Business Plan for New Hampshire State Coordinating Council's Mobility Management Program

The purpose of this document is to present the Business Plan for the State Coordinating Council's (SCC's) 2011/2012 Mobility Management Program. The Business Plan includes the following elements:

1. **Mobility Management Program**

   The first section of this report outlines the background on the State Coordinating Council (SCC) and provides an overview of SCC projects and achievements.

2. **Cost Projections for Administration and Operation of Coordinated Service**

   A spreadsheet model was built to estimate the costs of administering and operating a coordinated system in the state. This model is built on the actual costs associated with current transportation services, with productivity inputs reflecting urban vs. rural trips densities, trip length, and other trip characteristics.

3. **Cost Projections for Capital Projects**

   The spreadsheet model above can also be used to estimate vehicle needs. Also included in this section is an estimate for the coordination software (see below).

4. **Coordination Software**

   This section discusses the groundwork undertaken by the SCC, and particularly the Alternative Solutions Work Group, to help identify the general specifications for coordination software, and to develop a plan to make that software available to the Regional Transportation Coordinators / Coordinated Community Transportation providers by the end of 2011.

5. **Cost-sharing/Cost Allocation Strategies**

   This section discusses the importance of cost-sharing policies to coordinated transportation programs and alternative approaches. In 2011, the SCC hopes to adopt a specific approach, which would then be reflected in the coordination software that is made available to the regional transportation programs. This section also discusses how cost-sharing / allocation policies are used to establish rates for invoicing sponsoring agencies / organizations.

6. **Medicaid NEMT - Financial Analysis**

   This section describes a 3-phase plan to integrate Medicaid NEMT into the regional structure of coordinated community transportation to achieve a coordinated system much like that which exists in many other states. The plan includes three phases to roll out the system and outlines benefits for Medicaid and community transportation providers.

The underlying motivations for a plan to integrate Medicaid are (1) to reduce DHHS costs for the NEMT transportation of recipients requiring accessible ("wheelchair") transportation; (2) to provide more volunteer driver resources to DHHS for ambulatory Medicaid recipients going to covered medical appointments, especially in rural areas; and (3) to provide an additional revenue sources for regional community transportation coordinators/providers. With the integration of Medicaid NEMT into the regional structure, the Regional Transportation Coordinators would experience greater opportunities to provide more efficient service overall through greater ridesharing opportunities and economies of scale. Medicaid revenue would also be available to possibly leverage additional FTA 5311 funding.

7. BEAS Senior Transportation - Financial Analysis

In this section, an analysis of BEAS Title III(b) transportation data for FY 2010 was used in conjunction with rural public transportation data and Medicaid NEMT data to show how senior transportation funding can be stretched to afford more transportation in a coordinated environment.

8. "Business Case" for Coordination

The business case for coordinated service delivery illustrates the economic impact of sharing trips among providers in New Hampshire by way of detailed examples that demonstrate gains in efficiency. The business case also is supported by the coordination successes already achieved by North Country Transit.

1. Mobility Management Program

BACKGROUND

The Coordination Framework in New Hampshire

The framework for coordinating community transportation services in New Hampshire consists of:

- A State Coordinating Council
- A Regional Coordinating Council in each of 10 Community Transportation Regions
- A Regional Transportation Coordinator in each of 10 Community Transportation Regions

Each of these is described below:

State Coordinating Council

SCC's Mission Statement

> *To foster regional and local coordination of community transportation services that directly or indirectly improve access and mobility for all New Hampshire residents, especially those in need of essential services and activities.*

Note: The Communications/Outreach Plan recommends a change to the mission statement to read as follows:

> *To provide mobility and access for all New Hampshire residents, especially those in need of essential services and activities, and to foster regional and local coordination of community transportation services.*

SCC's Roles and Responsibilities

Under RSA 239 as amended by RSA 321, the SCC was established to:

1. Develop, implement, and provide guidance for the coordination of community transportation options within New Hampshire so that the general public, and in particular citizens in need of access to essential services and activities, can access local and regional transportation services and municipalities, human service agencies, and other organizations can purchase shared ride coordinated transportation services for their citizens, clients, and customers.
2. Set statewide coordination policies for community transportation, establish community transportation regions, encourage the development of regional coordination councils, assist other regional efforts as needed, and monitor the results of statewide coordination.
3. Approve the formation of regional coordination councils and the selection of regional transportation coordinators, according to such criteria and guidelines as the SCC may establish.

4. Solicit and accept donations for funding to implement and sustain community transportation. Said funding is to go into a "regional transportation coordination fund" that will be a source of grants to improve community transportation.

SCC Membership

Under RSA 239, membership in the SCC includes commissioners (or designees) of the Departments of Education, Transportation, and Health and Human Services, a representative from a regional planning commission, a representative from a philanthropic organization, and eight appointees made by the Governor and the Executive Council to include representatives from transportation providers, the business community, statewide human service agencies, and the University of New Hampshire's Institute on Disability. In the amending RSA 321, term limits of three years were established for all members except the representatives from state level departments.

Regional Coordinating Councils – Roles and Responsibilities

A Regional Coordinating Council (RCC) shall be established in each of the 10 Community Transportation Regions. The roles and responsibilities of each RCC are to:

1. Facilitate the implementation of coordinated community transportation in their region.

2. Encourage the development of improved and expanded regional community transportation services.

3. Advise the SCC on the status of community transportation in their region.

Regional Transportation Coordinators

One of the responsibilities of each RCC will be to help determine how coordination efforts, from the very simple exchanging of information to coordinated service delivery, are to be implemented. This may include the RCC's designation of one entity, called a Regional Transportation Coordinator (RTC), to lead those efforts.

An RTC could be a public or private entity. It could be a public transit provider, a community transportation provider, a human service agency, or a private for-profit transportation operator/management firm. With the help of the RCC, it shall be determined what coordination efforts should be pursued and, if the effort involves coordinated service delivery, what particular model of service delivery is to be pursued. Under a coordinated service delivery system, the RTC itself could be the sole or primary operator in this system. The RTC could be a non-operating broker. Or, the RTC could be a hybrid of the two, directly serving a portion of the trips and assigning the balance to subcontractors. Consolidated call-center and/or operational functions could also be contracted out to a private entity. The RTC could also serve as the lead to offer additional mobility management services such as one-stop access to information and referrals, a consolidated volunteer driver/escort program, taxi or flex voucher subsidy program, or resources sharing and joint procurements for community transportation service providers.

For each region, the designation of the RTC is a factor of what community transportation providers are currently in place, which of these is willing to take on the role and responsibilities of the RTC, and the types of coordination efforts that are to be pursued in the region.

SCC Work Groups and Accomplishments in 2010/2011

The SCC Work Groups provide an opportunity for the SCC to address specific topics on a more in depth basis. Additionally, many work groups include people interested in the work of the SCC and often members of a Regional Coordinating Council, so the SCC can benefit from diverse opinions of local stakeholders, and from participation by many more people than just those who are members of the SCC.

Alternative Solutions Work Group

The Alternative Solutions Work Group was formed to address some of the most complex topics that confront the SCC. This year, these issues include the potential acquisition of coordination/mobility management software, the adoption of cost allocation / cost-sharing policies, and the integration of Medicaid non-emergency medical transportation (NEMT) into the regional coordination infrastructure. These three topics are briefly describe below but are also each covered individually later in this Business Plan.

- The Work Group's goal for 2011 is to prepare general specifications for the software, to work with the regions to determine how they are going to use the software in the short-term and long-term, to review coordination/mobility management software systems, to determine whether to join a United We Ride funded program or to undertake a competitive software procurement, to identify federal and state sources of funding to access / acquire the software, and finally to make available the software to the Regional Transportation Coordinators and other community transportation providers.

- With the development of the three-step plan to integrate Medicaid NEMT into the regional coordination infrastructure, and some initial discussions with Medicaid staff in 2010, the Work Group's goal for 2011 is to work with Medicaid officials to forward the implementation of plan.

- Coordinated service delivery requires a model to allocate the cost of service that is shared between/among sponsoring organizations. This is required not only to ensure that sponsoring organizations are paying for their fair share (and not cross-subsidizing other agencies), but that the results of that allocation can be harnessed to simplify invoicing and administration. In 2011, the Work Group hopes to adopt a cost-sharing / cost allocation model similar to the ones that have been already adopted by other states.

Other potential topics that are on this Work Group's "to-do" list include the development of standards and the development of more uniform policies and procedures that will simplify operations and administration (e.g., reporting and invoicing) for the Regional Transportation Coordinators.

Communications/Outreach Work Group

The Communications/Outreach Work Group played a pivotal role in generating a brochure explaining the importance of community transportation and the state and regional councils involvement in fostering its development, and approving and implementing the recommendations made in the Communications/Outreach Action Plan.

Insurance Issues Work Group

This Work Group, which was formed after the April 2010 SCC meeting, has heard from Rep. Donna Schlachman and David Withers, Property & Casualty Director and Actuary from the New Hampshire Department of Insurance. The Work Group's goal for 2010 and completed in 2011 was to create resources for RCCs to have a better understanding of liability limits and risk management, and is considering insurance issues pertaining to coordinated service provision and coverage for volunteer drivers.

Legislative Work Group

Recognizing the great need to build awareness in the legislature about the importance of community transportation and the efforts of the SCC, the Legislative Work Group was formed at the August 2010 SCC meeting to develop an outreach strategy to increase the SCC's interaction with legislators, and to make them aware that the SCC can be used as a resource for transportation issues under consideration by the legislature.

Regional Coordinating Council Formation and Review Work Group

In 2010, this Work Group approved six new Regional Coordinating Councils, bringing the total to 9 out of 10 regions. Upon the approval of the last Regional Coordinating Council for Carroll County, anticipated for 2011, the goal of this committee, for approval of all 10 RCCs, will be met.

Summit Planning Work Group

The Summit Planning Work Group organized the SCC's 2010 Community Transportation Summit that took place on Thursday, November 18, 2010. The Summit provided a forum for stakeholders, policy makers, and community leaders to learn more about community transportation and the significant and growing need for such transportation services in New Hampshire. The Summit also provided community transportation providers, administrators, volunteers, and others to gain important knowledge to support their efforts.

Other Work Groups

There are several other work groups that have been less active this year because there has been less need for their services. The map of the RCC regions has remained in place throughout the year, limiting the need for the review of any boundary questions by the Regional Boundaries Work Group. The Evaluations Work Group, tasked with determining evaluation strategies for the work of the SCC and coordination activities through the state, will likely become more active in 2011 as coordination efforts are undertaken. The 5310 Approval Process Role Work Group reviewed 5310 applications that were submitted in January 2011 and will review those applications from the regions in the coming year.

WORK SCOPE FOR SCC's MOBILITY MANAGEMENT CONTRACT WITH NELSON\NYGAARD

Overview of the SCC's Mobility Management Program

The SCC's Mobility Management contract with Nelson\Nygaard has three elements, all directly related to the mission statement language (*to foster regional and local coordination of community transportation services)* and the coordination framework that has been established for the state.

Staff SCC Meetings and Other SCC Administrative Duties

Objectives -- To increase the effectiveness of the SCC; to improve communication between the SCC and all stakeholders at the state, regional, and local level

Responsible Work Group – Leadership Work Group

Scope of Work -- The SCC meets monthly usually on the first Thursday of every month. Up until the initiation of the SCC Mobility Manager contract, any staff-type work (meeting minutes, correspondence, etc.) was performed on a voluntary basis by one of the SCC members. The development of products such as the 2009 Annual Report, the draft marketing brochure, etc. was also performed on a voluntary basis by SCC members. SCC members will continue to perform committee work as part of their job. Populating the SCC website (which resides on the NHDOT website) with related documents has been accomplished with help from NHDOT staff; this will continue.

For 2011 and 2012, The SCC Mobility Manager (Nelson\Nygaard) will (1) prepare SCC communications, as requested; (3) draft a business plan and communications and marketing plan, and the 2011 annual report; (4) prepare grant applications and correspond with funders, as requested; and (5) provide technical assistance to SCC work groups, as needed.

Schedule -- Minutes, agendas and all materials that are prepare on a monthly basis will be prepared and e-mailed to SCC members at least one week prior to the meetings and after a review by the SCC Secretary. These tasks will be completed by an SCC member or interested individual. Communications will be prepared on as needed basis. An draft Business Plan was completed and submitted for review by the end of the first quarter of 2010, and this new version was developed after a great deal of input from SCC Leadership and Members. The draft Communications and Marketing Plan, after much input by the Communications/Outreach Work Group, has been provided for their review and approval, hopefully by the end of the third quarter of 2010. Technical assistance will also be provided on as needed basis per guidance from SCC Leadership.

Anticipated Benefits / Results – Having a professional dedicated staff who is technically experienced will increase the effectiveness of the SCC by (1) ensuring that all communication with SCC members and between the SCC and all stakeholders at the state, regional and local level be accomplished in a timely fashion, ((2) giving SCC members access to professionals who are experienced with coordination issues therein saving members the time to research issues.

Budget -- The SCC Mobility Manager budget for these efforts is approximately $3,277 for the remainder of the contract.

Funding Sources -- The two funding sources used for this contract are Boston UZA funds, , and FTA Section 5311 funding (Small Urban and Rural Transportation), as well as in-kind and previously compensated Nelson\Nygaard staff time.

Establish, Approve and Assist Regional Coordinating Councils

Objectives – To ensure that coordination efforts in each of the 10 Community Transportation Regions in the state are guided by a Regional Coordinating Council that is reflective of the region's stakeholders, meets criteria established by the SCC, and has a reasonable Work Plan to implement or enhance coordination and mobility options in the region. Once an RCC is formed, the objective becomes to assist/support the RCC and their Regional Transportation Coordinator (RTC) as needed.

Responsible Work Group -- Regional Coordinating Council Review Work Group

Scope of Work -- The SCC helped establish and approved RCCs from nine out of ten regions in 2009 and 2010. This included SCC members attending several organizational meetings and the RCC Formation and Review Work Group reviewing RCC applications to makes sure that each application is complete and meets all of the criteria necessary for recognition as an RCC, and that the RCC has a membership reflects a diverse and geographically representative stakeholder group, has active subcommittees and a good and relevant work plan.

The final region awaiting approval is Region 2, Carroll County, which, in September 2010, received a grant to help with organizational development. The Regional Coordinating Councils facilitate the implementation of coordinated community transportation and encourage the development of improved and expanded services. The approved RCCs either have planned or are planning to designate a lead agency (or Regional Transportation Coordinator) in their region to manage the coordination of community transportation. It is anticipated that in nine regions, Regional Transportation Coordinators will be in place by mid-2011.

While members of the SCC and its RCC Formation and Review Work Group will continue to be involved in the process of RCCs organizing (including going to key organizational meetings, an additional function of the SCC Mobility Manager is to help develop the RCCs. This means, for those RCCs that have already been approved by the SCC, to help, as requested, groups that are struggling to move forward with implementing coordination efforts. And for groups that have not yet organized as RCCs, the SCC Mobility Manager can facilitate organizational meetings and help these fledgling RCCs develop their work plan.

The work plan for the SCC Mobility Manager calls for the Mobility Manager to attend RCC meetings as needed over the two-year (2010 and 2011) period, and in this capacity, the Mobility Manager or a representative has been to all the approved RCCs for meetings or visioning workshops.

It should be noted that SCC already has established a website, the intent of which in part is to provide a resources for RCCs and RTCs. As part of the administrative task above, the SCC Mobility Manager has made changes to the structure and content of the SCC website to make it more useful and provide new content as appropriate.

The work scope of the SCC Mobility Manager also includes the organization of an annual coordination summit that will also serve to help support the RCCs and their RTCs.

Anticipated Benefits / Results – All RCCs (for each of the 10 regions) will be organized and embarked on their respective Work Plans by mid 2011. Beginning with the start of the Mobility Manager contract, there will be in place various support resources to assist the RCCs with development and implementation of their respective Work Plans.

Schedule -- Throughout 2010, the Mobility Manager provided technical assistance to all regions on an ongoing basis, and with the SCC leadership's guidance on priorities, will do the same on a more limited basis throughout 2011. Revisions to the website were scheduled for the first quarter in 2010; population of the website will be ongoing. The mobility manager planned the 2010 Community Transportation Summit, but that responsibility now resides with SCC members and interested parties if another will be pursued in 2011.

Budget -- The SCC Mobility Manager budget for providing technical assistance to the regions in the remainder of the contract comes to $11,840.

Funding Sources -- The two funding sources used for the SCC Mobility Manager contract are Boston UZA funds, covering 63% of the cost, and FTA Section 5311 funding (Small Urban and Rural Transportation), covering 37% of the cost. The bulk of this consultation will be provided by in-kind and previously compensated Nelson\Nygaard staff time.

Help with Ongoing Issues

There are three issues that have been the focus of on-going SCC discussions and work. These three topics are:

- The Integration of Medicaid NEMT into the Coordination framework
- RTC Software/IT
- RCC liability protection and other insurance issues

<u>The Integration of Medicaid NEMT into the Coordination Framework</u>

Objectives – To evaluate ways to streamline the Medicaid Non-emergency Medical Transportation program in New Hampshire so that more transportation providers in the state can serve more residents with fewer administrative challenges.

Responsible SCC Work Group – Alternate Coordination Strategies Work Group

Scope of Work – This effort requires an analysis of the challenges that in the past, have constrained how Medicaid NEMT might fit into coordinated systems. Some associated problems include trip reimbursement difficulties, eligibility questions, coverage in rural areas, and service redundancies. Addressing these challenges that have historically served as roadblocks to integrating Medicaid within the coordination framework will ensure that coordination can be streamlined in an effective way. Details regarding this effort are provided in section 6 of this memo.

Anticipated Benefits / Results – Better coordination between the New Hampshire Department of Health and Human Services Medicaid program and transportation providers could result in more NEMT trips being provided by community transportation providers, with a significant cost savings to the state.

Schedule – Initial work on this project commenced at the end of the first quarter of 2010. Work continued throughout 2010, in meeting with Medicaid staff and this advocacy continues into 2011.

Budget – This is an ad-hoc technical assistance project but an important effort that the SCC has asked the Mobility Manager to tackle. The budget for all ad hoc work for the remainder of the contract is $12,625.

RTC Software/IT

Objectives – To determine the most appropriate software product to support the Regional Transportation Coordinators.

Responsible SCC Work Group -- Alternate Coordination Strategies Work Group

Scope of Work – The RTC Software/IT issue has been one facing the SCC for some time, and one they have researched and addressed through various means of gathering information in order to make an informed decision that would be beneficial to the RTCs. In June 2008, the SCC issued a Request for Information regarding an Information Technology System that would meet the needs of the RTCs, to which the SCC received responses. During 2010, the Mobility Manager met with software suppliers, potential funders, and potential users of software in order to better advise the SCC on their next steps. The Alternate Coordination Strategies Work Group is now moving forward with that work and that effort is detailed in section 4 of this memo.

Anticipated Benefits / Results – The ultimate goal is to select the appropriate technology to best support the RTCs, their service providers, and the customers, while allowing various RTCs to communicate and share information with each other and other local providers, and limiting the burden of the reporting requirements and paperwork.

Schedule – Initial work by the Mobility Manager on this topic began in the first quarter of 2010, and has and will continue as needed until the software/IT system is purchased and operational.

Budget – The costs associated with this project include the capital costs of acquiring the software system, setting it up for each of the RTCs, and maintaining the software. Other associated costs include the training of RTC staff members and other transportation providers who would use the system. Public outreach to educate target ridership populations would also ensure that the system is used to its full capacity. The Mobility Manager will spend time researching and assisting with the purchase, contract, acquisition, and implementation of this software. Technical assistance, as provided by the Mobility Manager, is an ad-hoc project and hence comes out of the contract. As mentioned above, the budget for all ad hoc work for the remainder of the contract is $12,625.

Funding Sources – Capital acquisition costs can be covered by 5310 funds, and this project may be ripe for funding by the Endowment for Health and the expanded Coordination Fund (See Help with New Issues section).

RCC liability protection and other insurance issues

Objectives – To determine liability for various situations that could arise for RCCs and RTCs and ensuring those problems are covered by insurance.

Responsible SCC Work Group -- Insurance Issues Work Group

Scope of Work – The SCC, for some time, has been researching insurance and liability issues and has hoped to fully address the concerns associated with coverage for the RCC, as well as for the practice of sharing vehicles and drivers. Since the SCC recently was informed by the Local Government Center in the first quarter of 2010 that the Regional Planning Commission coverage does not extend to the RCCs, the SCC is working hard and quickly to determine how best to resolve this insurance issue. The Insurance Issues Work Group has addressed a variety of topics related to insurance and liability and has provided several products as a result of its work.

Anticipated Benefits / Results – Ultimately, it is hoped that all RCCs and RTCs have liability protection and that insurance issues related to shared vehicles and/or drivers are resolved.

Schedule – The work on this topic will be led by the Insurance Issues Work Group on an as needed basis.

Budget – The Mobility Manager will provide technical assistance if needed, but only if requested by SCC leadership.

Help with New Issues

There are two issues that have recently become areas of concern for the SCC. These topics are:

- Expand Coordination Fund / 5310 Funding Conversion for Seed and operational Funding
- Cost-sharing Policies

Expand Coordination Fund / 5310 Funding Conversion for Seed and Operational Funding

Objectives – To create and augment a sustainable source of seed funding and operational funding to implement and sustain coordination effort.

Responsible SCC Work Group – 5310 Approval Process Role Work Group

Scope of Work – This effort aims to expand the funds available to the RCCs and RTCs. The concept behind the Coordination Fund is to obtain funding that can be used to cover the implementation of coordination and mobility management efforts and possibly to cover operational costs of coordinated services as well. Once there is sufficient monies in this Fund, the SCC would oversee a competitive application process (from RCCs) to fund efforts. Note too that this fund could serve to leverage additional federal monies as the local match.

Anticipated Benefits / Results – Adding 5310 funds to the Coordination Fund would significantly expand the amount of money available for coordination purposes in New Hampshire. Instituting a competitive grant process would ensure that the RCCs and RTCs create feasible plans that are implemented quickly and can aid in the rapid improvement of community transportation in New Hampshire.

Schedule – Early conversations about this plan have taken place in the first quarter of 2010. If the Mobility Manager can provide assistance into this issue, the SCC leadership will request such help.

Budget – It is envisioned that funding for this effort would come from NH DOT's 5310 allotment and private grants.

Funding Sources – Funding sources include FTA 5310 funds and other funding streams contributing to the Coordination Fund.

Cost-sharing Policies

Objectives – To take advantage of economies of scale in purchasing and appropriately sharing costs between transportation providers.

Responsible SCC Work Group -- Alternate Coordination Strategies Work Group

Scope of Work – Developing cost-sharing policies entails first suggesting some guidelines for proper cost allocation techniques (so that each entity is able to identify what their full costs are and to translate those costs into a unit cost or rate (e.g., per trip, per hour). The second step is to suggest a preferred method (for state-wide application) that is applied to how costs related to serving co-mingled trips should be split between sponsors. See section 5 for more details about this effort.

Anticipated Benefits / Results – Developing uniform cost allocation and cost-sharing policies will foster greater levels of trust and cooperation between sponsors and RTCs.

Schedule – Initial work on this project was completed in the second quarter of 2010, and advocacy has continued on this effort into 2011.

Budget – This is an ad-hoc technical assistance project but an important effort that the SCC has asked the Mobility Manager to tackle. As mentioned previously,the budget for all ad hoc work for the remainder of the contract is $12,625.

Regional Coordinating Council Achievements in 2010

The following are summaries of the RCC Achievements in 2010:

Region 1: Grafton-Coos Counties

The Grafton-Coos RCC has met monthly since its formation in July 2009. The RCC created a website, containing information about its activities and resources of those involved, and held a strategic planning session in May to guide its activities. An operations survey was conducted in July 2010 to have a better understanding of what type of information providers collect, an effort that proved to clarify opportunities for coordination. The RCC also produced a directory of transportation services in the region, so that people who need such service can access it more easily. A web version was provided in August 2010, and is available on the RCC's own website at: http://www.grafton-coosrcc.org/. A print version was produced in September 2010.

Region 2: Carroll County

Carroll has received a grant to help organize itself as an RCC, and is anticipated to seek approval by the SCC in early 2011. The group informally functioning as the RCC is looking to hire a Mobility Manager, who can help lead the formation process and advance the coordination of transportation services in the region.

Region 3: Belknap-Merrimack, except Hooksett, and including Deering and Hillsborough

Region 3 was approved as an RCC in September 2010 and hosted a strategic planning session in November. The RCC has thirteen members, representing several nonprofit agencies, the Lakes Region Chamber of Commerce, the Merrimack County Department of Corrections, the NH Office of Employment Security, the town of Hillsborough, Community Action Program for Belknap-Merrimack counties, and the Central NH Regional Planning Commission. The RCC is in the process of putting together a transportation services directory and plans to create a communications strategy to increase awareness of the RCC, and activities, as well as a membership committee to expand its stakeholder base.

Region 4: Sullivan County

The Sullivan RCC has met monthly since the group first formed in July 2008, and was formally recognized as an RCC in September 2009. It was one of the first RCCs to designate a Regional Transportation Coordinator, with the selection of the Community Alliance Transportation Services (CATS). To increase service, CATS obtained New Freedoms funds to begin an expanded volunteer driver base in the county. The RCC has put together a directory of transportation services, which is available on the RCC's own website: http://www.sullivancountyrcc.org/. Like Region 1: Grafton-Coos, the RCC conducted a survey of transportation providers in June 2010 and held a strategic planning session in May. In September 2010, the RCC issued an RFP for marketing services.

Region 5: Cheshire County

The Cheshire County RCC, approved in September of 2010, is composed of seventeen diverse public and private members. In addition to a number of nonprofit agencies as members there are three private for-profit transportation providers, one fixed route public transit provider, one volunteer driver service, one County Government, and three health facilities, including a major hospital. The CCRCC has developed a website, completed a needs analysis and held a strategic planning session in November 2010. The results of this planning session helped the group prepare an update to the 2006 Southwest Region Coordinated Plan. The group is also working with the Eastern Monadnock RCC to pilot a directory of transportation services with regional human service providers.

Region 6: Eastern Monadnock

The Eastern Monadnock RCC has been meeting since June of 2009, following a kickoff summit that involved over fifty participants. The RCC was officially approved in April of 2010 with fifteen members. Of these members, there are three private for-profit transportation providers, one town, two volunteer driver services, one hospital, four human service agencies, one citizen stakeholder and many nonprofit agencies. The RCC has conducted a needs analysis, updated the 2006 Southwest Region Coordinated Plan, developed a website, and created a directory of transportation services that it plans to pilot with human service providers. The group held a strategic planning session in November with the CCRCC and is actively pursuing action items on its 2010-2011 work plan.

Region 7: Nashua

The Region 7 Nashua RCC was recognized by the SCC in 2008 and has thirteen active members, representing transit providers, domestic/sexual violence victim support, health care/home assistance case management, town welfare offices, services for individuals with developmental disabilities, Meals on Wheels, advocates of independence for people with disabilities, community organizers, and the Nashua Regional Planning Commission. The RCC held a strategic planning session in April 2010 and is creating a transportation services directory. The RCC is also conducting a Regional Community Transportation Needs survey throughout the region, which was conducted between late October and mid-December 2010.

Region 8: Manchester

The Manchester RCC held a strategic planning session in September 2010. While there was general agreement that the lead agency function might best be filled in the long term by a Regional Transit Authority, the RCC felt that Easter Seals would be in the best position to serve as the Regional Transportation Coordinator until that happens. The region has several major

projects underway. The RCC is creating its own website: http://www.greatermanchesterrcc.com/ and is putting together a transportation services directory that will provide information about all the services available in the region. Two other projects to be funded by FTA Section 5310 money made available by the Department of Transportation are being planned. These include a volunteer driver program and a voucher program that utilizes taxis and other transportation resources. Since Manchester already has fixed route service, the goal is to expand transportation options in the presently underserved evenings, weekends, and outside the urbanized area.

Region 9: Derry-Salem

In the past year, work in the Greater Derry-Salem region has focused on formalizing the RCC and updating the region's transit coordination plan, originally developed in 2003. Assessment work has included surveys of providers and local welfare officers, and analysis and mapping of current trip patterns, to determine key transportation needs and how best to meet them. In a September 2010 strategic planning session, the RCC prioritized the following needs: medical appointments; employment transportation, grocery shopping, and social opportunities. The RCC has identified CART as its designated Regional Transportation Coordinator, working in collaboration with Easter Seals, which operates CART's call center and much of its service. The RCC is working with CART to identify routes and demand for new flex-route services and a soon to be launched Derry-Salem fixed route service; modify existing demand response service levels to make best use of available resources; and pursue new funding to address other prioritized needs.

Region 10: Southeast / Alliance for Community Transportation (ACT)

This Region had a long history of transportation coordination interest and efforts by the Alliance for Community Transportation (ACT) and so was named as the RCC for the Southeast Region. ACT has seventeen member organizations, including human service organizations, regional planning agencies, transportation providers, and one municipality, plus one active citizen member. ACT has identified the Cooperative Alliance for Seacoast Transportation (COAST), which operates public bus service in the Seacoast area, as the lead agency for the RCC.

In April 2010, the Southeast region held a strategic planning session. Projects underway include developing service standards, analysis of a survey of transportation providers, and developing a website and transportation services directory. Additionally, this group has intiated a pilot project for the region with volunteer drivers operating a COAST minibus, called *The Community Rides,* through which rural disabled and elderly residents are provided service once a week to the nearest urban center for shopping and pharmacy trips.

2. Cost projections for administration and operation of coordination system

Note to SCC: our understanding of this section is that the SCC would like NN to estimate the cost of a coordinated service in each of the 10 regions. There are obviously many factors that enter into this, including several key design elements (e.g., who would serve as lead, who would be the partnering organizational sponsors, is service operated in-house or contracted, trip volumes, lengths and characteristics, fleet size, etc.) that are largely unknown in many of the regions. Also, the impact of whether or not Medicaid NEMT is to be delivered through this network is significant. In view of these many unknowns, we have built a simple Cost Projections

spreadsheet model that can be used to help estimate budgets, especially in regions where many of these design elements are still unknown. But these would be very rough estimates as there would be many assumptions.

3. Capital Projects for Coordination System

Note 2 to SCC: Estimates for capital expenses for a coordinated transportation system can also be made, especially regarding the number of vehicles needed, based on the Cost Projections spreadsheet used to determine administrative and operational costs, as described in Section 2.

The cost of the coordination software (see section 4 currently being considered by the SCC) has an upward ceiling of $300,000, of which 20% would be contributed by a local match. The actual cost of the software is in the process of being determined.

4. Coordination/Mobility Management Software

BACKGROUND

A subcommittee of SCC members and individuals knowledgeable in the areas of transportation coordination and information technology was tasked with the responsibility of determining the most cost effective way to implement regional and statewide transportation coordination and to determine the best management tools and technology that would help achieve that goal.

After a yearlong review of coordination software applications and various States coordination programs, the subcommittee concluded the development of a system for coordination in NH would require more than the mere purchase of a software product. Successful implementation would require the guidance and assistance of professionals with direct experience in the development of a coordinated system. A highly regarded FTA project funded through the United We Ride program had helped to expand and improve upon coordination initiatives in nearby Massachusetts.

The State of Massachusetts' established a coordinated system over the course of decade. Its rural and suburban operation offers a model for NH to emulate. The Montachusett Area Regional Transit Authority (MART) in Fitchburg operates 30 fixed route buses and 165 paratransit vans. They are a high volume provider of service and they work with about 200 independent vendors to coordinate in the region.

MART provides brokerage services for the greater Metro Boston area, Pioneer Valley Area, North Central Area, Lowell and the South Central Area. MART has contracts with 153 vendors to provide transportation via a low cost bid system. MART currently services the transportation needs of Mass Health consumers in 223 cities and towns, with an approximate annual budget of $18 million. MART facilitates approximately 5300 one-way trips per day with the highest volume in the Metro Boston area. MART developed its system with the help of an FTA United We Ride Program Grant as a coordination demonstration project. The project report is at http://www.itsa.org/itsa/files/pdf/UWR-FinalRpt.pdf

The MART Interactive Traveler Services (M-ITS) provides a powerful framework for enhancing the availability, quality and efficiency of community transportation and improves the mobility of seniors, persons with a disability and low-income residents through improved resource

coordination. The M-ITS is a successful web based regional brokerage model that is coordinating transportation for four funding sources.

RELEVANCE TO NH

Similar to NH, the Massachusetts public transportation environment is broken into nine regions. Each has a Regional Transit Authority (RTA) assigned to it. The RTAs are responsible for Fixed Route /Paratransit, Medicaid, Special Education, Early Intervention and Developmental Services Transportation. The RTA can choose to broker these funding sources or permit another RTA to provide them. This flexible model is one that is a good fit with the current NH environment.

Collaboration with MART offers the opportunity to:

- Integrate third party software systems (RouteMatch, Trapeze, etc.)
- Assure secure communications across regional boundaries
- Provide a single point access for information sharing
- Effective trip coordination
- Web based scalability
- Low cost operations and maintenance
- The opportunity to leverage Federal and State resources already invested

Most important, the MART partnership offers NH access to the guidance and support of experienced transportation professionals in an adjacent state that has a successful record of accomplishment over more than a decade.

For these reasons, the SCC voted at its May 2011 meeting to recommend that NHDOT move forward with its discussions with MART on joining their United We Ride project.

5. Cost-sharing/Cost Allocation Strategies

The purpose of this section is to discuss the importance of cost-sharing policies to coordinated transportation programs and to present some suggestions for alternative approaches. In the end, it is hoped that the SCC may wish to adopt / bless a specific approach, which would be reflected in the software that the regional transportation programs use to support their coordinated services. This section also discusses some possible ways to invoice sponsoring agencies.

THE IMPORTANCE OF COST-SHARING

Whenever there is a situation in which two or more customers are being transported in a vehicle at the same time and those customers are sponsored by different organizations/programs, each sponsoring organization is interested in making sure that it only pays for its share of the service and that it is not subsidizing the transportation of the other riders. This concern can be a major obstacle to an organization participating in the coordinated system. More often, a lack of such a cost-sharing policy or practice, a policy or practice that appears to favor one sponsor over the other, or one that is inherently flawed or inaccurate can prove to be a stumbling block in creating a coordinated system. This is why most coordinated systems have developed some policy or practice to split or apportion the cost of providing shared service to customers sponsored by different organizations.

Note that cost-sharing applies more to dedicated service, where a vehicle is exclusively used in the coordinated system for a certain period of time during the day, and less to non-dedicated service providers (such as taxis and most volunteer drivers) which are used to augment the dedicated service.

THE IMPORTANCE OF HAVING A STATEWIDE POLICY FOR COST-SHARING

It would be in NH's best interest to have a statewide policy for cost- sharing for two very practical reasons:

(1) It is hoped that state agencies such as DHHS will eventually be purchasing service from Regional Transportation Coordinators (RTCs). If each RTC has its own way of cost-sharing, it will be a challenge for state officials to determine the accuracy of costs.
(2) The SCC is currently looking into the purchase of software to support coordinated service delivery (and other mobility management functions). It would be easier and less costly for the software vendor to support one approach as opposed to 10 different approaches (one for each of the 10 regions). (See section 4)

For the purposes of this memo, it is important to distinguish between establishing costs that pertain to each sponsoring agency and invoicing each agency for those costs. In the discussion that follows, we will look at each separately.

Examples of Cost-Sharing Practices

Most services that provide transportation directly have an idea of their unit cost, derived by taking the operations cost or variable costs (any part of the cost structure that is affected by volume of trips) and dividing that total cost by the total number of revenue vehicle hours or revenue vehicle miles. This yields an operational cost per revenue vehicle hour or a cost per revenue vehicle mile.

Operations Cost (Variable Costs) ÷ Revenue Vehicle Hours or Miles = Unit Cost

In some circumstances, it may be appropriate to lump in the administrative / management or fixed cost into this calculation. At other times, reimbursement of such costs can be handled differently. For example, in a coordinated system, utilizing a fixed amount per month, the portion of the administrative / management / fixed cost amount per month associated with each sponsor is typically determined by using the historic ratio of the annual volume of trips to the total annual number of trips, divided by 12. Each sponsor is then billed this amount each month.

(Annual Administrative/Management/Fixed Costs x Historic Ratio of Sponsor's Trips to Total Trips) ÷ 12 = Monthly Management Fee

In the case where an RTC functions as a broker or retains a broker or call center manager that does not also operate service in the system, the cost of the brokerage or call center functions could be split up into monthly fixed costs, as described above, while the operational cost of service, as supplied by the service providers, and invoiced to the RTC or broker, can be subject to a cost-sharing policy/practice that in part is based on the unit cost of service. This is discussed further below.

For the purposes of describing different ways to share the cost of co-mingled trips, we shall use the following "block" of trips as an example. A vehicle in the coordinated system picks up Customer 1 sponsored by Sponsor A, then picks up Customer 2 sponsored by Sponsor B, then drops off Customer 1, and then drops off Customer 2.

Pick Up-1	PU-2	Drop Off-1	DO-2
10 min	30 min	20 min	
4 miles	10 miles	6 miles	

The examples below present three of the most common ways of costing out the trips.

Example 1: Base cost-sharing on time

Using a shared time approach and a cost per revenue hour unit cost (which the provider has calculated to be $50/rev hour), the cost of providing Customer 1's trip is 25/60 * 50 = $20.83, where 25 is the time apportioned to Customer 1 (10 minutes + ½ of 30 minutes shared ride time) and 60 is the total number of minutes in the block. Similarly, the cost of providing Customer 2's trip is 35/60 * 50 = $29.17 (1/2 of 30 minutes shared ride time + 20 minutes). In the case of the time when both are on board together, the time is split evenly between the two. Note that the 60 minute block costs $20.83 + $29.17 = $50, equating to the cost per hour for service.

Example 2: Base cost-sharing on vehicle mileage

This is basically the same approach as above. In this case, the provider has calculated his cost per revenue vehicle mile to be $2.50. Using this unit cost, and the mileages above, Customer 1's trips costs 9 * 2.50 = $22.50 (where 9 = 4 miles + ½ of 10 miles) and Customer 2's trip costs 11* 2.50 = $27.50 (where 11 = ½ of 10 miles + 6 miles). Here, too, the mileage in common is split evenly between the two customers.

Example 3: Base cost on passenger-miles and exclusive-ride path

In this approach, the cost of the trip can be "flat-rated" before the trip is taken. GIS software is used to estimate the length of the trip as if it were being served exclusively (without any ride-sharing). This mileage is then applied to the average cost per passenger-miles (vs. per revenue vehicle mile), which, like the other unit costs above, is calculated based on historical data.

Deadhead hours and mileage during revenue service time

In some systems, a provider's payment for dedicated service will be based on garage-to-garage time or mileage, or even first pick-up to last drop-off time or mileage. In either of these cases, the cost of deadheading, or the time in which the vehicle has no passengers but is starting or ending its service, needs to be included in the costing / payment calculations.

Perhaps the easiest way to do this is to take the time or mileage ratio that applies to each customer in the time block and divvy up the deadhead time preceding the block. In the case of garage-to-garage calculations that are included in revenue service, this leaves out the last deadhead back to the garage. There are two ways to handle this time or mileage attributed to deadheading back to the garage. One way is to apportion it based on the last block. In a way, this is a double whammy to the sponsoring organizations of the trips in the last block, but systems that have employed this method believe that it all evens out in the end. Another (and more visibly equitable) way is to apportion the last-pick-up-to-garage deadhead time/mileage based on the ratios from the collective set of blocks.

Examples of Invoicing

The above discussion focuses on methods where by the cost of shared-ride service is apportioned to sponsoring organizations. Once these costs are determined, each RTC or broker then must invoice the sponsoring organization for the cost of providing this service.

The following presents two examples of how this could be done.

Actual Cost Method

One way to do this is to present the actual cost of service, as determined above. While this is the fairest and most accurate approach, it sometimes causes confusion for the sponsoring organization. For example, a trip may cost $10 on Monday and $5 on Tuesday. (On Tuesday, the trip was shared with a trip sponsored by another organization.) Wide swings in cost can therefore occur because of the fluctuating level of inter-agency ridesharing.

Note that flat-rating the trip (see Example 3 above) addresses this issue because the cost of that same trip will always be the same (as long as the unit cost per passenger-mile doesn't change).

Average per Trip Cost Method

Another way to invoice for the service is to cost out trips based on Example 1 or 2 above for either all trips or a statistically relevant sample, total the cost, and divide the total by the number of trips to arrive at an average cost per trip. This average per-trip cost can then be used as the basis of billing. An average cost per trip is calculated for each sponsor. This facilitates the budgeting process for each sponsor because the sponsoring organization can roughly judge what budget is needed for the coming month or year based solely on the expected demand.

Some organizations using this method adjust their rate every quarter based on the experience in the preceding quarter. Others have been known to adjust their rate every 6 months or every year. The longer the period between adjustments, the more of a need there may be for a reconciliation process. Some sponsors may be willing to accept the concept that any gains or losses using this method (compared to the actual cost of service) will be taken care of during the next period. Other sponsors may require an audited reconciliation, with payments or losses being paid from one part to the other. In some cases, this reconciliation may need to be undertaken a while after the period in question if the sponsors' policies allow payment submittals to trickle in long after the end date of the period.

Incentive program

An incentive program, similar to the one utilized in Massachusetts, could also be employed to encourage RTCs to improve on efficiencies. In this program, the average cost per trip becomes the "target unit cost." If actual costs, as determined by the cost-sharing practices, indicates that the actual cost is running below the target unit cost, the brokers who elect to participate in this incentive program keep the difference up to the first 3% of the annual projected revenue. After that threshold is reached, the sponsor keeps any additional savings.

Management cost invoicing

If the administration/management/fixed costs of the RTC or broker are not included in computing the cost of service, this cost can then be invoiced separately. Most systems that do separate out this from operations costs are reimbursed on a monthly basis.

6. Medicaid NEMT - Financial Analysis

EXECUTIVE SUMMARY

The NH State Coordinating Council is in favor of a three-phrase plan to integrate Medicaid NEMT into the regional structure of coordinated community transportation to achieve a coordinated system much like that which exists in many other states.

Savings to Office of Medicaid Business and Policy (OMBP)

- In Phases 1 (and 2), OMBP benefits from a cost reduction for each trip that is shifted to a provider that is willing to bill the trip at a statewide shared-ride rate that is lower than the current average reimbursement per trip. For OMBP, even implementing the first phase of this plan has the potential to reduce cost by creating a lower price "class" of shared-ride service providers available to Medicaid NEMT customers. The cost of providing almost 70,000 NEMT wheelchair trips in FY10 exceeded $1.9 million. By establishing a shared-ride service rate that is below the average cost of a Medicaid NEMT wheelchair trip (which in FY10 was $43.61), the range in savings is estimated to be between $42,500 to $647,800, depending on the rate ($25.00-$37.50) and the number of "diverted" trips. Note that there is already a precedent for this in the state.
- Phase 2 should increase the number of trips that are billed in this fashion because of the centralized intake. In Phase 3, as each community transportation coordinator/provider becomes a contracted broker, they will negotiate an average rate (or average rate per mode) with OMBP, reflecting rates for optimal ridesharing (increased efficiencies) and cost-sharing with other sponsoring organizations. Having access to a variety of different modes and carriers means that the RTC can assign each trip to the lowest cost, most appropriate mode. This should create even more savings than the savings that accrue from Phases 1 and 2.
- In addition, the RTC offers tighter fraud control as rides will be monitored while services are performed and not after the fact, and billing will be performed by the RTC and not by individual providers. The RTC will also check on client and trip eligibility determination before the ride is served.
- Expanding the rosters of volunteer drivers via volunteer driver programs that are managed by the regional community transportation coordinators will expand Medicaid Client Services' (MCS) ability to find low-cost transportation options, particularly in rural areas of the state. We propose a surcharge for this management because of its potential value, noting that there is already a precedent for this in the state and this increase can be subsidized by the savings from the shared-ride service rate concept. Fewer trips assigned to an expensive "last resort" contractor should also result for additional savings.
- Improving access for preventative care through expanded access has been found in other states to reduce overall health costs by reducing use of emergency services. Access to transportation is also a key element in supporting seniors and people with disabilities to live independently in the community for as long as possible rather than incurring the high cost of nursing facility care.[1]

Reduced Administrative Burden

- Reduced transportation requests coming into MCS frees staff to deal with other volume of calls. In Phase 1 and 2, we speculate that the number of requests ultimately handled by MCS will be reduced. In Phase 3, the RTCs will handle all requests.
- In Phase 3, OMBP will only be reimbursing 10 RTCs and not individual transportation providers.

[1] Cost Savings Coordination of Our Public Transportation Study. Report to Commissioner Vailas on Human Service Transportation, July, 2003.

Improved Service Quality

- Each RTC will have high contractual standards for service quality and a comprehensive service quality monitoring program.
- Vehicles in each regional network will adhere to certain operating standards and insurance requirements above what the Department requires.
- New volunteer driver programs are being established currently in 6 regions that have screening and training requirements.

Keeping up with Estimated Increase in Medicaid Population

- Nationally, 10% of the enrolled Medicaid population use NEMT. In New Hampshire, it's approximately 7%. 1 percent of Medicaid expenditures are for NEMT. In NH, it is approximately 0.5%. (New Hampshire Medicaid Annual Report, December, 2010) Considering that a majority of the states use some form of brokered NEMT, it could be assumed that we could see the same percentages here, noting that this would not happen until Phase 3.
- The three phases can be approved separately with each phase being evaluated and closely monitored in order to achieve success.

Benefits to the State (the SCC perspective):

Transformation into One Network

- By melding Medicaid NEMT transportation into the regional coordination infrastructure, most human service transportation will be organized through the RTCs, simplifying state agency administration and providing for the possibility of one uniform set of policies and procedures related to operations, reporting, invoicing, and reimbursement.
- By melding Medicaid NEMT transportation into the regional coordination infrastructure, additional ridesharing opportunities, cost-sharing opportunities, and general economies of scale will help RTCs stretch the existing funding and leverage additional federal funding to expand services to improve the mobility and access of those NH residents who depend on community transportation services. Such expansion could include expanding service origins and destinations, expanding service days and hours, expanding (or adding in new) trip purposes, or simply keeping up with the ever-growing demand for community transportation services.

INTRODUCTION

As of 2009, 38 states have implemented Medicaid brokerages of some nature in order to provide cost efficient transportation.[2]

In March 2010, Nelson\Nygaard, as part of the NH Mobility Manager contract, developed a three-phase plan to integrate the Medicaid Non-Emergency Medical Transportation (NEMT)

[2] *Medicaid's Medical Transportation Assurance: Origins, Evolution, Current Trends, and Implications for Health Reform*, The George Washington University School of Public Health and Health Services.

program with the network of regional community transportation coordinators/providers. This document is attached as Appendix A.

The underlying motivations for this plan were (1) to reduce DHHS costs for the NEMT program, which provides wheelchair van service to and from covered medical appointments for eligible Medicaid recipients who require specialized transportation service; (2) to provide more volunteer driver resources to DHHS for ambulatory Medicaid recipients going to covered medical appointments, especially in rural areas; and (3) to provide an additional revenue sources for regional community transportation coordinators / providers and to enable greater ridesharing opportunities and economies of scale opportunities that will help these coordinated systems make better use of their current funding and possibly leverage additional federal funding.

Additional benefits to DHHS' OMBP which oversees Medicaid is to eventually simplify the administration of the program and reduce fraud while increasing service quality.

Summary of the Plan

Briefly, the three-phase plan involved the following:

> **Phase 1:** Encourage Regional Transportation Coordinators/Providers who are not already Medicaid NEMT providers to become NEMT providers. At the same time, DHHS would establish a "shared-ride service" rate that is lower than their average cost per trip for specialized NEMT service. DHHS would also establish a "managed" volunteer driver rate, which while greater than the current volunteer driver costs, would be funded by a portion of the savings yielded from the shared-ride service rate. Note that the shared-ride service rate is not a rate that kicks in when a NEMT trip is co-mingled with another NEMT trip or a non-NEMT trips; rather, it is a rate that pertains to organizations that offer share-ride demand-response service. Otherwise, there would be no other changes to the way NEMT now works.
>
> **Phase 2:** Requests for Medicaid recipients are funneled to one phone number per region, staffed by the Regional Transportation Coordinator (RTC). The RTC would then place the trip with a service provider based on the preference of the customer. If that provider does not wish to serve the trip and the RTC (if an operator) does not wish to take the trip, the trip request is transferred to MCS, much as they are now. Re-visiting of the shared-ride rate (to cover such call-taking functions) would be in order. Whichever provider ends up serving the trip bills Medicaid accordingly.
>
> **Phase 3:** The network is transformed into a network of brokerages that would have responsibility for accommodating all trip requests. Each broker would negotiate a separate rate with DHHS (with the rate reflecting fully allocated cost pertinent to each's experience with NEMT trips from Phase 1 and 2, as well as the costs associated with the administrative and call center functions). Each RTC would be responsible for placing the trip with the least cost, most appropriate provider. This could include directly operating the trip itself (if it is in within this service's service area), utilizing its roster of volunteer drivers (for ambulatory trips) or utilizing for-profit carriers in the area.

Linked to this plan is the necessity of an electronic link to NEMT client and trip eligibility data and an adopted model for allocating costs of shared-ride service among funding programs.

Benefits to OMBP/Prospective Savings from Implementing a Shared-Ride Service Rate

The analysis on prospective savings focuses only on Phase 1, since this is the first phase, and because there is a possibility that OMBP may wish to stop there.

The current statewide payment rate is a "base" rate of $27.90 per trip (which includes the first 5 miles), plus $2.51 per mile thereafter. There is also a $3.25 per ½ hour wait fee (for round trips).

According to information provided by OMBP, 69,622 one-way NEMT wheelchair trips were provided (and billed) in FY10. The total payment came to $1,922,169, reflecting the base rate for each trip (which also covers up to the first 5 miles of the trips) and an additional $1,113,981 for the mileage over and above the first 5 miles of each trip). There were also some additional costs. For example, $7,992 was paid out for wait time and $168,257 in "encounters", but we will assume that these do not enter into the equation since community transportation providers would likely not take any trips (in Phase 1) that involve waiting or encounters. An additional $147,842 was paid for parking fees and tolls; similarly, shared ride service would not involve parking, and tolls would be paid regardless. OMBP also paid for $56,152 in commercial carrier bus passes; the analysis below assumes this would also continue and would have no impact. Therefore, we will focus on the base rate and mileage rate payments.

As shown in Figure 1, the total base rate and mileage rate payments was $3,036,150. From this we can calculate an average of $43.61 per one-way trip ($3,036,150 divided by 69,622 trips).

Figure 1: FY10 Cost of Wheelchair NEMT Service

Procedure w/ Code	Units	Claims	Payment
NEMT Wheelchair Van Base rate (incl. 1st 5 mi)	69,622	30,118	$1,922,169
W/C Van Mileage Per Mi (after 1st 5 mi)	447,858	27,636	$1,113,981
Total Cost for Base Mileage Rate Payments			$3,036,150
Total Cost Per One-Way Trip			$43.61

The premise of the shared-ride service rate is that the shared-ride service provider should be able to cover its cost; at the same time, the rate should be lower than the average cost per trip in order for OMBP to realize cost savings.

The chart in Figure 2 below offers some possible shared-ride rates, as well as the cost reductions if a certain percentage of the 69,622 trips were to be billed at that rate.

Figure 2: Possible Cost Reductions

Shared-Ride Service Rate	Possible reduction in total costs, depending on percentage of trips paid at shared-ride service rate				
	10%	20%	30%	40%	50%
$25.00	$129,560	$259,120	$388,680	$518,240	$647,800
$27.50	$112,155	$224,309	$336,464	$448,618	$560,773
$30.00	$94,749	$189,498	$284,247	$378,996	$473,745
$32.50	$77,344	$154,687	$232,031	$309,374	$386,718
$35.00	$59,938	$119,876	$179,814	$239,752	$299,690
$37.50	$42,533	$85,065	$127,598	$170,130	$212,663

As shown above in Figure 2, at the lower rates and the higher volume of trips paid out at that rate, one finds more savings.

How reasonable is it to believe that between 10% and 50% of the trips could potentially be billed at a shared-ride rate? Obviously the more community transportation providers that become NEMT providers, the more trips could be billed at a share-ride rate. However, in Phase 1 and 2, the community transportation providers would still be competing against the existing providers for trips, as user choice will still be in effect. Thus, in the end, the higher the service quality, the more NEMT trips a provider will attract. In some areas of the country, dually-eligible riders (e.g. those who are both Medicaid and ADA paratransit eligible) opt to ride with the community transportation provider as a public transportation rider, even though there is a fare and despite the fact that it is shared-ride service because the service quality is so much better than the Medicaid NEMT providers. In other areas, the exclusive ride service and no fare is more attractive. Suffice to say there is a built-in incentive for community transportation providers to want to be attractive to NEMT customers. Also note that in both Phase 1 and 2, there will be NEMT trips that have origins and/or destinations that are beyond the service area of the community transportation service's service area, and hence would never be billed at the shared-ride rate. One current community transportation provider (North Country Transit) who is already an NEMT provider, handles this by charging their negotiated shared-ride rate for NEMT trips within their system's service area, and charging the state rate for other trips that they opt to take. Indeed, the concept of a shared-ride service rate stems from this in-state precedent.

The six possible shared-ride rates reflected in Figure 2 reflect a range from $25.00 to $37.50, in increments of $2.50. All rates are obviously less than the $43.61 average cost.

Setting a statewide per trip rate, or a per passenger-mile rate that is equivalent to these rates per trip, will require some negotiation with the industry, or possibly with the State Coordinating Council, acting as an ombudsman in the negotiations.

How reasonable is $25.00 per trip? Most publicly-funded specialized demand-responsive transportation services cost within $10.00 (plus or minus) of $50.00 per hour; so, a range of $40.00 to $60.00. If a shared-ride service was to achieve a productivity of 2.0 trips per revenue hour, which should be possible with a coordinated service involving seniors and general public, then the $50.00 cost per hour translates into $25.00 per trip. If the current experience in NH is that that productivity is difficult to achieve, a 1.5 trips per revenue hour productivity, at $50.00 per hour translates into $33.33 per trip. Figure 3 gives a sense of the cost per trips that are calculated at different costs per hour levels and different productivity levels.

Figure 3: Range in Costs Per Trip at Varying Cost per Hour and Productivity Assumptions

Productivity	$40	$45	$50	$55	$60
1.3	$30.77	$34.62	$38.46	$42.31	$46.15
1.4	$28.57	$32.14	$35.71	$39.29	$42.86
1.5	$26.67	$30.00	$33.33	$36.67	$40.00
1.6	$25.00	$28.13	$31.25	$34.38	$37.50
1.7	$23.53	$26.47	$29.41	$32.35	$35.29
1.8	$22.22	$25.00	$27.78	$30.56	$33.33
1.9	$21.05	$23.68	$26.32	$28.95	$31.58
2.0	$20.00	$22.50	$25.00	$27.50	$30.00

The cost reduction estimates in Figure 2 use a range of rates that roughly reflect the range in costs per trip under the $50 per hour column in Figure 3.

In Figure 2, there is a range of cost reductions assuming that a certain percentage of the 69,622 trips can be “diverted” to a shared-ride service provider. Remember that in Phase 1 (and 2), it is still up to the recipient to call a provider of choice. It is reasonable to believe that many recipients will elect to call the carrier with whom they have historically ridden. The best chance of such diversion is for the shared-ride service provider to offer superior service quality. Also, it may be that the customers of the shared ride service provider are also Medicaid recipients and are already familiar with the service, and hence may choose to “stick” with the shared-ride service provide for NEMT trips as well.

Additional Cost of Managed Volunteer Drivers

The basic concept here is that MCS has difficulty recruiting and maintaining volunteer drivers as a backup to “self-drives” and that the effective coverage area of these volunteer drivers is limited. Meanwhile, most of the Community Transportation Coordinators are either currently managing or implementing a volunteer driver program that MCS can tap into.

However the current reimbursement rate per mile which OMBP pays ($0.41) which goes to the driver does not cover the RTC costs of managing the volunteer driver program, which includes recruiting and reimbursing drivers, performing background checks, training, confirmation of insurance, spot vehicle inspections, etc. There is great value to this these services, over and above expanding the roster of volunteer drivers (and hence coverage).

Thus, we recommend that OMBP establish a special "managed volunteer driver" reimbursement rate that bumps up the mileage by a certain amount. In discussing this with a director of one RTC that currently has such a program, she felt that a range of 5 to 10 cents per mile would cover such costs. Clearly, more data is needed to better establish an exact rate increase. But that said, with this rate, MCS service could use such program as a back-up or perhaps save on administrative costs associated in contacting multiple volunteer drivers for one trip request, not to mention saving on fraud control labor, by calling the regional RTC from the start.

Figure 4 below shows the costs associated with reimbursed volunteer driver trips in FY10.

Figure 4: FY10 Costs of Volunteer Drivers

One-way trips	563
Round trips	12,618
Total one-way trips	25,799
Total Expenditure	$268,612
Average expenditure per one-way trip	$10.41

At $0.41 per mile, the average trip length works to 25.39 miles per trip, or a total of 655,037 miles. If the reimbursement rate was increase by $0.05 per mile to cover the administrative costs of managing the volunteer driver program, the additional cost to OMBP would be $32,752 or if looked at on a regional basis, $3,275 per region. Increasing the rate by $0.10 per mile would double this figure.

Note that there is a precedent for OMBP paying North Country Transit a higher rate for managed volunteer driver trips.

Whatever the rate increase that is agreed upon, this additional cost could be funded through the savings that accrue above from the NEMT wheelchair shared-ride rate. Thus, no additional outlay would be required.

Benefits to Regional Transportation Coordinators/Community Transportation Providers

By melding Medicaid NEMT transportation into the regional coordination infrastructure, additional ridesharing opportunities, cost-sharing opportunities, and general economies of scale will help RTCs stretch the existing funding and leverage additional federal funding to expand services to improve the mobility and access of those NH residents who depend on community transportation services. Such expansion could include expanding service origins and

destinations, expanding service days and hours, expanding (or adding in new) trip purposes, or simply keeping up with the ever-growing demand for community transportation services.

For example, in several regions of the state, there is a separate set of services that focus on ADA paratransit and rural public transportation and on senior transportation. This obvious overlap of similar services is, by definition, inefficient and does not lead to the optimal use of funding. In other regions, the same service provider serves demand-responsive trips that accommodate the general public and senior trips. In these regions, co-mingling trips funded by different funding programs has led to efficiencies that have helped make better use of the funding dollars available, as noted above. Adding Medicaid-sponsored trips to the mix can only lead to greater efficiencies.

The origins and destination patterns of riders of ADA paratransit, rural demand-response, senior centers, and Medicaid are not that dissimilar. Common destinations across these services include hospitals and medical facilities, shopping centers, employment concentrations, etc.

The improvement in cost efficiency that results from coordinating service delivery can best be illustrated through an example of two operators of community transportation services in overlapping service areas in the same region in New Hampshire:

- One service provider, a public transportation operator, supplies an ADA paratransit service, i.e., a shared ride, curb-to-curb, demand-responsive transportation service for ADA paratransit eligible persons with disabilities.
- The other service provider, a senior center, supplies shared ride, curb to curb, demand-responsive service to older adults and adults with disabilities.

The customers of these two services go to many similar destinations in the area at the same time, suggesting that efficiencies could result from serving compatible trips with the same vehicle. Compatible trips could be more efficiently served if (1) the transit provider could purchase service from the senior center for certain trips and allow the senior center to co-mingle these paratransit trips with senior trips on the senior vans, or (2) if the senior center could purchase service from the transit provider and allow the transit provider to co-mingle these senior trips with its paratransit trips; or (3) if these two systems – or their call centers -- were consolidated, enabling these two trips to be served with one vehicle. We explore the first two scenarios below. The third is further explored later in this section.

By way of an example, we shall use two trips going from the same neighborhood to the same medical facility at roughly the same time. For the sake of the example, each trip takes about 30 minutes. One of these trips is currently served by the public transportation provider on its ADA paratransit service, the other by the senior transportation provider.

For this example, actual service and cost data for FY 2009 were used. These were obtained from NHDOT and from the senior transportation provider.

As presented in Figure 5 below, the fully-allocated hourly costs of providing dedicated demand-responsive service in FY 2009 were $45.04 per hour for the public transit provider and $35.65 per hour for the senior transportation provider. As a side note, the higher cost of the public transportation provider is not surprising given the inherent obligations of – and more sporadic trip patterns of -- ADA paratransit; further, it is well within the range of reasonableness as one looks at peer ADA operations around the US.

Based on these hourly costs and the 30-minute trips in the example, the trip on the ADA paratransit van, if exclusively served, would cost $22.52, while the exclusively-served trip on the senior van would cost $17.83. Together, the two trips, served independently, would cost $40.35 to serve.

Figure 5: Uncoordinated Services Example

Provider	Funding Program	Trip Duration (hr)	Operating Cost per Hour	Cost per Trip
Public Transit Provider	FTA 5311	0:30	$45.04	$22.52
Sr. Transportation Provider	Title IIIB/BEAS	0:30	$35.65	$17.83
Total				$40.35

If the public transit provider serves both passengers: It costs $22.52 for a vehicle to take one person to one location in 30 minutes. If the ADA paratransit van was used to serve the ADA paratransit trip and the senior trip, we will say, for the purposes of this example, that the total duration to serve the two trips is 45 minutes. However, the cost is now split between the two passengers (and funding sources). With an operating cost of $45.04 per hour, it costs the agency $33.78 to operate for 45 minutes, or $16.89 per passenger trip. Thus,

- This cost for the paratransit trip is reduced by $5.63 per trip ($22.52 minus $16.89), which reflects a 25% improvement in efficiency.
- Meanwhile, the cost for the senior trip is reduced by $0.94 ($17.83 minus $16.89), which reflects a 5% improvement in efficiency.

If the senior center van takes both passengers: It costs the senior transportation provider $35.65 per hour to operate service. For a 30 minute trip for one passenger, it costs $17.83. With two passengers on board, the trip is likely to take 45 minutes, so the operating cost for the senior transportation provider is $26.74, but per passenger, it costs $13.37. Thus,

- This cost for the paratransit trip is reduced by $9.15 per trip ($22.52 minus $13.37), which reflects a 40% improvement in efficiency.
- Meanwhile, the cost for the senior trip is reduced by $4.46 ($17.83 minus $13.37), which reflects a 25% improvement in efficiency.

If there was a third compatible trip (a Medicaid, non-emergency medical trip): To illustrate the concept further, we add to this example a Medicaid wheelchair trip that is compatible with the other two trips. Again, this case illustrates that the three providers are transporting three different people from the same neighborhood to the same hospital. Note that the cost of the Medicaid trips on a private carrier is based on a mileage-based state Medicaid rate for wheelchair trips ($27.90 covering the first 5 miles plus $2.51 thereafter). So, for the purpose of this example, we shall say that length of this Medicaid trip is 7 miles. If the three trips were to be co-mingled on one vehicle, we shall also assume that it would take one hour to serve all three trips.

Figure 6: Uncoordinated Services Example with Medicaid

Provider	Funding Program	Trip Duration	Operating Cost per Hour	Cost per Trip
Public Transit Provider	FTA 5311	30 min	$45.04	$22.52
Sr Transportation Provider	Title IIIB/BEAS	30 min	$35.65	$17.83
Medicaid Carrier	Title XIX	7 miles	$27.90 + $2.51/mile	$32.92
Total				$73.27

In the Figure 6 example, the total cost for all three trips, served separately, is $73.27.

If the public transit provider serves all three passengers: If all three trips were to be co-mingled on the ADA paratransit vehicle, then the cost to the transit agency's cost of $45.04 per hour would be split between the three organizations, or $15.01 per trip.

- This cost for the paratransit trip is reduced by $7.51 per trip ($22.52 minus $15.01), which reflects a 33% improvement in efficiency.
- The cost for the senior trip is reduced by $2.82 ($17.83 minus $15.01), which reflects a 16% improvement in efficiency.
- The cost of the Medicaid trip is reduced by $17.91 ($32.92 minus $15.01), which reflects a 54% improvement in efficiency.

If the senior transportation provider serves all three passengers: It costs the senior transportation provider $35.65 per hour to operate the service. For a 30 minute trip for one passenger, it costs $17.83. With three passengers on board, the per trip cost works out to $11.88. Thus,

- This cost for the paratransit trip is reduced by $10.64 per trip ($22.52 minus $11.88), which reflects a 47% improvement in efficiency.
- The cost for the senior trip is reduced by $5.95 ($17.83 minus $11.88), which reflects a 33% improvement in efficiency.
- The cost of the Medicaid trip is reduced by $21.04 ($32.92 minus $11.88), which reflects a 64% improvement in efficiency.

It is important to note though that these examples reflect the co-mingling of just 2 and 3 sample trips, respectively. One can't use these efficiency gains more globally because only a portion of trips from the two – and three – services will likely be ridesharable. That said, it is reasonable to expect that at least 5% and potentially 10% of the trips would be compatible, and so these savings estimates of this order of magnitude could potentially accrue to those transportation programs which coordinate with Medicaid NEMT. Of course the savings estimates in the examples above that pertain to the Medicaid trips pertain to the current state-wide rate for NEMT wheelchair transportation (and not the proposed shared-ride rate concept.)

7. BEAS Senior Transportation – Financial Analysis

Providers of trips funded by BEAS will also be able to save with a coordinated system. To illustrate the benefits, we used the BEAS Title III(b) transportation data for FY 2010 to show how if carriers become more efficient in delivering trips, their cost per trip decreases. As shown in Figure 7, the agencies' collective average cost per trip for FY 2010 was $9.85. Note that this unit cost is well below the unit costs for the example above, owing to the general nature of senior transportation: many group trips mainly going to a few destinations if not one site.

Figure 7: FY10 BEAS Trip and Cost Data

Provider	Annual Trips	Annual Cost	Average Cost/Trip
CAP Belknap	41,498	$245,554	$5.92
Community Alliance	18,024	$ 476,116	$26.42
Easter Seals / Special Transit	21,112	$138,068	$6.54
Gibson Center	38,460	$403,632	$10.49
Grafton County	13,321	$126,488	$9.50
Holiday Center	16,881	$197,012	$11.67
Lamprey	9,881	$75,440	$7.63
Newport Senior Center	50,711	$138,812	$2.74
No. Conway Comm Center	15,756	$193,803	$12.30
Rockingham Nutrition & Mow	24,301	$275,128	$11.32
St. Joseph's	11,476	$99,620	$8.68
Strafford County Cap	7,881	$75,197	$9.54
Transit Mgt Of Nashua	15,430	$338,686	$21.95
Tri-County Cap	33,572	$229,153	$6.83
VNA @ HCS	12,035	$240,012	$19.94
TOTAL	**330,339**	**$ 3,252,721**	**$ 9.85**

The data that we obtained from the senior transportation operator (and that was used in the analyses above) evidenced a productivity of 3.75 passenger trips per hour. If we assume that the other senior transportation providers are achieving a similar productivity, then the average cost per hour for carriers in New Hampshire is $36.95 ($9.85 x 3.75). This is used to calculate estimates for how the cost per trip of transporting senior trips can be reduced with increased productivity that results from coordinating the service delivery of senior trips and other trips sponsored by different funding sources.

In Figure 8, we show that for each percentage increase in productivity, the average cost per trip decreases. The percent change in the average cost per trip is the difference between the new average cost per trip and the current average cost per trip ($9.85).

Figure 8: Reduction of Unit Cost Per Trip With Increased Productivity

Increase in Productivity	Average Productivity	Average Cost/Trip	Percent Change in Average Cost/Trip
0%	3.75	$9.85	
1%	3.79	$9.75	10.4%
2%	3.83	$9.65	10.6%
3%	3.87	$9.56	10.8%
4%	3.90	$9.47	11.0%
5%	3.94	$9.38	11.2%

To determine what impact the increased productivity has on each provider, we calculated how many additional trips each provider would be able to serve given the range of productivity increases. These estimates were calculated by taking the difference between 5% of each provider's annual trips times the FY10 cost per trip, and subtracting 5% of the annual trips times the new average cost per trip for each provider. This monetary figure was then divided by each provider's average cost per trip (from Figure 7) to estimate the number of potential new trips that a provider will be able to serve without increasing hours of service.

Figure 9 is the sum of all the potential additional trips that could be served each year, statewide, with increased productivity at 5% and 10% of trips shared. If 5% of all BEAS trips were shared, then between 1,712 and 1,851 additional trips could be served. If 10% of all BEAS trips were shared, between 3,425 and 3,701 extra annual trips could be served.

Note that these calculations do not include the potential additional revenue that is associated with a purchase of service, and that would not only cover the cost of serving purchased trips but that could be used to help share in the cost of administrative and other support expenses.

Figure 9: Additional Annual Trips that Can be Provided When 5% and 10% of Trips are Shared (at Varying Productivity Increases)

Productivity Increase	1%	2%	3%	4%	5%
5% of Trips Shared	1,712	1,746	1,781	1,816	1,851
10% of Trips Shared	3,425	3,493	3,562	3,631	3,701

8. "Business Case" for Coordination

SUMMARY

The business case for coordinated service delivery details example cases and additional support to illustrate the economic impact of sharing trips among providers in New Hampshire. This simplified example demonstrates coordination: two passengers with similar origins ride on separate vehicles to proximate or the same destination. Coordinated service delivery would put those two passengers on the same vehicle, so the service providers would be sharing trips. The passengers will have a slightly longer journey time, but by sharing seats on vehicles, service providers are able to be more productive (i.e. complete more trips per hour) and have better utilization of vehicles, so therefore have the capacity to provide more total rides. These efficiency gains illustrate why coordination is so important.

The business case also provides additional support that furthers the case that sharing trips among providers is feasible. For example, the origin and destination patterns of riders of ADA paratransit, rural demand-response, senior centers, and Medicaid are related. Similar medical facilities, hospitals, shopping centers, employers, etc., are frequent destinations for most users. Plus, senior trips tend to be concentrated at particular times of day, rural demand-response tend to be spread over the course of the day, and Medicaid trips are somewhere in the middle. Utilizing a vehicle that can service trips spread through the day (instead of heavy peaks with little service in between) is more efficient. Opportunities for coordination increase with staggered trip times throughout the day. The more productive the service, the lower the cost efficiency as measured by the cost per trip.

The case also includes the local success story of North Country TransitTransit, which provides fixed-route, rural demand-response, senior transportation, and Medicaid NEMT service (all services have different funding sources). Besides providing transportation for their own clients, over the past several years North Country Transit has begun to coordinate with other area providers, such as the American Cancer Society, Rural Community Transportation (VT), and Littleton Regional Hospital, in Carroll, Coös, and Grafton Counties. Coordination among providers has resulted in an increase in productivity and a decrease in the cost per passenger. Although it is impossible to account for exactly how much productivity has increased due to

coordination, North Country Transit estimates that the increase is between five and ten percent, which is comparable to other coordination efforts around the country.

The simplified coordination example, the additional supplemental benefits from service consolidation, and the North Country Transit success story together illustrate that coordination of service delivery helps to provide more mobility options, use vehicles more efficiently, and increase access for persons who are dependent on community transportation services.

BACKGROUND AND PURPOSE

Coordinating the delivery of community transportation services offers opportunities to improve the cost efficiency of participating operations. While there are secondary benefits as well, this memorandum will focus on the cost efficiencies that can potentially be derived by coordinating service delivery.

It is also important to note that while improvement in cost efficiency is measured as a reduction in cost per trip, the purpose of coordinating the delivery of trips funded by different sources is not to reduce budgets, but to be able to do more with the funding that is available. By reducing a service's cost per trip, the service may be able to keep up with a growing demand, expand to new areas or new times, and/or accommodate additional trip purposes. All of these have been identified throughout New Hampshire as unmet needs.

The coordination of service delivery may also lead to the opportunity to leverage additional federal funding, that can be used to provide even more mobility options.

Thus, in the end, the coordination of service delivery helps to provide more mobility options and increase access for persons who are dependent on community transportation services.

In preparing this memorandum, we initially had hoped to acquire "before-and-after" data for a particular region in New Hampshire that had recently migrated from a set of independent services to some form of coordinated service delivery. However, such data was not available because the migration to coordinated services in the region where coordinated service delivery exists happened several years ago. Indeed, finding good data on service delivery costs has proven difficult in general.

Lacking such data, we decided to focus on some examples where good data exists, and posed some "what-if" scenarios. In one particular region, we were able to obtain good service and cost data for a public transportation provider and a senior transportation operator. With this data, we were able to develop some simple scenarios:

- If the public transportation provider were able to utilize the senior transportation provider to serve some of its trips, would its overall cost per trip be reduced and by how much? And how many more trips could be provided as a result?
- If the senior transportation provider were able to utilize the public transit provider to serve some of its trips, would its overall cost per trip be reduced and by how much? And how many more trips could be provided as a result?

These scenarios address the classic case where there are two compatible and concurrent trips going to and from the same neighborhood to the same destination (or nearby destinations) and are currently served on two completely different systems.

To these scenarios above, we add a third compatible trip, a non-emergency medical wheelchair trip sponsored by Medicaid. Currently, these trips in this region are served by private carriers enrolled as medical transportation providers by Medicaid. If the public transportation provider and/or the senior transportation provider were to become enrolled as Medicaid transportation providers, how could their shared ride service and the inclusion of Medicaid trips into the mix benefit both the providers and Medicaid?

The scenarios above are explored by way of some examples, and are meant to illustrate perhaps the simplest form of coordinated transportation service: where organizations purchase some service from other providers where it makes a good business sense. These examples are meant to explore this limited from of coordination only.

To explore the opportunities that can potentially be realized by consolidating service delivery, we use data from a system (from another region in the state) that is already coordinated. This system offers a single point of access for consumers, and operates a demand-responsive coordinated community transportation service that provides service to rural public transit customers, seniors, and Medicaid recipients. This system also utilizes a network of volunteer drivers to serve trips outside its service area.

It is the intention that this business case will become part of the business plan, and can be used in marketing, communication and outreach materials.

THE BUSINESS CASE FOR COORDINATING SERVICE DELIVERY

The improvement in cost efficiency that results from coordinating service delivery can best be illustrated through an example of two operators of community transportation services in overlapping service areas in the same region in New Hampshire:

- One service provider, a public transportation operator, supplies shared ride, curb-to-curb transportation service for persons with disabilities.
- The other service provider, a senior center, supplies rides to older adults and adults with disabilities.

In this region of New Hampshire, the customers of these two services go to many similar destinations in the area, such as hospitals and medical centers, shopping centers, major centers of employment, and senior centers. In other words, there are undoubtedly some compatible trips currently being served on separate vehicle that could be served by a single vehicle if (1) the transit provider could purchase service from the senior center for certain trips and allow the senior center to co-mingle these paratransit trips with senior trips on the senior vans, or (2) if the senior center could purchase service from the transit provider and allow the transit provider to co-mingle these senior trips with its paratransit trips; or (3) if these two systems – or their call centers -- were consolidated, enabling these two trips to be served with

one vehicle. We explore the first two scenarios below. The third is further explored later in this memorandum.

By way of an example, we shall use two trips going from the same neighborhood to the same medical facility at roughly the same time. For the sake of the example, each trip takes about 30 minutes. One of these trips is currently served by the public transportation provider on its ADA paratransit service, the other by senior transportation provider.

For this example, actual service and costs data for FY 2009 were used. These were obtained from NHDOT and from the senior transportation provider.

As presented in Figure 10 below, the fully-allocated hourly costs of providing dedicated demand-responsive service in FY 2009 were $45.04 per hour for the public transit provider and $35.65 per hour for the senior transportation provider. As a side note, the higher cost of the public transportation provider is not surprising given the inherent obligations of ADA paratransit; further, it is well within the range of reasonableness as one looks at peer ADA operations around the US.

Based on these hourly costs and the 30-minute trips in the example, the trip on the ADA paratransit van, if exclusively served, would cost $22.52, while the exclusively-served trip on the senior van would cost $17.83. Together, the two trips, served independently, would cost $40.35 to serve.

Figure 10 Uncoordinated Services Example

Provider	Funding Program	Trip Duration (hr)	Operating Cost per Hour	Cost per Trip
Public Transit Provider	FTA 5311	0:30	$45.04	$22.52
Sr. Transportation Provider	Title IIIB/BEAs	0:30	$35.65	$17.83
Total				$40.35

If the public transit provider serves both passengers: It costs $22.52 for a vehicle to take one person to one location in 30 minutes. If the ADA paratransit van was used to serve the ADA paratransit trip and the senior trip, we will say, for the purposes of this example, that the total duration to serve the two trips is 45 minutes. However, the cost is now split between the two passengers (and funding sources). With an operating cost of $45.04 per hour, it costs the agency $33.78 to operate for 45 minutes, or $16.89 per passenger trip. Thus,

- This cost for the paratransit trip is reduced by $5.63 per trip ($22.52 minus $16.89), which reflects a 25% improvement in efficiency.
- Meanwhile, the cost for the senior trip is reduced by $0.94 ($17.83 minus $16.89), which reflects a 5% improvement in efficiency.

If the senior center van takes both passengers: It costs the senior transportation provider $35.65 per hour to operate service. For a 30 minute trip for one passenger, it costs $17.83. With two passengers on board, the trip is likely to take 45 minutes, so the operating cost for the senior transportation provider is $26.74, but per passenger, it costs $13.37. Thus,

- This cost for the paratransit trip is reduced by $9.15 per trip ($22.52 minus $13.37), which reflects a 40% improvement in efficiency.
- Meanwhile, the cost for the senior trip is reduced by $4.46 ($17.83 minus $13.37), which reflects a 25% improvement in efficiency.

If there was a third compatible trip (a Medicaid, non-emergency medical trip): To illustrate the concept further, we add to this example a Medicaid wheelchair trip that is compatible with the other two trips. Again, this case illustrates that the three providers are transporting three different people from the same neighborhood to the same hospital. Note that the cost of the Medicaid trips on a private carrier is based on a mileage-based state Medicaid rate for wheelchair trips ($27.90 covering the first 5 miles plus $2.51 thereafter). So, for the purpose of this example, we shall say that length of this Medicaid trip is 7 miles. If the three trips were to be co-mingled on one vehicle, we shall also assume that it would take one hour to serve all three trips.

Figure 11 Uncoordinated Services Example with Medicaid

Provider	Funding Program	Trip Duration	Operating Cost per Hour	Cost per Trip
Public Transit Provider	FTA 5311	30 min	$45.04	$22.52
Sr Transportation Provider	Title IIIB/BEAs	30 min	$35.65	$17.83
Medicaid Carrier	Title XIX	7 miles	$27.90 + $2.51/mile	$32.92
Total				$73.27

In the Figure 11 example, the total cost for all three trips, served separately, is $73.27.

If the public transit provider serves all three passengers: If all three trips were to be co-mingled on the ADA paratransit vehicle, then the cost to the transit agency's cost of $45.04 per hour would be split between the three organizations, or $15.01 per trip.

- This cost for the paratransit trip is reduced by $7.51 per trip ($22.52 minus $15.01), which reflects a 33% improvement in efficiency.
- The cost for the senior trip is reduced by $2.82 ($17.83 minus $15.01), which reflects a 16% improvement in efficiency.

- The cost of the Medicaid trip is reduced by $17.91 ($32.92 minus $15.01), which reflects a 54% improvement in efficiency.

If the senior transportation provider serves all three passengers: It costs the senior transportation provider $35.65 per hour to operate the service. For a 30 minute trip for one passenger, it costs $17.83. With three passengers on board, the per trip cost works out to $11.88. Thus,

- This cost for the paratransit trip is reduced by $10.64 per trip ($22.52 minus $11.88), which reflects a 47% improvement in efficiency.
- The cost for the senior trip is reduced by $5.95 ($17.83 minus $11.88), which reflects a 33% improvement in efficiency.
- The cost of the Medicaid trip is reduced by $21.04 ($32.92 minus $11.88), which reflects a 64% improvement in efficiency.

It is important to note though that these examples reflect the co-mingling of just 2 and 3 sample trips, respectively. One can't use these efficiency gains more globally because only a portion of trips from the two – and three – services will likely be ridesharable.

But, we can use these examples, and "what-if scenarios" that describe how many ridesharable trips there might be to develop overall estimates from efficiency gains.

How Many Additional Trips Could be Provided as a Result?

Figure 12 shows how the public transit provider may provide more overall rides by purchasing service from another provider to serve some of its trips. Of the transit agency's 4,140 total trips per year, we begin by assuming that 5% of those trips (207 trips) are potentially ridesharable (with compatible senior trips). If the transit agency purchases service from the senior transportation provider to serve these 207 trips at a cost that is lower than the cost of directly serving these trips exclusively, then the difference in cost can be used to serve additional passengers.

The 207 trips cost the public transit provider $7,545 (207 trips multiplied by $36.45 per trip – the FY09 average cost per trip figure for that public transit provider). However, if the transit agency purchases service from the senior transportation provider at $13.37 per trip (from example above), or a total of $2,767, then the transit agency is spending $4,778 less, and then has additional capacity to serve more passengers. With nearly $5,000, the agency can serve about 130 additional riders (at a cost of $36.45 per trip).

This example case between the agencies allows for the public transit provider to have additional capacity to serve more passengers, and the senior transportation provider to be more productive, as there are more passengers on a vehicle going to the same/similar destinations, not to mention the benefits of additional revenue.

Similar calculations were done to explore what the impact could be if the transit agency was able to coordinate 10%, 20%, or even 30% of trips. It is more likely that an agency would be able to coordinate 5 or 10% of trips rather than 20 or 30%, but the example is illustrated below to show the accumulated benefits.

Figure 12 Additional Trips Provided for Transit Agency Service

Increase in Efficiency	Trips Coordinated with Senior Transportation Provider	Trip Cost	Transit Agency Cost	Cost of Purchasing Service from Senior Center	Addt'l Trips Provided by Transit Agency
5%	207	$36.45	$7,545	$2,767	131
10%	414	$36.45	$15,090	$5,535	262
20%	828	$36.45	$30,180	$11,070	524
30%	1242	$36.45	$45,270	$16,605	786

Additional Productivity Benefits from Service Consolidation

Using the same service to serve public transit, senior center, and Medicaid trips within the same service area is likely to increase system productivity, as illustrated above. There is more to the story, though, that furthers this case.

First, the origin and destination patterns of these different types of programs tend to have similarities. For example, in the case of ADA paratransit and rural demand-response passengers: the destinations for trips are quite varied for both groups and include medical centers, shopping centers, centers of employment, schools, etc. Medicaid (non-emergency medical transportation) generally has fewer destinations by nature, since passengers are only going to just medical appointments, and hence centers, hospitals, or related. Senior trips generally have even less destinations, as they usually congregate at a senior center or local medical facility. Inherently, senior trips are more productive, as they are taking people to fewer destinations ("many to one") as opposed to ADA paratransit and rural demand-response which has many destinations ("many to many"). Medicaid NEMT is somewhere in the middle, since there are limited destinations ("many to few").

Second, the timing of trips throughout the day tends to vary (and thus complement each other) among groups. ADA paratransit and rural demand-response tend have the highest demand in the morning and afternoon/evening (with some demand mid-day); Medicaid NEMT fluctuates throughout the day with no significant peaks; and senior trips tend to be fairly steady throughout the day. With this variety, the timing of trips from different programs is reasonably compatible.

Consequently, from the perspective of a transit provider operating demand-responsive service, service productivity will likely increase from merging these three trip types together because the opportunities for coordination increase. There are more ridersharable trips during peak times, which are already inherently more productive, and there are more group trips, so less scattered trips, again increasing productivity and the utilization of vehicles. The more productive the service, the lower cost efficiency as measured by the cost per trip.

The Example of North Country Transit

North Country Transit offers several types of services to a variety of clientele: rural general public demand-response (and fixed-route) transportation (FTA-funded), Medicaid non-emergency medical transportation (funded by Title XIX), and senior transportation (funded by Title IIIB with local match). North Country Transit's rural general public demand-response has a productivity of 1.82 trips per hour (FY2006-FY2009), which is on par with the national average of 1.8 to 2.2. Over the past several years, North Country Transit has begun to coordinate with other area providers, such as the American Cancer Society, Rural Community Transportation (VT), and Littleton Regional Hospital, in Carroll, Coos, and Grafton counties. Coordination among providers has resulted in an increase in productivity and a decrease in the cost per passenger. Although it is impossible to account for exactly how much productivity has increased due to coordination, North Country Transit estimates that the increase is between five and ten percent, which is comparable to other coordination efforts around the country.

North Country Transit uses RouteMatch, where trips and hours attributed to senior trips vs. rural general public demand-response are tracked separately. The Medicaid trips are combined with the rural general public DRT. Because of the separate tracking, this is almost like "pretending" that North Country has an uncoordinated system, and we can use their data to see what impact the coordination has on productivity. Productivity data since 2006 is displayed in Figure 13.

Figure 13 North Country Transit Productivity Analysis

								'06-'08	'06-'09	'06-'10
		2010	2009	2008	2007	2006		3-yr	4-yr	5-yr
Senior Wheels	Trips	33334	29403	28415	23093	22422		73930	103333	136667
Rural GP DRT	Trips	9929	8608	17723	13793	17726		49242	57850	67779
Total		43263	38011	46138	36886	40148		123172	161183	204446
Senior Wheels	Hours	8366	8614	8311	6678	6230		21219	29833	38199
Rural GP DRT	Hours	8416	6642	7881	8863	8327		25071	31713	40129
		16782	15256	16192	15541	14557		46290	61546	78328
Senior Wheels	Trips/Hour	3.98	3.41	3.42	3.46	3.60		3.48	3.46	3.58
Rural GP DRT	Trips/Hour	1.18	1.30	2.25	1.56	2.13		1.96	1.82	1.69
Combined	Trips/Hour	2.58	2.49	2.85	2.37	2.76		2.66	2.62	2.61
Productivity increase from merging		119%	92%	27%	53%	30%		35%	44%	55%

Depending on the years selected, the increase in productivity for the system, as a result of merging the two together, ranges from a 35% improvement to a 55% improvement. Using North Country Transit's productivity numbers, we can determine how many more trips (every three

years) North Country Transit will be able to provide. The costs per hour are taken from the previous example.

Using 35% improvement at $35.65/revenue hour:

$35.65 / rev hr ÷ 1.96 = $18.70 per trip

$35.65 / rev hr ÷ 2.66 = $13.78 per trip (save $4.92 a trip)

$4.92 per trip x 123,172 trips = $606,103 or 43,990 additional trips

Using 35% improvement at $45.04/revenue hour:

$45.04 / rev hr ÷ 1.96 = $22.98 per trip

$45.04 / rev hr ÷ 2.66 = $16.93 per trip (save $6.05 a trip)

$6.05 per trip x 123,172 trips = $744,853 or 43,990 additional trips

Keeping estimates more modest, with a 5% and 10% increase, these are the benefits:

Using 5% improvement at $35.65/revenue hour:

$35.65 / rev hr ÷ 1.82 = $20.14 per trip

$35.65 / rev hr ÷ 1.91 = $19.19 per trip (save $0.95 a trip)

$0.95 per trip x 123,172 trips = $116,875 or 6,090 additional trips

Using 10% improvement at $35.65/revenue hour:

$35.65 / rev hr ÷ 1.82 = $20.14 per trip

$35.65 / rev hr ÷ 2.00 = $18.33 per trip (save $1.81 a trip)

$1.81 per trip x 123,172 trips = $223,232, or 12,181 additional trips

The results are summarized in Figure 14.

Assuming a cost per hour of $35.65, North Country's overall cost per trip decreases by $0.95 if 5% of trips are coordinated and $1.81 if 10% of trips are coordinated. For an agency that provides more than 100,000 trips per year, the overall savings are significant.

Figure 14 Reasonable Productivity Increase Estimates for North Country

	Current	5% Increase in Productivity	10% Increase in Productivity
Productivity	1.82	1.91	2.00
Cost per Trip (assumes $35.65/hr)	$20.14	$19.19	$18.33
Savings per Trip		$0.95	$1.81
Total Savings		$116,875	$223,232
Additional Trips		6,090	12,181

CONCLUSION

The coordination of service delivery helps to provide more mobility options and increase access for persons who are dependent on community transportation services. The example cases in this memo intend to illustrate the cost efficiency potential when coordinating and demonstrate that agencies are able to provide more service to more passengers.