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Mobility Management Strategies: Accessibility Options Report

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Introduction

The ability to access goods and services is an important component in an individual's quality of life. Many of us take our "mobility" for granted—we are easily able get to a doctor's appointment, the grocery store, our place of employment, or a friend's house. However, for many others these are not easy tasks. Certain groups, such as people with disabilities, the elderly, and people with low income, can be particularly impacted by a lack of mobility and a lack of options available to assist them.

This report is intended to serve as a foundation for further research into how to improve mobility and accessibility for the elderly, people with disabilities, and those with low incomes. It analyzes the relationship between "options" and "alternatives" and how they relate to mobility and accessibility and was developed to serve as a basis for the design of information resources and decision support systems to aid in future coordinated mobility projects.

Alternative or Option

An *option* is something that is available as a choice, usually one out of many. The differences between the options are usually minor. For example, a person who would like to purchase shampoo will typically find many different types of shampoo differentiated by brand, bottle design, price, smell, size, color, and many other factors. However, they all serve the same basic purpose—to wash a person's hair. Each shampoo bottle is one option out of many from which a consumer can choose to wash his/her hair, based on his/her preference.

A very important component of an option is that one must be able to refuse one option in preference for another. Back to the shampoo example, if one of the shampoo brands is beyond the purchasing power of a particular consumer, then that particular shampoo brand is no longer an option for the consumer. The reason is because he/she cannot refuse to purchase it in lieu of something different because the consumer doesn't have power to purchase it in the first place.

An *alternative* is a choice between two mutually exclusive possibilities. If an individual chooses one item, then the person cannot choose the other. In the shampoo example, suppose the consumer has only $5.00 to purchase a hygiene product. The individual can choose to purchase a $5.00 bar of soap or a $5.00 bottle of shampoo, but not both. If the consumer actually needs both, then he or she will have to choose one and go without the other until he/she can purchase the other item.

Accessibility via Mobility

Accessibility is a quality of how easily an individual obtains, reaches, or uses something to meet his or her needs and wants. Following the above example,

shampoo bottles located on shelves are accessible to the consumers who walk through the aisle; that is, a person can reach onto the shelf to get the shampoo they want. All forms of accessibility require effort to obtain an item and thus a person must expend a certain amount of energy to access something. Therefore, determining the accessibility of an object is a means to identifying how much energy and/or effort a person must expend to get what she/he is seeking. For example, if a certain shampoo bottle is located on the very top shelf and the consumer who wants that particular shampoo is not tall enough to easily reach it, then from that person's perspective the bottle is not very accessible. He or she will need to exert extra effort by finding someone who can reach it or possibly climb up the shelves. On the other hand, a tall individual would view that particular product as easily accessible because getting it wouldn't require much effort. However, that same tall individual would not view a bottle on the bottom shelf as being as accessible because he/she would need to bend down to reach the bottle.

Mobility is the capability of moving or of being moved from one place to another. Like accessibility, mobility is a process-oriented quality of a person's life. It is set on a continuum based on the amount of energy, effort, and speed by which someone can freely move or be moved from one place to another. The energy expended to move from one place to another could be generated by the person who is moving or the energy can be expended by someone else. For example, an individual who needs to go to the store can expend the energy by walking or by using his/her own car to get to the store. Or, the individual could ride with a friend to get to the store. True mobility consists of an individual's ability to freely and effortlessly move from one place to another whenever the individual wants to move. A low-mobility individual is someone who cannot move very quickly, freely, or effortlessly from one place to another whenever he/she wants to move.

Accessibility is a function of mobility because many items or services that a person may want or need require the person to physically move from one place to another to obtain them. If a person is not very mobile, that is different mobility options are not available or come with a high cost, many items or services will not be very accessible to that person. For example, a moderate income individual who is not disabled can choose (meaning having the power to refuse an option) between using a car, scooter, motorcycle, or bicycle; walking; riding public transit; riding with a friend; or paying for someone to deliver a good to his/her house. However, an individual with low income and/or with disabilities may be limited to only riding with a friend or paying someone to deliver a good, when affordable. The other items are not options because the person does not have the power to "refuse" the option.

Individuals with severe mobility barriers encounter alternative-decision situations. When mobility/travel options are available, they may have to choose between paying a high mobility cost and obtaining a desired good or not paying the high mobility cost and foregoing the desired good or service—they don't have the

option of obtaining the good or service at a low mobility cost. So the issue is that some may have to choose to go without goods and services they need because of the high cost of mobility. The challenge is to find appropriate options that enable these individuals to get the desired goods and services.

Human Needs

An important factor when considering accessibility options is the type of need being met. Meeting some needs may require one to move physically; other needs may be met by services delivered by governmental, non-profit, or for-profit agencies or businesses.

Probably the best known human-needs theory is Abraham Maslow's[1] hierarchy of five human needs:
1. Self Actualization (creativity, problem solving, etc.)
2. Esteem (self-esteem, confidence, etc.)
3. Love/Belonging (friendship, family, etc.)
4. Safety (security of employment, health, etc.)
5. Physiological (food, water, etc.)

According to Maslow's theory, the needs at the bottom of the hierarchy must be met first before a person can seriously work on meeting the higher needs. For example, a person must first meet physiological needs before he/she can focus on safety needs.

From the perspective of coordinated mobility management, because resources are limited, it may be sometimes necessary to prioritize what needs to help address because it may be impossible to provide mobility services that enable those with limited mobility to satisfy all of their needs. Another consideration related to coordinated mobility is the general predictability of how and where individuals will meet their diverse needs. For example, to meet the basic physiological need of food, a person can either purchase food and cook it at home or go somewhere to eat. However, an individual has many ways to meet self-actualization needs such as creativity. An individual can paint a picture at home; decorate their home with items that can be purchased at numerous craft stores, play music at a nightclub, etc.

How mobility options can either enable or hinder an individual from meeting a myriad of human-need possibilities adds to the complexity. For example, to satisfy the need for food, a person can travel (via bike, walking, car, bus, etc.) to a

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[1] A.H. Maslow, *A Theory of Human Motivation*, Psychological Review 50(4) (1943): 370-96.

restaurant, order food for take-out (home delivery or pick-up), or travel to one of numerous types of stores that sell food (grocery, gas station, drug store, etc).

An individual's options for obtaining goods and services can be divided into three broad categories based on mobility of the individual.

<u>Self Reliant Personal Mobility Options</u>

These are based on an individual's ability to move him or herself through independent modes of transportation. Examples include:

- Personal Automobile
- Personal Motorcycle/Scooter
- Bicycle
- Walking
- Wheelchair – powered / non-powered

<u>Personal Mobility Options Reliant on Others</u>

These mobility options require the person who needs to move to rely on other individuals. Examples include:

- Public transit – bus, train, paratransit
- Taxi
- Carpool / vanpool / car sharing
- Ride with friend and/or family

<u>Accessibility (Non-Personal Mobility) Options</u>

These mobility options are general ways an individual can access a good or service without physically moving to obtain it. The good or service is the item that is actually moving from one place to another—not the person who needs it. Examples include:

- Home delivery – physical (actual good or service is delivered to or rendered in an individual's home)
- Home delivery – digital (e.g., watch a baseball game on TV instead of in person, the experience of watching the game is "delivered" to your house without physically being in your house)
- Providing service on-site, but not at a person's home (e.g., having daycare at a work place)

Accessibility Options

This section lists accessibility options by general needs. Some providers are mentioned more than once if they meet more than one type of need. The list is a preliminary step in developing a comprehensive database to aid in identifying and coordinating resources. The providers listed below were primarily identified from

online resources and online search engines to simulate the process that an individual in the target populations, especially people with disabilities, those with low incomes and the elderly, might go through to find solutions to his/her mobility challenges.

The accessibility options lists do not include members of an individual's social network, even though friends, family, co-workers, fellow church members, etc., can help satisfy individual's needs. These social networks are very important because they are able to help individuals meet their needs at a relatively lower cost to society as whole by (typically) providing the services for free and often bridging the gap in available mobility options.

Health Care Needs

Health care services have the potential for home delivery depending on the medical need. For example, simple medical exams consisting of blood work, temperature, heart monitoring, etc. can be delivered at home. Medical care involving equipment or specialized services (X-rays, surgeries, etc.) may not be able to be delivered at home. Dental and vision services may also not be available for home delivery due to equipment constraints. Below are examples of providers of limited in-home medical care:

Saint Alphonsus Home Health
Website: www.saintalphonsus.org/svc_homehealth.html
In-home health care
Target groups served: mainly seniors and people with disabilities, those with low incomes possible
Available in Treasure Valley

St Luke's Home Care
Website:
www.stlukesonline.org/meridian/specialties_and_services/home_care/index.php
In-home health care
Target groups served: mainly seniors and people with disabilities, those with low incomes possible
Available in Treasure Valley

Progressive Nursing Staff prn, Inc
Website: www.progressivenursingprn.com/index.htm
Target groups served: mainly seniors and people with disabilities, those with low incomes possible
Available in Treasure Valley

Touchmark
Website: www.meadowlakevillage.com/
Nursing home / assisted living   (services available for residents)
Target groups served: mainly seniors
Available in Treasure Valley

Diamond View Assisted Living
Website: www.diamondviewassistedliving.com
Nursing home / assisted living (services available for residents)
Target groups served: mainly seniors
Available in Treasure Valley

Food/Living Supplies

Home delivery of food and other supplies necessary for daily living (e.g., household cleaning supplies, personal care products, etc.) is a possible solution for individuals who cannot travel to obtain these items. The following is a list of home delivery providers (mainly of food):

Schwan's Home Service, Inc
Website: www.schwans.com
Specialty food retailer – specializes in home delivery of goods
Target groups served: seniors, people with disabilities
Available in Treasure Valley

Albertsons
Website: www.albertsons.com
Retail store that provides home delivery in select areas
Target groups served: seniors, people with disabilities, those with low incomes
Delivery service available in Boise

Boise Milk
Website: www.boisemilk.com
Grocery retailer specializing in home delivery
Target groups served: seniors, people with disabilities, those with low incomes
Available in Treasure Valley

Touchmark
Website: www.meadowlakevillage.com/
Assisted Living Center (services available for residents)
Target groups served: mainly seniors
Available in Treasure Valley

Bonaventure Senior Living
Website: www.bonaventuresenior.com
Assisted Living Center (services available for residents)
Target groups served: seniors
Available in Treasure Valley

Valley View Retirement
Website: www.valleyviewret.com
Assisted living center (services available for residents)
Target groups served: seniors
Available in Treasure Valley

Assisted Living Concepts, Inc.
Website: www.alcco.com
Assisted living center (services available for residents)
Target groups served: seniors
Available in Treasure Valley

Diamond View Assisted Living
Website: www.diamondviewassistedliving.com
Assisted living center (services on-site)
Target groups served: seniors
Available in Treasure Valley

Almost Home
Website: www.almosthomellc.com
Assisted living center (services on-site)
Target groups served: seniors
Available in Treasure Valley

Tomorrow's Home
Website: www.tomorrowshopeinc.org/
Disabled services group home (services on-site)
Target groups served: people with disabilities
Available in Treasure Valley

Comfort Keepers
Website: www.comfortkeepers.com
Non-medical, in-home care provider
Target groups served: seniors, people with disabilities
Available in Treasure Valley

Assisting Hands Home Care
Website: www.assistinghands.com
Non-medical, in-home care provider
Target groups served: seniors, people with disabilities
Available in Treasure Valley

Meals on Wheels
Website: www.mowaa.org
Non-profit delivers meals to seniors in need.
Target groups served: seniors
Available in Treasure Valley

Leisure Needs

The need for leisure is typically met through various entertainment and recreational activities. As mentioned previously, identifying the ways in which someone can meet their need for food is more simple than how someone chooses to meet his/her need for entertainment or recreation. In general, the following companies specialize in providing entertainment and recreational products to a person's home.

Netflix
Website: www.netflix.com
Delivers DVD movies directly to a person's home
Target groups served: seniors, people with disabilities, those with low incomes
Available in Treasure Valley; delivery across the country

Blockbuster
Website: www.blockbuster.com
Movie rental store that also offers home delivery
Target groups served: seniors, people with disabilities, those with low incomes
Available in Treasure Valley; delivery across the country

Over-the –Air TV (antenna)
Website: www.antennaweb.org
Free TV "provider"
Target groups served: people with low incomes
Available in Treasure Valley

DirecTV
Website: www.directv.com

Satellite TV provider
Target groups served: seniors, people with disabilities, those with low incomes
Available in Treasure Valley

Dish Network
Website: www.dishnetwork.com
Satellite TV provider
Target groups served: seniors, people with disabilities, those with low incomes
Available in Treasure Valley

CableOne
Website: www.cableone.com
Cable TV provider
Target groups served: seniors, people with disabilities, those with low incomes
Available in Treasure Valley

Video- and Boardgames etc.
Example website: www.boardgames.com; www.tetris.com
Online retailers that specializes in selling board games
Target groups served: seniors, people with disabilities, those with low incomes
Available in Treasure Valley; delivery across the country

eAudioBooks and Videos
Website: http://www.boisepubliclibrary.org/eCollections/eaudio/ also
http://www.freeaudio.org/
Online service for downloading free eAudioBooks onto a computer, MP3 player or
PDA
Target groups served: seniors, people with disabilities, those with low incomes
Available in Treasure Valley

Bookmobile
Website: http://www.boisepubliclibrary.org/Locations_and_Hours/Bookmobile/ also
http://www.boisepubliclibrary.org/About_BPL/Special_Services/Homebound.shtml
A mobile library-in-a-bus; special services for homebound individuals
Target groups served: seniors, people with disabilities, those with low incomes
Available in Boise

Mobile Recreation Unit
Website:
http://www.cityofboise.org/Departments/Parks/Activities/YouthServices/page26030
.aspx

A cargo van outfitted with balls, jump ropes, bases, painting supplies, a sound system, and other supplies for fitness, nutrition, art, drama and dance activities for children.
Target group served: people with low incomes
Available in low-income schools and at parks and apartment complexes in Boise

Social Interaction Needs

Social interaction is important for the overall well-being of individuals. People who are not able to leave their homes but are able to have many of their needs met through organizations that deliver goods and services directly to their home may not have many opportunities for social interaction. As mentioned previously, members of the individual's social network, such as friends and family, may fulfill this need. The internet provides many opportunities for interaction via online community groups and video-phone services. The following are other organizations that can provide social interaction (many of which are organizations that also serve other needs).

Touchmark
Website: www.meadowlakevillage.com/
Assisted living center
Target groups served: mainly seniors
Services available on-site

Bonaventure Senior Living
Website: www.bonaventuresenior.com
Assisted living center
Target groups served: seniors
Services available on-site

Valley View Retirement
Website: www.valleyviewret.com
Assisted living center
Target groups served: seniors
Services available on-site

Assisted Living Concepts, Inc.
Website: www.alcco.com
Assisted living center
Target groups served: seniors
Services available on-site

Diamond View Assisted Living
Website: www.diamondviewassistedliving.com
Assisted living center
Target groups served: seniors
Services available on-site

Almost Home
Website: www.almosthomellc.com
Assisted living center
Target groups served: seniors
Services available on-site

Tomorrow's Home
Website: www.tomorrowshopeinc.org/
Disabled services group home
Target groups served: people with disabilities
Services available on-site

Comfort Keepers
Website: www.comfortkeepers.com
Non-medical, in-home care provider
Target groups served: seniors, people with disabilities
Available in Treasure Valley

Facebook
Website: www.facebook.com
Online social networking community
Target groups served: seniors, people with disabilities, those with low incomes
Available via the internet

Myspace
Website: www.myspace.com
Online social networking community
Target groups served: seniors, people with disabilities, those with low incomes
Available via the internet

Employment and Childcare Needs

One of the barriers to employment can be access to childcare. Employers that offer on-site childcare reduce their employees' need to travel and may help low-income individuals access employment.

The internet and other communication technologies increase the possibilities of working at home. However, finding legitimate work-at-home jobs may be difficult.

While many employers allow some of their employees to telecommute, every employer is different, and this makes it difficult to compile a list of employers offering home-based employment. The sector with one of the greatest potential for work-at-home opportunities for a diverse demographic group is the call center industry. Other possible work-at-home occupations include medical transcription and medical billing and coding. However, these occupations require specialized training that normally requires mobility to access the training. The following lists work-at-home call center job opportunities. Local call center employers in the Treasure Valley, such as T-Mobile, DirecTV, EDS, and WDSGlobal, may also offer work-at-home opportunities in the future.

AlpineAccess
Website: www.alpineaccess.com
Call center outsourcing company that specializes in using work-at-home call center
    agents to serve its clients' customers
Target groups served: seniors, people with disabilities, those with low incomes
(does require passing a credit check)
Based in Denver but employs work-at-home agents across the country

Arise
Website: www.arise.com
Call center outsourcing company that hires work-at-home independent contractors
    (who must incorporate their business) to service their clients' customers
Target groups served: seniors, people with disabilities, those with low incomes
Based in Miramar, FL, but partners with home-based businesses across the country

Working Solutions
Website: www.workingsol.com
Company provides call center and some data entry services to its client via work-
at-home agents
Target groups served: seniors, people with disabilities, those with low incomes
Headquarters in Plano, TX, but recruits agents from across the country

Liveops
Website: www.liveops.com
Company provides call center services to its clients via work-at-home agents.
    Agents are independent contractors.

Target groups served: seniors, people with disabilities, those with low incomes
Headquarters in Santa Clara, CA but recruits independent contractors from across the country

West Corporation
Website: www.apply.westathome.com
Offers communication, conferencing, and receivables management services to clients. Has both a traditional call center presence and hires work-at-home agents
Target groups served: seniors, people with disabilities, those with low incomes
Headquarters in Omaha, NE, but recruits agents from across the country

Sitel
Website: www.sitel.com
Offers call center services to clients. Has both a traditional call center presence and hires work-at-home agents.
Target groups served: seniors, people with disabilities, those with low incomes
Headquarters in Nashville, TN, but hires agents from select areas across the country. Agents must first attend training at certain locations before they can become work-at-home agents.

Convergys
Website: www.convergys.com
Offers call center, human resource solutions, and other consulting services to clients. Operates both traditional call centers and virtual call center using at-home-workforce
Target groups served: seniors, people with disabilities, those with low incomes
Headquarters in Cincinnati, OH, but recruits work-at-home agents from around the country.

Summary and Recommendations

Many organizations currently help seniors meet their needs without leaving their homes. For example, retirement centers can fulfill the need for food, daily living supplies, entertainment, social interaction, and even medical care within the retirement center. In-home care providers can fulfill many of the same needs that can be met at retirement centers without the senior individual leaving his/her home.

Many of the services tailored toward the senior population can be extended to people with disabilities as well, such as medical and non-medical home care providers. Many of the needs are similar, and seniors and people with disabilities are often easier to identify to receive services than people with low incomes. Also,

the demographic shift toward an older population will likely generate more organizations that specifically cater to seniors. Retirement centers and in-home care providers are for-profit entities and the aging baby-boom generation represents an attractive market.

People with low incomes, however, appear to have fewer organizations that specifically focus on satisfying their needs. Those with low incomes may not be attractive markets for for-profit companies and reaching them may be difficult. Mass marketers will typically provide services in large volumes and may meet the needs of low-income individuals by doing so. Reaching people with low incomes may be difficult also because they may be more dispersed demographically and geographically. For example, low-income households may be located in a city, in suburbs, or in rural areas. They may be young, middle-aged, or older. Identifying marketing tactics to reach low-income groups specifically may be perceived as too costly by businesses deliver goods and services to homes or workplaces.

Advanced medical care and vision and dental care may not be good candidates for being met through home delivery. The equipment requirements and the nature of some procedures may only be economically viable at specialized facilities. However, post-surgery check-ups and procedures that do not require advanced equipment have the potential for home delivery.

The majority of jobs still require traveling to a workplace. However, the at-home-agent call center trend may prove to be a good opportunity for especially individuals with low incomes and/or individuals with limited mobility.

This initial analysis of accessibility options for the target populations has helped identify the following additional tasks:
1) Refine information about user needs and accessibility options, including a cost of the options, and compile a more comprehensive database.
2) Research in more detail the options available for the low-income target population given the various options available to seniors.
3) Explore ways to acknowledge and enhance the role of informal social networks in helping individuals with low mobility options meet their needs.
4) Identify means to incorporate accessibility options into broader mobility coordination to ensure that target populations are able to meet their basic needs despite lack of mobility options.