally ranked. Medical destinations are ranked above average by all organization types, perhaps because there is often specific money available to reimburse these trips. However, personal activities also seem to be well-served.

Group trips

To better understand how vehicles were being used, we asked providers about the typical number of passengers on vehicle trips (Table 14). Specifically, we asked them to indicate the percentage of their vehicle trips that served large groups (five or more people) and individuals or small groups (four or fewer people).

Table 14 Percent of Trips Serving Groups

	Four or fewer people	Five or more people
Church	42.5%	57.5%
Housing	70.5%	29.5%
School	14.1%	86.0%
Social	55.2%	44.8%
Transit	64.6%	35.4%

There appear to be a surprising number of group trips for all organization types. Because we expected this number to be small, we did not ask follow-on questions about the nature and frequency of the group trips. This would be an interesting area for further exploration.

Resources and Collaboration

This part of the survey queried providers about various aspects of their available transportation resources and their interactions with other agencies:

- Resource adequacy
- Funding sources and types
- Existing collaboration
- Clients arranging own transportation
- Collaboration interest and barriers

Resource adequacy

We asked providers an attitudinal question about the adequacy of their available resources to meet demand (Table 15). The possibility of using excess capacity to meet other demands hinges in part on whether the agency perceives themselves to have excess capacity.

Table 15 Resource Adequacy

	Not enough vehicles	Just enough vehicles	More than enough vehicles	Enough vehicles, not enough money
Church	8%	58%	25%	8%
Housing	25%	39%	22%	14%
School	19%	67%	5%	10%
Social	27%	45%	9%	21%
Transit	18%	41%	12%	32%

Most organizations believe that they have just enough vehicles. Only in the church and housing categories do a significant fraction believe that they have more than enough. The more transportation-focused types are far more likely to believe that their resources are inadequate, especially with regard to funding.

We analyzed this question further by breaking the results down the number of agency vehicles rather than by the organization type (Table 16). The idea here was that smaller agencies might have less flexibility or sophistication in terms of managing their vehicle fleet, and thus might be more likely to have excess capacity.

Table 16 Resource Adequacy by Number of Vehicles

Number of vehicles	Not enough vehicles	Just enough vehicles	More than enough vehicles	Enough vehicles, not enough money
1	16%	47%	20%	18%
2 to 5	18%	43%	16%	24%
6 to 10	18%	50%	23%	9%
11 to 20	18%	68%	3%	12%
> 20	41%	22%	7%	33%

Three points stand out in this table. First, assessing oneself as having "not enough vehicles" was strongly associated with agencies with more than 20 vehicles; perhaps a counterintuitive result. Second, agencies with more vehicles were much less likely to believe themselves to have "more than enough." Finally, in comparing this chart to the breakdown by organization type, attitudes toward money seem to be more a function of the organization type than of the number of vehicles. In terms of our original hypothesis, the smallest agencies did not appear more likely to consider themselves to have excess capacity.

We also analyzed the results by passengers per vehicle, our measure of operational efficiency (Table 17). Again, the hypothesis was that those agencies with light passenger loads might be more likely to perceive themselves as having excess capacity.

Table 17 Resource Adequacy by Passengers per Vehicle

Passengers per vehicle	Not enough vehicles	Just enough vehicles	More than enough vehicles	Enough vehicles, not enough money
<3	15%	42%	23%	23%
3 to 10	20%	41%	18%	22%
10 to 50	22%	44%	13%	21%
50 to 100	24%	52%	10%	19%
>100	22%	61%	4%	13%

Here finally the expected trend was observed: the probability that an agency would consider itself to have "more than enough" vehicles was strongly and inversely

related to the passenger load per vehicle. A similar relationship also held in terms of attitudes toward funding. Those with the lightest loads were more likely to consider their funding to be inadequate. It is not obvious how to interpret this.

Funding sources and types

We asked providers about the sources of the funding that they used to pay for their operations (Table 18). An interesting point in this regard is that only 12 (of roughly 90) housing organizations answered this question.

Table 18 Funding Sources

	Federal	State	County	City	Private	Medical	Other	Count
Housing	33%	42%	42%	0%	33%	8%	33%	12
School	25%	100%	6%	0%	0%	0%	0%	16
Social	42%	75%	69%	5%	31%	7%	18%	55
Transit	77%	83%	73%	23%	40%	43%	27%	30

Generally it appears that many or most agencies use a mix of funding sources, especially in the transit category. This could be healthy in that organizations don't become overly dependent on any one source. However, it also supports the common provider complaints that they have to spend excessive amounts of time applying for large numbers of small grants from a multitude of sources, and that all of these have their own distinct reporting and regulatory requirements.

We asked about the nature of the funding received (Table 19). A relatively large fraction of agencies are reimbursed for specific rides, most likely from medical sources. A substantial number, especially of housing and transit, receive vehicles and materials, while cash grants seem surprisingly uncommon. We have heard providers complain in the past that funders are eager to provide vehicles but reluctant to provide money to operate them (ref), and these findings support that to some degree.

Table 19 Types of Funding

	Cash grants	Vehicles and materials	Ride reimbursement	Other	Count
Housing	17%	42%	58%	17%	12
School	20%	0%	20%	60%	15
Social	31%	22%	63%	30%	54
Transit	53%	43%	73%	20%	30

We also asked about fees that organizations charge their riders (Table 20). Except for transit agencies, most charge nothing; the transportation is being provided as part of another service.

Table 20 Fees Charged to Riders

	Mandatory Fee	Specified Donation	General Donation	Nothing	Count
Church	7%	0%	7%	93%	15
Housing	19%	1%	3%	83%	77
School	0%	0%	0%	100%	19
Social	25%	3%	7%	73%	95
Transit	78%	14%	11%	14%	36

Percentages in this table can add to more than 100% because some agencies may have different types of trips or passengers, and thus might charge a fee in some cases and not in others.

Existing collaboration

We asked agencies about whether they provide rides to other customers outside of their primary clients (Table 21). This question didn't necessarily make sense in the context of transit agencies, where anyone that gets a ride is, by definition, a client. However, for the other organization types, where transportation is secondary to some other organizational purpose, the notion of an outside customer has more meaning.

Table 21 Organizations Providing Transportation to Others

	Percent providing transportation for other organizations
Church	33%
Housing	21%
School	29%
Social	29%
Transit	71%

In every case except transit, more than two thirds of providers only serve their own specific clientele. For those that do serve others, the majority cited a specific organization or situation for which they provide trips. Although we did not ask directly, in most cases these appeared to be informal, voluntary relationships. A more in-depth study of how these relationships arose and are maintained might provide some insight.

A follow-up question asked about the frequency of providing transportation to outside customers (Table 22). Even given the small number of organizations that do this, relatively few of these answered this question.

Table 22 Frequency of Providing Transportation to Others

	Less than once per month	Less than once per week	More than once per week	Daily	Count
Church	25%	25%	25%	25%	4
Housing	64%	18%	9%	9%	11
School	50%	50%	0%	0%	4
Social	35%	25%	5%	35%	20
Transit	17%	6%	33%	44%	18

The relatively high frequency of provision outside the organization among social service providers is interesting, in that these organizations are not more likely to provide outside transportation in general. Some of this may be social service organizations that have a specific transportation component.

The converse question asked providers about the frequency with which they refer their own clients to other transportation providers (Table 23). This appears to be quite common among housing and social service organizations.

Table 23 Referring Clients to Other Providers

	Less than once per month	Less than once per week	More than once per week	Daily	Count
Church	50%	17%	33%	0%	6
Housing	20%	37%	28%	15%	46
School	100%	0%	0%	0%	3
Social	40%	22%	18%	21%	68
Transit	38%	31%	15%	15%	26

In the majority of cases outside referrals were to specialty transportation providers, either fixed route transit, or more commonly, wheelchair-equipped providers. Specialized medical transport services were also frequently cited. This indicates that many providers may only be equipped to serve a limited range of trips and degree of disability.

An interesting footnote to this question is that our initial survey categorization was between providers and “arrangers,” whom we tried to define to include anyone who arranges or purchases transportation for their clients with other agencies. But in this question, more than 50% of those who identified themselves initially as providers but not arrangers answered yes to this question of whether they refer their clients to other agencies. Conversely, 20% of those that said they did both in the initial question then said they didn’t arrange at this point in the survey. In other words, a minority of the survey provider respondents answered these two questions consistently. We are not sure of the reasons for this, except that perhaps respondents detected a difference in the wording of the two questions. The initial question implied more of an active role in arranging or paying for transportation, while the later question only asked if they “refer” their clients to other transportation providers. These referrals may be fairly passive in many cases.

Clients arranging own transportation

We also asked providers if their clients also arrange transportation on their own, without the organization's involvement (Table 24).

Table 24 Clients' Own Transportation Activities

	Percent whose clients use other transportation without referral
Church	20%
Housing	39%
School	14%
Social	44%
Transit	11%

The low numbers here may just indicate that many organizations don't know or take any role in what their clients do outside of their relationship with the agency. Unfortunately, we did not offer "don't know" as an option.

Collaboration interest and barriers

We asked providers their attitudes about "improving your transportation services through collaboration with other organizations" (Table 25). A follow-up question asked if they were aware of restrictions that would hinder or prevent such collaboration.

Table 25 Interest in Collaboration

	Not interested	Somewhat interested	Very interested	Aware of restrictions	Count
Church	50%	33%	17%	42%	12
Housing	43%	38%	12%	33%	69
School	57%	24%	19%	67%	21
Social	22%	41%	36%	47%	85
Transit	15%	35%	41%	24%	34

An important ambiguity in this question was that we did not specify that we intended that collaboration be interpreted as sharing their vehicles and drivers with other organizations. The comments that many respondents made indicate that they might have interpreted collaboration to mean getting more rides from others, rather than giving more rides to others. Also, those that arrange as well as provide were much more interested in collaboration (42% to 19%), further supporting this interpretation. We should have asked the two questions separately.

There was no particular pattern in terms of awareness of restrictions being related to interest in collaboration. That is, people seemed to separate their theoretical interest in collaboration from their practical feelings about its implementation; those who were very interested seemed as aware of restrictions as those that weren't.

The cited restrictions were interesting. In a number of cases they reflected organization-specific restrictions based on special client needs or confidentiality issues.

However, many of the cited barriers had to do with real or perceived administrative or procedural restrictions, which are in principle open to reform:

- Providing transportation services to those outside our agency makes us a transportation company requiring STS certification
- Rules and regulations that limit use of vehicles by other groups (i.e. driver requirements, insurance coverage)
- Mn/DOT grant requires vehicle be used for Sr. and transportation of Sr.'s w/ disabilities
- Motor carrier regulations, liability insurance
- State funding of public transit limits service area (destinations)
- Our liability insurance. We are only covered for our clients. Other providers have a wide range of coverage
- Our buses are licensed with tax-exempt plates and that restricts us to school related transportation only
- Funding restrictions and amount of funding available
- Motor Carrier Regulations that will increase our costs, insurance concerns
- County buses don't cross lines and we are on the edge of the county
- Regulations that prohibit public transit for working with schools or private transit
- Licensing--Insurance coverage limits us to transport only our residents using our vehicles to be covered
- State law prohibits non-school bus for route pick up. We tried!
- Certain laws prevent us from using our buses to collaborate with schools
- X (city) only goes from their border - we are X… zip code but in the city of Y…
- Funding restrictions
- Our mission and insurance coverage
- Service limits to city limits
- This becomes an insurance issue and much higher rates are charged if we get into a "livery" category
- Statutes limiting who we can transport

Many of these can be grouped into three broad categories: insurance restrictions, legal constraints, and the desire to avoid being subjected to new regulatory structures. These are the same kinds of issues that are always raised when coordination is discussed; this survey indicates that these problems are indeed widespread and not just the defense mechanisms of organizations trying to avoid change, as funders sometimes implicitly assert. In principle, these are all things that the governments that fund these systems could influence at least to a degree.

Regulations are created by governments, and while they may be promulgated by many different sources, this is not necessarily an insuperable barrier to clarification and simplification. Similarly, operating rules, such as those often cited by transit agencies and schools, are created by the governments that operate these systems. The reason for the rule needs to be weighed against the possible benefits of bending it. Again, this may be a matter of government agencies communicating their respective objectives with each other, rather than putting the burden on the transportation provider to do this. Finally,

while insurance is generally privately provided and purchased, there is no reason in principle why the government couldn't be involved either in negotiating rates or conditions, or subsidizing higher insurance rates in cases where an expanded operation could yield substantial public benefits.

4 Full survey: Arrangers

This group includes all organizations that answered yes to the descriptor "We purchase or arrange transportation…" Some of these also provide transportation themselves, but the answers given by those organizations did not differ meaningfully from those who did not provide transportation.

There were 264 organizations in this category; over 200 were either general social service agencies or housing providers. As in the provider section, the response rate for any given question was usually considerably less than the full number of survey respondents. In the tables below, the results are restricted to those respondents that actually answered that particular question; the only exceptions are a few questions that were yes/no, and we had to take the absence of a positive response to mean "no."

Arranged transportation

This part of the survey explored the nature of the transportation that is arranged with external providers:

- Types of arranged transportation
- Types of providers used
- Trips per week and costs
- Busiest times
- Service area restrictions

Types of arranged transportation

Organizations that purchase or arrange transportation for their clients use a variety of methods (Table 26). No one tactic is particularly widespread, nor is any method rare. This could reflect differing transportation needs across organizations, budget constraints, or opportunities.

Table 26 Types of Arranged Transportation

	Purchase transportation directly	Reimburse expenses	Use own drivers with other vehicles	Short term rentals	Employee or volunteer drivers and vehicles	Assist with public transit use
Church	31%	27%	27%	31%	58%	31%
Housing	32%	9%	23%	8%	44%	41%
School	81%	25%	13%	13%	13%	0%
Social	53%	27%	25%	11%	49%	49%
Transit	33%	17%	8%	8%	50%	50%

Types of providers used

A question about the types of providers that organizations use met with similar results (Table 27). No particular type of provider is very widely used.

Table 27 Types of Providers Used

	Medical transport	Senior or ADA services	Church	Social service agency	Public transit	Taxi
Church	12%	42%	23%	15%	19%	31%
Housing	38%	30%	6%	11%	14%	19%
School	0%	0%	0%	0%	6%	6%
Social	32%	34%	3%	14%	36%	22%
Transit	25%	17%	8%	17%	8%	17%

Trips per week and cost

We asked organizations about the average number of trips that they purchase or arrange each month (Table 28). We also asked about the number of different passengers, to get at the question of whether they are many trips for a few people, or a few trips for many different people. However, we did not make sufficiently clear what we meant, so the answers tended to just be the same as for the total number of trips.

Table 28 Average Trips Arranged per Month

	<20	20 to 100	100 to 1000	>1000	Unknown
Church	17	1	2		6
Housing	68	8	2		10
School	1	3	5	5	2
Social	59	26	7	1	21
Transit	2	3	2	3	2

(Entries show number of organizations in each category)

We also asked about the total monthly expense for arranged trips (Table 29). We group them into categories for ease of display. Comparison of the "unknown" category between these two tables shows that agencies are much more likely to know the number of trips they arrange than they are to know how much these trips are costing them.

Table 29 Average Total Cost per Month for Arranged Trips

	< $100	$100 to $1000	$1000 to $10000	>$10000	Unknown
Church	9	5	1		11
Housing	28	13	3		44
School		1	3	9	3
Social	28	24	14	5	43
Transit	1	1	2	1	7

(Entries show number of organizations in each category)

From these two questions, we calculated the average cost of trips that organizations arrange on behalf of their clients (Tables 30 and 31). It is important to note here that many of the arranged trips involve little or no monetary outlay, for example using volunteer drivers and vehicles or referring to public transit.

Table 30 Average Cost of Arranged Trips

	Average trip cost	Number of respondents
Church	$3.74	10
Housing	$8.09	20
School	$15.69	12
Social	$14.84	49
Transit	$11.67	4

Table 31 Cost per Trip by Category

	<$5	$5 to $15	$15 to $25	$25 to $50	> $50	Unknown
Church	8	2				16
Housing	10	7	2	1		68
School	3	5	3		1	4
Social	23	17	4	1	4	65
Transit	1	1	2			8

(Entries show number of organizations in each category)

This information on cost per trip seemed less useful the more we thought about it. As just noted, we did not ask respondents to distinguish between trips that were done for "free" and those for which they actually paid money. This immediately makes any calculation of averages very suspect. An equally important problem is that we did not seek information on the characteristics of the trips that were purchased. It could be that the purchased trips are precisely the most difficult ones, that organizations were not capable of providing on their own (since many arrangers are also providers). In other cases the most expensive trips might be paid for by someone else, such as medical sources. So we present these results primarily to encourage ideas on how this question might be more effectively probed in future surveys.

Busiest times

As with the provider section of the survey, we asked arrangers about their busiest times for transportation needs (Table 32a, b, c). Part of our thought with this was that we could identify times when transportation needs were high (in this group) and unused resources were available (in the provider group). However, because we asked "when is your busiest time" as opposed to "when do you have unmet needs," or, "are your clients able to travel at the times they want," the answers were not very enlightening in this regard. The busiest times are, almost by definition, those times when transportation is being provided by someone; people know that this is when they should seek rides.

Table 32a: Busiest Time of Day

	Commute	Other daytime	Evening
Church	0%	86%	14%
Housing	15%	83%	5%
School	69%	31%	0%
Social	31%	67%	5%
Transit	44%	56%	0%

Table 32b: Busiest Time of Week

	Weekday	Weekend
Church	42%	74%
Housing	100%	8%
School	100%	8%
Social	98%	14%
Transit	100%	0%

Table 32c: Busiest Time of Year

	Winter	Spring	Summer	Fall
Church	91%	73%	27%	64%
Housing	83%	64%	62%	55%
School	91%	91%	9%	91%
Social	80%	64%	66%	80%
Transit	88%	75%	25%	75%

Generally these tables are not substantially different from those for providers. Evening and weekend trips are even less common for arrangers, which may reflect the difficulty of arranging transportation at these times of day.

Service area restrictions

We asked arrangers if there were any geographic restrictions on where they would arrange trips, or a limit on what they would pay (Table 33).

Table 33: Presence of Service Area Restrictions

	Percent with service area restrictions
Church	42%
Housing	43%
School	50%
Social	46%
Transit	83%

It is interesting that, with the exception of transit, all of the numbers are far lower here than they were for providers. Organizations arranging transportation, who are not as

bound by legally- or administratively-defined service areas, are more open about the types of trips that they will consider funding.

Client Characteristics

We asked about characteristics of the clients for whom trips are arranged:

- Characteristics and barriers
- Destinations
- Group trips

Characteristics and barriers

At the beginning of the survey, all respondents were asked about the characteristics of their organization's clients. Then later in the survey, providers and arrangers separately were asked about the barriers faced by those clients with whom they have a transportation relationship. For providers, the two responses were quite similar. For arrangers, they differed somewhat (Table 34).

Table 34a Characteristics of Organization Clients

	Elderly	Youth	Physical disabilities	Immigrants Refugees	Mental disabilities	Low income
Church	96%	81%	88%	35%	69%	77%
Housing	90%	16%	83%	14%	68%	70%
School	0%	100%	69%	13%	63%	31%
Social	84%	47%	80%	32%	75%	77%
Transit	50%	58%	67%	50%	67%	58%

Table 34b Transportation Barriers

	Elderly	Youth	Wheelchair use	Other physical disabilities	Mental disabilities	Low income
Church	92%	31%	38%	46%	23%	42%
Housing	82%	8%	69%	69%	51%	64%
School	6%	75%	19%	31%	25%	19%
Social	74%	22%	52%	59%	58%	64%
Transit	58%	50%	58%	67%	75%	75%

Although the categories are not exactly the same, it appears that efforts to arrange or purchase transportation for clients might focus on those with physical disabilities, while those with other barriers are less likely to be served in this way. This could reflect a couple of possible explanations. One is that many arrangers are also providers, and they may seek outside providers for those trips that they are not equipped to serve themselves, i.e., those requiring wheelchair or other disability accommodation. Conversely, the lower likelihood of arranging transportation for other groups may in some cases reflect that those groups are better able to arrange their own transportation and thus do not have this kind of relationship with the organization (e.g. youth and low income).

Destinations

As with providers, we asked arrangers about the most common destinations for which they arrange or purchase trips for their clients (Table 35). Again here, the numbers represent average rankings, thus a lower number represents a more common destination.

Table 35 Most Common Destinations

	To and from organization	Work	School	Medical	Shopping	Social & recreational	Personal & other
Church	2.2	6.0	5.3	2.0	4.3	4.2	4.0
Housing	4.7	4.8	5.7	1.7	3.1	4.1	4.0
Social	3.8	4.9	5.2	1.9	3.7	3.9	4.6
Transit	5.5	3.5	4.5	2.0	3.7	3.7	5.2

(Entries show average rank for that destination, given the organization type)

As with providers, medical trips dominate, perhaps because there is often outside funding available to pay for these. Other destinations are also well represented though.

Group trips

We asked arrangers about the typical number of passengers on the trips that they purchase or arrange (Table 36).

Table 36 Percent of Trips Serving Groups

	Four or fewer people	Five or more people
Church	59%	41%
Housing	90%	10%
School	21%	79%
Social	80%	20%
Transit	84%	16%

We were surprised to see that in every type, arranged trips tended to serve smaller groups than did trips provided by the organization itself (see Table 14). We had expected that organizations might be more likely to use outside providers to serve large group trips that they couldn't handle with their own vehicles. A couple of possible explanations come to mind. One is that organizations with frequent group trips may come to feel that it is worth buying their own vehicle to serve them, and thus are not in this category at all. Another possibility is that large vehicles are difficult and costly to arrange and so these types of trips just aren't served as often. In other words, we cannot know if the discrepancy is a benign difference in needs or a real problem with the system.

Resources and Collaboration

Finally, we asked transportation arrangers about the resources they use to support transportation and their relationships with other organizations.

- Resource adequacy
- Funding sources
- Clients arranging own transportation
- Attitudes to collaboration, known barriers

Resource adequacy

We asked arrangers about the adequacy of their transportation resources. The options that we gave differed for those for providers, representing the different nature of the resources used here (Table 37).

Table 37 Resource Adequacy

	Adequate	Not enough money	Not enough staff	Not enough volunteers	Not enough drivers	Not enough collaborative relationships
Church	56%	20%	4%	40%	0%	8%
Housing	45%	38%	26%	34%	21%	9%
School	57%	43%	14%	7%	14%	0%
Social	38%	48%	26%	30%	10%	12%
Transit	73%	36%	18%	36%	9%	9%

For all organization types, a substantial fraction felt that their resources were inadequate, and the nature of this problem was similar across types.

Funding sources

As with providers, we asked arrangers about the sources of the funding that they use for transportation (Table 38). And, as with providers, relatively few answered the question.

Table 38 Funding Sources

	Federal	State	County	City	Private	Medical	Count
Housing	21%	43%	43%	0%	18%	18%	28
School	25%	92%	17%	8%	17%	8%	12
Social	42%	60%	48%	6%	31%	24%	67
Transit	56%	78%	78%	11%	44%	44%	9

Generally the answers do no differ dramatically from those given by providers.

Clients arranging own transportation

We asked arrangers about the types of transportation that their clients used on their own (Table 39).

Table 39 Clients Arranging Own Transportation

	Other agencies	Public transit	Taxi	Family	Count
Church	53%	63%	26%	68%	19
Housing	48%	54%	41%	89%	63
School	0%	30%	10%	90%	10
Social	48%	71%	40%	84%	97
Transit	36%	45%	45%	73%	11

For the arranger organizations, about 80% have clients that arrange transportation on their own, as opposed to the 10-40% observed among providers. This may simply reflect that the lack of transportation provision within the agency forces clients to seek other alternatives more actively.

Attitudes to collaboration, known barriers

Finally, we asked arrangers about their attitudes toward additional collaboration, and their knowledge of barriers that would make this difficult (Table 40).

Table 40 Attitudes to Collaboration, Barriers

	Not interested	Somewhat interested	Very interested	Aware of restriction	Count
Church	29%	63%	8%	0%	24
Housing	18%	53%	30%	22%	80
School	40%	47%	13%	25%	15
Social	12%	39%	49%	34%	106
Transit	36%	18%	45%	58%	11

Arrangers of transportation are somewhat more interested in collaboration than are providers. They may be more likely to see themselves as the beneficiaries of any such arrangements. This may also just reflect the fact that providers to some extent have their own resources and see less to gain from working with others, while arrangers need others to provide transportation for them, and would benefit from having this done more cheaply or efficiently.

5 Lessons

Our objective in this survey was not really to develop definitive answers to specific questions about the specialized transit community. Because we did not know much about the types of organizations that we were likely to encounter, the types of models that they would operate under, or the relative frequencies of the various activities and attitudes in the field, it seemed premature to try to focus on specific knowledge until we had a better sense of the "lay of the land."

Thus our primary objective was to develop this general description of the field. With a better knowledge of the range of activities being pursued, a sense of what issues and activities are common enough to justify further study, and a clearer idea of the complexities inherent in how different types of organizations approach the transportation problem, we could approach more detailed surveys with much more confidence. Our secondary objective, deriving from this, was to learn about how to conduct future surveys of this type.

Our primary lesson was that future surveys should be more specialized to different types of organizations. School districts, for example, operate under a fundamentally different model than do nursing homes, and so asking them all the same questions is not effective at exploring the subtleties of the different models. While this seems somewhat obvious in retrospect, it was not necessarily so going in. For one thing, we didn't know what the appropriate categories would be; this was something that we wanted to let the data tell us rather than imposing on it. Second, asking everyone the same questions and then observing where differences or ambiguities arise in the answers actually has helped us to understand more about how the operational models differ from each other. If we had assumed these differences from the beginning we could not have known if they were real or simply a reflection of our own preconceptions.

One example of this approach would be surveys specialized to the type of organization, for example, school, social service, etc. This could also address whether the organization has a major focus on transportation. Many of the questions in this survey were based on an implicit idea of a social service agency with clients to whom it would sometimes provide transportation. Because of this, some of the questions may not have been appropriate, or appropriately phrased, for other types of transportation providers such as transit agencies and school districts, or even for social service agencies with a transportation specialty. For these organizations, their clients *are* their transportation customers; questions aimed at understanding which clients receive transportation services are meaningless in this context.

It would also be useful to have separate surveys for providers and arrangers of transportation, with clearer criteria for distinguishing between the two. There is really a continuum of both of these activities, as a function of the frequency with which they are done; there needs to be an explicit threshold for membership in each category. Having separate surveys would make it feasible to go into more depth in each one. More importantly, it would add clarity for those organizations that do both, in terms of keeping the different activities separate when they answer questions. Because we asked many of

the same questions in both parts of our survey, we were not always completely confident that respondents were not mixing the two activities together in their answers.

We also learned a number of smaller lessons about how to organize future surveys in a general sense.

We wished that we had asked about the organization size, in terms of number of employees, volunteers, clients, parishioners, and so on. Again, this question would be easier to define in the context of a survey that is geared to a specific type of organization. However, it might also be another dimension around which surveys could be specialized.

Similarly, the geographical setting of the organization (urban, suburban, small city, etc.) would have been good to know. Again, this could be a dimension along which to organize surveys or specific questions within them.

We asked a fair number of yes/no questions. In future surveys, we would avoid these. One point is simply that there are other relevant possibilities, such as “don’t know” or “don’t want to say.” Another, more significant issue, is again that there is a continuum of behaviors and attitudes. It would be more useful to have a sense of frequency or perceived importance, rather than simply whether something is done.

Pre-survey lessons

In our survey, the primary purpose of the pre-survey was to simply to reduce our sample size. We had found ourselves with a very large database of over 11,000 organizations. We expected that a large fraction of these would have no involvement with transportation, and we did not want to waste the expense of printing and mailing a full 20-page survey if most of the recipients would have no reason to respond. So we used the one-page pre-survey as a way of filtering out organizations with no transportation interests.

However, in doing this we encountered a couple of important accidental benefits that would justify the use of a similar pre-survey in future efforts as well. First, we got a very large sample from which to draw conclusions about the number and types of organizations involved in transportation, and the nature of their involvement. This was the one key question of our study, and the short survey made it possible to maximize the response rate to this specific topic.

We also observed that the pre-survey could be an effective way to filter responses, in order to more effectively target the full survey. In our case we only used it to filter out those organizations that were not involved in transportation. However, in the future we would use it to focus specifically on categorizing possible respondents in order to send more specialized surveys, based on organization type, provider or arranger, geographic location, or other criteria of interest. Given our conclusion that the full survey should be specialized to different organizational criteria, the pre-survey is almost a necessary component of this.

In addition to creating provider surveys that are specialized to different types of organizations, so that for example schools will be asked different questions than nursing homes, we also learned a number of other lessons about how to better define the issues of interest in order to reduce ambiguity and eliminate irrelevant situations.

The first point would be to create much clearer criteria for defining what a provider is. We simply asked whether the organization provides transportation, but did not place any formal constraints on how to interpret this. In part this was again because we did not want to impose our own preconceptions on the definition of the concept, but wanted to let the data inform us on how to best define it. From this we learned a couple of important lessons.

First, vehicles that are owned by staff and perhaps occasionally used to give rides are an important phenomenon, but one that needs to be considered separately from true agency-controlled vehicles. We did not specifically exclude these situations, or include them as a separate category, so in the end we did not have a sense of the prevalence of this activity.

Second, some organizations have vehicles that are owned by the organization, and sometimes used to transport clients, but which have some other primary purpose. For example, a church might have a car for the pastor to use for visits, or some social service agencies might have vehicles that they use to bring meals or other services to their clients at home. As with staff-owned vehicles, these situations need to be explored, but kept separate from vehicles that are actually intended primarily for transporting passengers. In both cases, the major problem is that it becomes very hard to determine how efficiently vehicles are being used for passenger transport when multi-use vehicles are lumped in to the total count.

In general, from the perspective of efficient resource usage that underlies much of the concern about community transportation, it might make more sense to define "provider" in terms of resources rather than activities. That is, a provider might be defined as an organization that owns or leases a vehicle whose primary purpose is transporting passengers. Survey questions could then focus much more directly on how these vehicles are being used. By contrast, organizations that occasionally provide passenger transport in vehicles that are mostly used for other purposes, or which sometimes borrow or rent vehicles, perhaps should really be considered transportation "arrangers" from the perspective of their degree of involvement in how transportation resources are used.

Another major category of information from providers was the nature of the transportation that they provide, and the clients that they serve. One distinction is between pre-set routes versus on-demand service; another is the focus on individual versus group trips. Both of these could significantly affect the cost per trip and the average trip length. A better understanding of service-area restrictions would be helpful; many organizations did indicate that they were subject to these. It would be useful to probe the extent to which these restrictions are legally- or self-imposed, or merely guidelines; and about the extent to which the restrictions actually interfere with operations. Finally, there are also organizations that provide specialty services, such as long-distance rides to particular destinations, and distinguishing these from ordinary local-area providers is important to maintaining the integrity of the data.

Another aspect of specialty services is the type of client. In our survey we just listed a number of characteristics and asked the respondent to check all that applied. This was not that helpful in that most organizations checked most of the boxes. We really

wanted to know something more about the frequency with which they encounter particular characteristics, and providing frequency categories rather than a simple yes/no choice would be one way to get at this. But beyond frequency, we also want to know if some passenger characteristics are primary, while others are merely incidental. For example, schools primarily serve youth; some of them may be disabled or low income, but these are not factors by which they decide whom to transport. Other organizations may focus on disabled or low-income passengers, and age may be a secondary characteristic. Transit agencies carry whoever pays the fare; their customers have all the characteristics, but none of them are primary in the sense of being a focus of the agency.

The real issues of interest here are: 1) To what extent does dealing with secondary characteristics draw resources away from the primary mission, and could these situations be better handled by specialty providers. For example, do agencies have to invest in expensive vehicles to serve disabled passengers when this is 1% of their ridership, and when others are already equipped to do this? 2) To what extent do funding restrictions that may be directed to specific passenger characteristics make it hard to serve their client base, which may be much more general?

A final important aspect of understanding transportation providers and resource usage is their relationships with other organizations and attitudes toward working with others. A fair number of providers did indicate that they provide transportation on behalf of other organizations at least occasionally, and understanding the circumstances of these relationships would be valuable in identifying opportunities for additional collaboration. Conversely, it would also be useful to know more about the reasons and constraints that motivate the large number of providers that do not ever provide rides outside their own organization.

Many organizations indicated an interest in more collaboration with others, but indicated the presence of barriers that make this difficult or impossible. Our write-in option on this question provided a good list of possible barriers, and further exploration of the prevalence of these would be very helpful in better understanding this often-cited problem. Another interesting possibility would be to probe further into the details of what kind of collaboration organizations are interested in, or what constraints they might want to impose upon any such collaboration. As a general point of possible improvement, we asked lots of questions about what providers do, but none about what they would like to be able to do but can't, i.e. how the system is not working and how coordination might make it better.

Arranger survey lessons

We were somewhat disappointed with the results of the arranger part of the survey. Our thinking going in was that we would ask questions that would basically parallel the appropriate provider questions, and then use differences in the answers to develop an understanding of why some organizations arrange transportation rather than providing it. We also imagined that differences in the answers might make it possible to identify opportunities where provider resources and arranger needs might be brought together in a productive way.

While this approach did point to a few intriguing differences between providers and arrangers, in general the two groups seemed fairly similar. Whatever motivates some organizations to provide their own transportation and others to arrange it was not apparent in the answers to the questions that we asked. Neither were possible complementarities identified. By focusing our questions on what arrangers do, rather than on what they would like to do but can't, we merely developed a description of the status quo, rather than an agenda of unmet needs.

Part of the problem was the sheer variety of activities that constituted "arranging" transportation by our survey definition. As noted for providers, there would be considerable value added by explicitly defining the different activities and treating them as separate issues in terms of the survey questions. There is a big difference in resource usage between an agency that sometimes helps a client figure out how to get somewhere on the bus, versus one that regularly pays for taxi rides or arranges medical transportation.

Another important distinction is between those organizations whose involvement in transportation is occasional and as-needed, versus those that have an ongoing and formal involvement. Both situations are important and worthy of study, but they represent fundamentally different business models that require different lines of questioning to understand.

Yet another point is that some organizations only arrange transportation, while others both provide and arrange. Our survey did not really help us to understand the differences between these types, because we asked only descriptive questions about operations rather than asking organizations directly about why they fall in one category or the other. For those that do both, the important follow-on is to understand why some rides are provided internally while others are arranged from outside. Our survey did provide some possible insight here, but more explicit examination would be valuable. For those that only arrange transportation, understanding why they do not own their own vehicle and what constraints this creates are the important details.

In general, the first lesson here is the same as for providers. That is, to identify the different possible operational models and develop specific surveys or sets of questions to examine each one separately. The second key lesson is complementary to that for providers. That is, while the focus for providers is on identifying underused resources, the focus for arrangers should be on identifying unmet needs; these are a possible application of underused resources. While it is important to understand what arrangers do and why, it is also important to know if this is due to preference or constrain

6 Conclusion

The primary objective of the survey was to develop a basic understanding of the types of organizations that provide or use transportation services and their inventories, operations, and attitudes. A second, and equally important objective given the exploratory nature of the project, was to also use the results to develop insights into how to improve future surveys of this type.

Our approach to the survey had two key characteristics. The first was to question both organizations that provide transportation, and those that do not provide it but are actively involved in purchasing or arranging it on behalf of their clients; with an eye to better understanding the relationships between resources and needs. The second was to be comprehensive; that is, to try to survey any organization that might be involved in either in providing or arranging transportation. The existing literature, as well as more informal discussions, tended to focus on the traditional transportation community known to government funders and regulators. We wanted to reach these organizations, but also to find the small social service agencies, housing service providers, and communities of worship for whom transportation is just an adjunct to a different mission.

Our purpose in this survey was not really to develop definitive answers to specific questions about the specialized transit community. Because we did not know much about the types of organizations that we were likely to encounter, the types of models that they would operate under, or the relative frequencies of the various activities and attitudes in the field, it seemed premature to try to focus on specific knowledge until we had a better sense of the "lay of the land."

Thus our focus was on developing this general description of the field. With a better knowledge of the range of activities being pursued, a sense of what issues and activities are common enough to justify further study, and a clearer idea of the complexities inherent in how different types of organizations approach the transportation problem, we could approach more detailed surveys with much more confidence. Our secondary objective, deriving from this, was to learn about how to conduct future surveys of this type.

We arrived at a few important findings about the current state of the specialized transportation system. Primary among these was that involvement in providing or arranging transportation for disadvantaged clients is indeed as widespread as has been believed. Among the very large sample in our pre-survey, which included a wide range of different types of organizations, about 65% were involved in their clients' transportation, and excluding churches, about 45% actually provide transportation themselves. Given our initial sample size of 7,000 non-church organizations, this implies that there are over 3,000 specialized transportation providers in the state of Minnesota. And 75% of these are not schools or government transit agencies that are formally regulated by the state; but are churches, nursing homes, and social service agencies.

Another important finding was the types of organizations that are involved in transportation. We did not impose any structure on this, allowing organizations to describe their missions directly. The descriptions, however, did fall into five broad types, which could serve as the basis for more specialized surveys in the future. Churches and other worship-based organizations are generally focused on their own parishioners,

although some go beyond this. Agencies that provide housing services again generally focus on their own clients. These are of special interest because they were far more common than we expected, and seemed in general to use their vehicles less intensively than other organization types. Schools, also, mostly carry their own students, and seem especially constrained on how they are allowed to operate. General social service agencies were the largest category (although not much larger than housing services), and provided the broadest range of operating models. Finally, transit agencies, while they are the main focus of discussions of improving community transit, are a small minority of the transit providers in operation.

With regard to questions of the efficiency or lack thereof in vehicle usage, our findings were mixed. Passenger loads per vehicle varied widely; part of this may have been due to a lack of precision on our part in defining which vehicles we wanted to be counted. In looking at vehicle schedules, we found that while weekdays are well served, that evenings and weekends are much less so, although it was not clear how much this simply reflected realities about demand. We also learned that in many cases vehicles are only used about half or less of the hours that they are scheduled to be available, indicating that there may be significant blocks of time when they could in theory be used for other purposes.

Finally, in examining how organizations interact with each other and their interest in additional collaboration to improve their transportation services, our results were mixed. Most organizations serve only their own clients, or provide transportation to other organizations very rarely. Many organizations were also uninterested in collaboration in principle as well. While a reasonable number of organizations were interested in more collaboration, many of them cited barriers that make such interaction difficult. Significant among these, from the standpoint that policy could address them, were insurance restrictions, legal constraints on how particular organizations (e.g. schools or transit agencies) can operate their transportation services, and the desire to avoid becoming subject to additional regulatory structures.

Our second main class of conclusions was an improved understanding of how to do better surveys of this type in the future. Chief among these was that future surveys should be more specialized to different types of organizations. Important criteria for this type of specialization are the organization type (school, social service, etc.), the degree of involvement in transportation (occasional, as needed, or formal and ongoing), and whether the organization provides or arranges transportation. We would also provide more explicit criteria for distinguishing between providers and arrangers.

Another key finding was the value of the pre-survey in filtering respondents, in order to more effectively target these specialized full surveys. The pre-survey also proved to be an effective tool for reaching a very large sample on one important question. In our survey this issue was developing an estimate of the total number of providers and arrangers in the state. In future surveys we might focus on variations of this theme, but with more tightly defined categories, or measurement of the frequency of specific activities or problems.

Finally, while this survey was very focused on what organizations actually do with regard to transportation, future surveys should also explore in more depth what they would like to do, and why they are not able to do it. While it is important to understand

what organizations do, and why, it is also important to know if this is due to preference or constraint. This is where the possibilities for policy improvements lie.

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