

the two dial-a-ride demonstrations in Rochester, New York, discussed in this paper. RGRTA received UMTA Section 6 project funds to test these innovative strategies and to collect the necessary data to conduct this evaluation.

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Barriers to Coordination: Irrational or Valid Objections?

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Part of a larger study that focused on coordination of transportation resources in programs designed for the elderly is presented. The study attempted to determine the conditions under which local agencies and providers resisted coordination attempts and to evaluate the validity of their objections rather than simply styling them as "barriers." The study sought to identify the situations in which coordination models might offer more benefits than costs to participants and the conditions under which local agencies correctly and incorrectly assessed these outcomes. Legitimate objections to transportation coordination that actually arose in the 30 sites visited or surveyed and in recent research are identified and ways in which coordination proponents can objectively appraise those objections and, when appropriate, overcome them are suggested. When analysts and planners are certain that coordination in any community is the most sensible and efficient long-run approach to transportation delivery, they must be willing to provide time, money, and professional resources to convince local participants of this outcome and to help agencies cover costs. In addition, planners and analysts must recognize and address the very legitimate concerns that human-service agencies have about the quality of transportation services they wish delivered to their clients.

There is growing public concern over the unnecessary duplication of local transportation services and the fragmented nature of many types of human-service transportation projects. Two key U.S. Department of Transportation programs--Section 18 (rural operating assistance) and Section 16(b)2 (needs of the elderly and the handicapped) of the Urban Mass Transportation Act of 1964, as amended--have mandated a coordinated and cooperative approach to transportation delivery in programs that use their funds. The 1978 amendments to the Older Americans Act of 1965 reflect the concern of Congress with the efficient use of existing community resources in providing transportation services to the elderly; the act mandates a coordinated approach to transportation delivery (Federal Register, Vol. 45, No. 63, March 31, 1980).

The consolidation or coordination of transportation services at the local level is increasingly being seen as a way to reduce unnecessary duplication and to obtain economies of scale. Coordination can use existing resources more effectively and can capture the potential offered by underused vehicle and staff capacities. Analysts have identified several theoretical models of such coordination; the literature reports the experiences of some of the

more successful or notable experiences in coordinated transportation services (1-7).

Most discussions of transportation coordination assume, first, that there is a great deal of service duplication and abundant potential for greater vehicle use at the local level (5). Second, they assume that service coordination is a desirable and meritorious idea in almost every context. Because of these prevailing beliefs, many analysts and observers have styled all objections to or reservations about coordinated service delivery as "barriers." They often imply that such objections are never rational or realistic or are always extremely protective of traditional modes.

This paper reports on part of a large study of the coordination of transportation resources in programs designed for the elderly or funded by the Administration on Aging (AOA). Thirty selected planning service areas (PSAs) (a geographic unit defined by AOA) were visited or telephoned to evaluate the operational experiences of local transportation providers and their responses to proposed coordination projects.

This study attempted to determine the conditions under which local agencies and providers resisted coordination attempts and to evaluate the validity of their objections. This study also sought to identify the situations in which different coordination models offered more benefits than costs to participants and the conditions under which local agencies correctly and incorrectly assessed these outcomes (7).

Although the literature is full of complex models and potential coordination arrangements (3-5,8) it is only necessary to identify four broad classes of coordination models here. Each model may include variants thought to operate and behave in a similar manner. [The AOA study itself developed a more comprehensive typology, which is too detailed for the needs of this paper (7).] The first model is nonservice coordination, which includes a mutual or cooperative agreement for any activity other than direct provision of transportation service (for example, joint purchasing of vehicles, joint dispatching services, and joint maintenance programs).

The second model is user-side coordination, that is, any arrangement that permits the client or user to pick an existing community transportation carrier. The third major model class is joint service coordination, which is any mutual or cooperative agreement between providers, public or private, and agencies for the coordinated delivery of services. The fourth class is purchase-service coordination, which is any agreement between agencies and providers, public or private, for the purchase of service or more capacity in vehicles or other resources.

All four major models described above can be combined or developed separately. What is often styled a "brokerage" can fit any of these four models or combinations of them; the term "broker" is and has been used to describe a number of different models of coordination. In general, and certainly for our purposes, there is no need to differentiate a brokerage as a separate model of coordination (5).

COORDINATION AND COST SAVINGS

Coordination brings benefits by reducing the redundant use of resources (such as duplication of the same or similar vehicle trips) or by increasing the efficiency or productivity of service delivery (3,5). However, it is important to be specific about what local agencies would actually want from participation in coordination and how coordination models work to meet these objectives. Moreover, it is equally necessary to identify the costs that are incurred as these mechanisms operate.

All four coordination models can meet the needs of local participating agencies if they provide one or more of the following benefits:

1. Reduce the resources (time or money) devoted to any cost component of service delivery (e.g., savings through joint purchase of vehicles or reduction in administrative costs by contracting for service),
2. Reduce total resources (time or money) devoted to transportation,
3. Reduce unit transportation costs,
4. Increase the amount of service delivered to existing clients,
5. Increase the number of clients provided equivalent service, or
6. Increase the quality or level of service (however defined) to existing clients.

Few local agencies are interested in overall efficiency or effectiveness if it does not translate into one of these objectives for them. In many ways, this is a checklist; local agencies would have to see one or more of these benefits to consider participating.

Many objections to coordination arise from a realistic appraisal of the costs and risks of coordination. If an agency decides that risks or costs are too high or the expected benefits are too small, these costs become barriers. Many so-called barriers to coordinated service delivery are a complex set of interactive responses and thoughtful concerns about the often-significant changes that are expected of a local agency participating in a coordinated transportation system.

Proponents of coordination often proceed from the assumption that because coordination can save money or increase efficiency, local agencies should be willing and eager to participate. Refusals to participate are not seen as rational responses to local coordination attempts.

This study and some very recent results from major demonstrations sponsored by the Office of Human Development Services (HDS) suggest that cost

savings are far from a simple issue (1,7,8). First, there is strong evidence that, in the short run at least (one to three years), many coordination attempts have not saved money or appreciably increased the quality of service delivered to clients. Second, when there are cost savings, they may not accrue to the agencies that are being asked to coordinate but rather to larger governmental units or funding sources. This undoubtedly lessens the willingness of local agencies to participate in a program, since it saves them nothing.

Third, even when there will be demonstrably lower costs of service, there may be initial start-up costs, such as radio purchases and driver training. Local agencies may simply be unable (or perhaps just unwilling) to incur those costs in the expectation of future savings.

Fourth, agencies that have usable vehicles are in a different position than those without such vehicles. There is a great deal of pressure on the former group to calculate the true costs of the provision of service by using the full costs of donated vehicles, etc. This is undoubtedly a valid policy concern, but it does not change the fact that, realistically, agencies with free resources will not give them up unless forced to do so. Moreover, the more crucial point (often missed by proponents of coordination) is that such vehicle fleets and donated resources generally cannot be converted into cash, even if they can be given a dollar value. Whether they are forced to recognize the costs of those resources or not, many agencies cannot use them in any other mode of operation.

Only in a fifth category, one in which the agency will immediately save money or markedly increase service quality, can local objections be styled as irrational or "turf-protecting". Even in this case, it is not realistic to expect agencies and their staff to immediately abandon the ways in which they have traditionally delivered transportation services.

The ways in which each of the four cost-saving situations discussed above can create barriers to the implementation of local coordination efforts will be examined, and methods by which proponents of coordination can act to overcome barriers in each of the four cases will be identified. Last, the circumstances in which such solutions are appropriate will be discussed.

Are There Any Cost Savings?

In early 1980, a study was published of the results of the first two years of five major transportation-coordination demonstrations conducted for HDS (1). That report found that only one of the five sites was able to reduce costs after coordination and that two sites incurred increased costs after coordination. Only one system substantially increased the efficiency of service delivery and two increased the quality of service delivered. Even those sites that decreased some costs more than offset those cost reductions by significant cost increases in other areas.

The authors of the study stated early in the report (1, pp. 3, 4):

Coordination does not necessarily lead to more efficient or effective transportation operations. In general, coordination and the number of riders served increased but costs per unit of service also increased, even after adjusting for inflation. Total cost savings were almost nonexistent.

They also stated that the best selling point for coordination was that it saved money (1, p. 10). In

fact, this was generally not the case for these demonstration projects. They concluded that it is only under very special circumstances that coordination costs less.

The AOA study reported in part here concluded that the kind of redundant services for which coordination would obviously reduce duplicative costs rarely existed (7). In the 30 areas visited, the study team found very few examples of actual redundancy in direct service delivery. Very few providers were operating their vehicles along the same or similar routes for the same type of clients at approximately the same time of day.

What the study did find was the opportunity for increased productivity and use of resources. For example, a local nutrition project for the elderly might use its vehicles for only a few hours in the middle of the day to transport meals, whereas the local cerebral palsy agency was using similar vehicles only in the morning and evening peak hours to carry handicapped people to sheltered workshops. The AOA study also found some opportunity for increased efficiency in joint nonservice activities; the most hopeful is joint purchase of insurance (as in Oregon). However, these opportunities for more-productive use of existing resources might not lead to any discernible cost savings for potential participants.

Nothing in the discussion above proves that coordination cannot lead to cost savings or meaningful service improvements. It has been noted that if previous coordination efforts had been made correctly, they might very well have achieved measurable benefits and savings. Yet, given the history of several well-publicized coordination efforts, local agencies that express concern or reluctance to coordinate service are not necessarily behaving irrationally.

Existing coordination documentation suggests that, simply because a system currently operates inefficiently or underuses its existing capacities, one cannot jump to the conclusion that coordination will increase its efficiency or productivity. Moreover, existing evidence suggests that, even if there were increased productivity and efficiency, they might not lead immediately to cost savings for participating local agencies. It is questionable whether local agencies would be interested in such efficiencies if cost savings or service improvements were not immediately forthcoming.

Who Obtains the Cost Savings That Do Exist?

It is important to note that the potential benefits from any coordination model will differ as the agency perspective differs (4). State and federal funding sources should and do have different perspectives on what constitutes efficiency and cost savings; these views are rarely shared by local agencies (4). The state may wish to minimize the number of vehicles awarded in a certain area and may view a coordination effort as an ideal way to achieve that objective. In many cases there is no benefit to any given local recipient in foregoing a vehicle and being forced to coordinate in order to save the state money (4,5).

Overall or systems savings or areawide increases in efficiency are rarely a motivating factor for any given local agency. Simply because analysts find opportunities to optimize the entire human-service transportation network in a community does not mean that any given agency sees such a proposal as beneficial. Analysts and the taxi industry have charged that the total costs of direct provision by social-service agencies are far higher than alternatives would be. Recent research has found that this is

often not true (4). However, even in the instances in which it is true, such comparisons are based on the total costs of service, including expenses not borne by the local agency (e.g., vehicles obtained by means of grants, volunteer drivers, and hidden-overhead subsidies). Although public analysts at the regional, state, and federal levels should make their decisions on these costs, local agencies do not. Local agencies will make their decision to participate in a coordination model based only on an evaluation of the out-of-pocket cost savings (as they understand those costs) offered by a coordination program.

Start-Up and Additional Costs Associated with Coordination

The five HDS coordination demonstrations incurred significant start-up costs and continuing additional costs. None of the projects succeeded in reducing direct costs, and one site actually increased maintenance costs (1). The HDS report noted, "For... potential cost savings in transportation expenditures to be realized from coordination, substantial planning and administrative expenditures are necessary" (1, p. 128). The report concluded, "The overriding theme emerging from the coordinated transportation demonstration program is that coordination is a more costly, complex, difficult, and time-consuming process than had been imagined. The process of coordination is arduous and does not end with initial accomplishments" (1, p. 5).

In addition to administrative costs, other costs may increase after coordination. The vehicles used by many social-service agencies in direct transportation provision are in marginal maintenance condition. Their continued use by only one agency may not create serious maintenance or capital-acquisition problems. If these vehicles become part of a coordinated fleet, however, they may quickly experience serious maintenance problems (1). Thus, the vehicles are a positive resource only to the original agency; they are a cost or a negative factor for most service-coordination models.

Smaller agencies sometimes work with volunteer networks that cannot be easily accommodated within an overall coordination model. By joining a coordinated system, an agency may break down these volunteer networks. The system may also have to hire people to provide the driver and escort services formerly volunteered.

The limited operational experience and the marginal maintenance condition of their vehicles may require social-service agencies that enter service-coordinated schemes to expend considerable resources. Their drivers may not be trained to deal with different types of clients (such as the retarded), and their vehicles may not be equipped to deal with the special needs of new travelers (such as those confined to wheelchairs). Their vehicles may not be compatible with the needs of an overall system (such as radio dispatching), and they may be incapable of operating additional hours or miles without extensive repair and increased routine maintenance.

These are not trivial costs, and they can represent a significant proportion of any agency's transportation budget. Most agencies would want to see significant and measurable changes in the cost or quality of service delivered to their clients as a result of such expenditures.

Agencies That Have Vehicle Fleets

Agencies that currently provide all or some of their transportation services directly in their own vehi-

cles or in staff cars are generally in a different position than those that do not. Most local agencies that have existing fleets will only be willing to engage in service-coordination models (i.e., the joint or coordinated delivery of services) or non-service models (e.g., joint maintenance). These are the only models that will allow them to use their own resources in such a way that their costs are lower or the quality of service improves. Even then they may require significant inducements to change their current operations.

In Houston, the local Area Agency on Aging (AAA) refused to allow their relatively large vehicle fleet (28 vehicles) to take part in a coordination effort. Finally, the coordinated system offered to carry the clients of AAA to congregated meals for a smaller unit cost than AAA thought it was currently incurring. In addition, the coordination system bought service from AAA for other clients during traditional periods of nonuse of AAA vehicles. In short, AAA reduced their own transportation costs and made money on their formerly idle vans. Only with such strong incentives were they willing to participate.

Agencies currently purchasing all their transportation services from local providers are already involved in one model of coordination. They may be more willing to switch to another coordinated effort (e.g., a system coordinated by a social-service system) because they can see whether they are getting lower costs or better services. Since they currently pay a clearly defined price, costs and benefits are seen easily. The Cerebral Palsy Association in Pittsburgh, for example, was willing to pay the coordinated system there, ACCESS, more money than they had previously paid private carriers because ACCESS lowered the amount of time that their own staff devoted to the administration of the contracted service. The current model of transportation service delivery followed by a local agency will have a significant impact on the type of coordination model it can and will consider.

BARRIERS TO COORDINATION

The previous discussion has shown that coordination efforts sometimes do not bring appreciable cost or service benefits. In other cases, the benefits that do occur do not accrue to the participating agencies but rather to their sponsors or other community agencies. In still other cases, operational cost savings can be wiped out by the high start-up costs associated with participation in a coordinated system.

Given these situations, it is not sensible to style all objections to coordination efforts at the local level as barriers or to see them as irrational or uninformed. Local objections to coordination must be seriously considered and appreciated.

Having an understanding of why local agencies rationally resist coordination efforts in their own self-interest does not mean that barriers to coordination cannot or should not be overcome. Rather, such an assessment of the actual incidence of costs and benefits suggests policies and programs that might realistically address the genuine problems and concerns of local agencies.

When local coordination efforts promise real systemwide cost reductions or service improvements either immediately or in the future, proponents can act to overcome objections and barriers. However, coordination proponents will only be successful in overcoming barriers to coordination if they recognize the differing perspectives of local agencies and the perceived self-interest of potential participants.

Many (although certainly not all) barriers to coordination arise from realistic appraisals of the costs and risks of participation. In such cases proponents can only overcome barriers if they can safeguard against the risks involved or change the incidence of costs and benefits. The following discussion centers on five classes of barriers to coordination found in the AOA study. The discussion suggests feasible and appropriate strategies to overcome these barriers.

Benefits Do not Accrue Directly to Participating Agencies

Agencies resist coordination because of their own perception that the costs and risks are not worth the expected benefits. Before addressing whether these are indeed barriers, it is necessary to first identify whether agency calculations of costs and benefits are correct. If agencies have not correctly calculated their cost savings, they can be trained and assisted to do so.

Often agencies have correctly assessed their own financial and service patterns. A local agency may be optimizing its own resources by using drivers trained under the Comprehensive Employment and Training Act and the "free" vehicles it received through grants. One or more funding sources may, however, see that granting more vehicles to various providers in the community would not be efficient. Such funding sources may feel that the best use of their resources lies in a coordinated effort by local agencies.

In this case, it is useless to try to overcome these "irrational barriers." Coordination proponents must recognize that few agencies will willingly give up free resources or accept communitywide cost accounting. Most agencies, particularly those that have existing vehicle fleets, would be foolish to give up their own resources.

These barriers are not irrational, and proponents are trying to convince the local agency to act against its own best interests. The funding source or relevant state and federal agencies must change their rules and requirements. Agencies should simply not be permitted to make short-term or highly individualized decisions at the expense of the efficiency of the entire community transportation system.

Physical Barriers

Many human-service agencies, particularly in rural areas, noted that there were real geographic barriers to coordination. Some agencies serve many counties. Some of the individual counties are themselves large and have low-density settlements and diverse origins and destinations. Many western urban areas can have very low-density settlement. Some rural agencies noted that their clients had no telephones and could not make easy use of either user-side or service-coordination models. Some providers noted jurisdictional problems; one county's vans could not carry another county's citizens.

These problems and their solutions are probably very site-specific. In some rural areas, social-service agencies provide scheduled, almost fixed-route service, which can be accessed by writing the provider a postcard, by flagging the vehicle down along the route, or by meeting it at an assigned stop at a specific time. Several Texas AAAs reported informal pick-up agreements along joint jurisdictional boundaries; a person would be carried to the county line by one provider and met there by another provider who was going into the urbanized area for medical services or shopping.

Services are so limited in rural areas that it

seems likely that where rural providers are not considering coordination, they have some valid reasons. In urban areas, the situation is slightly more complex. If providers resist coordination efforts, they are in effect saying that the problems and costs created by coordinating supply (or maintenance or bulk-gas purchasing) over a large area that has a low-density demand are greater than any benefits they can expect from coordination. Before any attempt is made to overcome these barriers, it should be determined whether the assessment is correct.

Record-Keeping and Accounting Requirements

Many agencies interviewed, as well as the literature (2,3,9), report that the administrative and accounting problems that accompany all four types of coordination models can be significant.

A serious problem for the lead agency in a service-coordination model is that each participating agency and its funding source may demand different types of contractual arrangements for different time periods, different payment schedules, and requirements for different and not entirely consistent trip records. Some agencies feel totally unable to meet this myriad of requirements. Other agencies find themselves unable to get the kind of contracts and records that they need from the facilitator of the coordination effort.

However, many of the difficulties encountered by these agencies reflect their inexperience and failure to understand how transportation systems work. There is some evidence that agencies establish reporting requirements out of ignorance or fear of unknown factors like unit-cost measures and performance indicators. Many agencies simply fear monthly variations in costs (5).

Some local agencies have displayed interest in standard transportation-reporting measures and in vehicle and system productivity. The Houston coordination system held a one-day training workshop for 43 local social-service agencies, including two AAAs and several small human-service transportation providers. The session covered how to set up books and calculate the advantages of alternative contract arrangements.

With such record-keeping assistance, some agencies will better understand the kinds of records and books that they really need for their own information and for the auditing requirements of their funding source. Such assistance may allow lead agencies or coordination facilitators to provide appropriate and complementary records.

In Pittsburgh, the local AAA is purchasing transportation for medical trips for elderly clients from the coordination system there, ACCESS. AAA knew what had been spent in previous years and wanted a simple agreement; the agency wanted to give ACCESS all its transportation money and be assured that all elderly clients who wanted transportation for medical care would get it. This was unacceptable to ACCESS.

ACCESS had its consultant monitor the trip records of AAA's clients for the previous year and calculate the average trip length and average unit cost. They then offered a comparable unit-cost figure (plus an inflation increase) to AAA. AAA still is not quite sure what the figure represents, but a clause has been built into the contract that allows it to stop purchasing services if the total amount spent starts to approach the annual amount set aside for transportation. This is an interesting arrangement, which shows that the facilitator of a coordinated system was willing to help educate AAA and that AAA was willing to take what it perceived as a risk.

Of course, some record requirements are not so readily addressed. A number of respondents at all levels of government reported that certain federal programs, particularly Title 20, were a nuisance to administer (2,3,7). Others reported that state auditors often imposed severe and very limiting requirements on local contractors for fear of conflicting federal audit decisions. Several states and the U.S. Department of Health and Human Services (HHS) have recognized this problem and have established a seven-state consortium; Michigan has the lead agency to develop a model uniform state recording system.

Perceived Statutory or Regulatory Requirements

It is still commonly believed that vehicles purchased by using Title 3 AOA funds may not be used to transport noneligible elderly and nonelderly clients. A corollary is that Title 3 funds cannot be used to purchase wheelchair lifts or radio equipment.

This inaccurate portrayal of AOA policy may have come from the state level down rather than from the agency level. There is evidence that several state AAA units have declared that this is indeed AOA policy, perhaps out of ignorance or perhaps because it gives the state greater control.

Many local AAAs feel that they cannot use Title 3 Older Americans Act monies in coordination efforts if there are any elderly citizens that have unmet transportation needs or if the level of service delivered to the elderly after coordination is in any way inferior to that previously delivered. It is, of course, extremely unlikely that all the transportation needs of the elderly in any community have been met. It is always possible that the level of service will deteriorate after coordination, if only slightly. It is necessary to clearly and definitely explain to local agencies that Title 3 funds may be used directly or indirectly in coordinated systems. It should still be noted that the misconception was expressed by a number of social-service agencies, even in states in which Title 3 monies had already been used for coordination projects. Since this is so pervasive a belief, AOA's congressional coordination mandate might be served by the issuance of some policy guidelines on this topic. The guidelines should clearly explain the permissible uses of AOA funds and the circumstances under which varying coordination methods are possible. Can, for example, Title 3 funds be used for user-side subsidies?

It would also be extremely useful if the AOA were to consider establishing standards on permissible variances in service quality. Local AAAs could then consider how much reduction in the level of service they are willing and able to accept for their clients in order to achieve cost reductions.

Service-Related Features

Many social-service agencies have norms and ideas about how their clients ought to be treated and the quality of service that they require and deserve. Different agencies have different philosophical views about the role of transportation in the care of a client.

Many agencies that deal with the elderly and the handicapped adopt the case-management approach. They attempt to deliver all the services their clients need and try to be helpful to clients in all or most of their social-service activities. Therefore, such agencies provide transportation services directly to their clients. Direct provision in part ensures quality and in part maintains the overall relationship with the client. Some agencies re-

ported that direct transportation provision showed the client that the agency really cared and that the client was important.

The case-management approach to transportation provision tends to be a very expensive model of service delivery and one that can limit how many people an agency can serve. But this normative model of service delivery has a great impact on the social-service community. Sometimes this normative model is linked with expressed fears that other transportation providers could not or would not provide the same intensity or level of care for their clients. Although this level-of-service variable can be expressed in terms of increased riding time, late pick-ups, and rude drivers, it is often expressed simply: "No one can care for our clients as well as we do."

Service-related responses have sometimes been dismissed by coordination proponents as "turf protection," but proponents must recognize that any agency's reluctance to use other community-transportation providers for their clients or to mix their clients with others generally reflects a strong concern for the client's welfare and dignity. Such a decision may be very expensive and not very efficient in the economic sense, but it cannot be characterized as irrational. Any attempt to change the transportation-delivery models chosen by local agencies in order to encourage coordination must address the real and underlying concerns of these agencies.

Most agencies have two key concerns about any type of service coordination. The first is the one they talk about freely; the second is part of their decision process, but they are less willing to articulate it publicly. First, many agencies are concerned that objectively measured indicators of service will move in unacceptable directions; for example, total waiting and riding time will increase and there will be late pick-ups and drop-offs.

The second concern is a related one; many agencies fear decline in far more subjective indicators of service quality. There are clear racial overtones to some of the resistance to coordination in southern and rural sites. This was complemented by the desire of many agencies to serve similar groups of the elderly--those from a cohesive ethnic or religious group or from a given neighborhood. There was real resistance to forcing the elderly to ride with children and strong resistance to mixing the elderly with the retarded or the severely handicapped.

Some agencies fear the breakdown of the volunteer network. Volunteers are important, not only in keeping costs low for social-service agencies but in maintaining a personal, hands-on service (9). Many systems use volunteers as escorts, not because the client or clients really need continued assistance but because it makes their clients feel better and more secure (4,7). Moreover, volunteers, although not continually available to either the agency or to individual clients, are often available for a special trip or particular purpose.

If agency participation in a coordinated mechanism breaks down the volunteer network or convinces volunteers that they are not needed, many specialized trip needs that are often imperfectly served by large or formal systems will no longer be served. It is difficult to know how much this thought consciously underlies service objections to coordination, but it is an issue about which analysts should have some concern.

Proponents too quickly dismiss the service concerns of local agencies as either ill-conceived or improbable. There is evidence from several sites studied by both HDS and AOA that some coordination

models have reduced costs and increased efficiency by indirectly decreasing service quality. It may be possible to significantly lower the per-trip cost of transporting an elderly person to a doctor's appointment, for example, if a coordinated system has the capacity to group several comparable trips from or to the same geographic location. The elderly rider, however, would incur some--perhaps significant--increase in waiting and riding time and might also have to cope with an unfamiliar driver and ride with strangers and people unlike himself or herself.

Moreover, some coordination programs trade off one desirable service objective for another, sometimes in ways about which social-service agencies have concerns. There is a trade-off, for example, between high-quality, on-demand transportation services that can only be provided to a few very needy clients and a restricted reservation-type service provided to many more clients.

It is fairly easy for a small system that has its own vehicles and relatively few demands for service to be sure that it is delivering a fairly high quality of service. It would be hard for a coordinated system to provide an equivalent level of service in terms of a number of key variables (waiting time, on-board vehicle time, amount of privacy, etc.).

It certainly is doubtful whether any individual agency can or should be allowed to provide a superior service to a few clients at the possible expense of a lower-quality but more-comprehensive service system for many more travelers. But it must be clearly recognized that the feared change in service quality often voiced as an objection to coordination may be a reality.

The only feasible approach is to help local agencies to understand exactly what it costs them in time and resources to deliver transportation services to their clients in such a personal manner. In addition, it may be helpful to assist such agencies to calculate the increased number of trips they could provide to existing clients or the new clients they could serve within their current budget if they entered some form of coordination model. It is also worthwhile for coordination proponents to decide at what point any given agency should be allowed to "do its own thing," no matter how inefficient that may be, because it would cost too much to change that agency's behavior.

OVERCOMING BARRIERS BY RECOGNIZING HOW LOCAL AGENCIES WEIGH COSTS AND BENEFITS

Historical precedent is a major decision factor for most local agencies. Often they choose to continue their present mode of transportation delivery because it is acceptable and because it has "always been done that way." Being presented with a less costly or better solution is not a sufficient inducement for many agencies to abandon their current model if it is still satisfactory to them. Although this is often labeled "turfism," such a reaction is a common one, recognized in the literature of organization theory (5). People are understandably upset at being asked to change long-held beliefs and to reorganize service-delivery models.

There is evidence from a number of case sites that the proponents of coordinated services often made public their belief that local agencies were inefficient and ineffective (1,7). Such views often made local providers defensive; they were forced to develop reasons why they should not join or be forced to join a coordinated service. This defensive posture prevented them from seeing any potential benefits in coordination, and it tended to magnify the negative aspects. On the other hand, the response of system proponents also cut off

opportunities for adjustments and resolution; many proponents refused to see any validity in agency concerns about service quality and personal approaches to client needs.

It is often easy (but not very useful) to quickly dismiss the stated objections of local social-service agencies because these objections are not "real" problems or because they were overcome in other communities. It is true that many objections are defensive ones and could be overcome with some persuasion. But even defensive objections are still real objections, and they must be dealt with. Very few of the objections of local agencies are without any basis at all; most stem from a minor problem that arose during the implementation of the coordination models.

All the previously identified objections are "real" ones. To a great extent they are susceptible to financial solutions; loans and start-up monies as well as driver-training and personnel-training courses could overcome many of the initial problems. Agencies can be trained to monitor and limit client trip making if they so desire, to take part in service coordination (joint maintenance, for example), and to keep the kind of records that would allow them to buy from or to supply services to a coordinated network.

It should be noted, if it is not immediately clear, that these strategies to overcome operational barriers to coordination all involve the commitment of resources (time, money, training skills) that must come from some other agency or service. Often some agency has to be willing to spend money to eventually allow for the saving of money. In Pittsburgh and Houston, the brokers that managed a service-coordination model provided assistance and, indirectly, funds to enable agencies to overcome their participation barriers.

Any local agency may find that because of increased overhead and administrative costs or high driver-training expenses, coordination is not cost-effective. If a regional planning agency or social-service funding source believes that in the long run the community may be better served by the development of such a coordinated system, it may subsidize the local agency or in some way cover its additional costs.

The strength with which objections to coordination are advanced may decline as the agencies involved become more familiar with the coordination programs and less defensive. It is the unusual person who finds serious changes easy to make and easy to accept initially. As the agency staff think through a coordination model, they may become more open to suggestion if they are not further forced into defensive postures.

CONCLUSIONS

There are significant financial and psychological costs involved in implementing coordination programs in social-service delivery systems. Some of these costs are incurred directly by purchasing new vehicles or additional insurance or by setting up specialized record keeping. Other costs are incurred in overcoming the resistance and doubts of potential participants.

Sometimes coordination of transportation resources cannot be achieved without some diminution in the level of service delivered to agency clients and in the personal responsiveness of the service. Often these tangible and intangible costs are far higher than local participating agencies can or are willing to bear. More often than previously recognized, all economic and other costs are so high that they cast doubts on the cost-effectiveness of proposed coordination efforts.

Overall, when analysts and planners are certain that coordination in any community is the most sensible and efficient long-run approach to transportation delivery, they must be willing to provide time, money, and professional resources to convince local participants of this outcome and to help agencies to cover the costs that they cannot directly recover. And planners must recognize and address, to the greatest extent possible, the very legitimate concerns that human-service agencies have about the quality of services that they wish delivered to their clients.

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