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Improving transportation with mobility management

by Brandon Garrison & Pat Weaver

provide some examples of how it might work in your community.

What is mobility management?

Mobility management evaluates the transit needs of a community and provides services that fit those needs. It

> dismisses the idea that public transit services should follow traditional urban models that rely heavily on fixed routes.

> > Transit providers

can use mobility management to complement traditional services with Go to page 2

Coordinated transit planning required by SAFETEA-LU

by Pat Weaver

ew human-service public transportation planning requirements included in SAFETEA-LU apply to agencies participating in selected federal transit programs beginning in FY 2006, with full implementation by FY 2007. Read this article to find out whether your agency falls under these requirements and how they are intended to support the transportation coordination effort at the local level.

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The demand for transportation is growing so quickly in some small commu-

nities that transit agencies often have difficulty keeping up with demand. One

solution to this problem

is mobility management. This article will define mobility management, describe some of its benefits, and

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added programs geared towards rural and suburban populations.

For example, urban communities have many commuters. With mobility management, transportation agencies could provide a service that takes workers directly to their jobs and then guarantees a ride home. Another service that could provide more customized rides is a flexible route service. Instead of riders walking to bus stops, vehicles would be assigned to regions, and riders would be picked up at their houses.

Mobility management also focuses on coordinating various transit services in the community to maximize resources and provide a complete, easy-to-use service for customers. a community transportation association ambassador for United We Ride program. These agencies can coordinate their efforts and become more efficient using mobility management. For instance, it is generally more efficient to have a single vehicle pick up multiple people instead of each organization sending out their own drivers to the same location. Also, transit agencies that cooperate can provide a single phone number that allows potential riders to determine which service they are eligible for. This is much easier than calling each agency looking for a ride.

A key feature of mobility management is the inclusion of informational strategies, such as a call center with information on all transportation services—and agreements with ridesharing agencies for trip plancall centers to update routes and schedule pick-ups with drivers in real time. Dispatchers can also stay in contact with drivers using traditional radio or cellular communication.

Dispatchers can monitor vehicles using Automatic Vehicle
Locater (AVL) technology. AVL
uses Global Positioning System
(GPS) technology with units mounted in vehicles to monitor their coordinates in real time. The equipment mounted in the vehicle sends a signal to a satellite that broadcasts the location of the vehicle to the DRT software at the call center.

Public transportation offices can possibly reduce the number of routes their vehicles must make by using this technology. While still relatively expensive, much of this technology has received enough widespread use that the cost has dropped significantly. In Kansas, there are two rural agencies currently testing these applications: Reno County Transportation in Hutchinson, and Developmental Services of Northwest Kansas, Inc. in Hays.



Transit services that use mobility management can look forward to some valuable benefits ... such as pooled funding to increase potential resources for all participating services.

Many rural communities lack a transit authority but have various public and private agencies that provide transportation. Senior centers and health care services provide paratransit for those with special needs. Human and social service departments provide transportation through Medicaid funding. In these rural areas, mobility management can be very helpful.

"Medicaid transportation providers and senior centers can create partnerships with the local agency on aging or the department of special services," suggests James Mclary, who teaches Coordinated Mobility classes for the National Transit Institute (NTI) and serves as ning. Mobility management might also include multi-provider trip reservation and integrated billing or schedule-coordination with the intercity bus or train service.

Technology is a helpful tool in mobility management

Technology is an important part of mobility management. Technology helps transit agencies meet a common mobility management goal of providing information on all community transportation services from a single call center. It also helps dispatchers at these call centers keep in close contact with drivers.

Demand-Responsive Transit (DRT) software allows dispatchers at

Mobility management benefits

Transit services that use mobility management can look forward to some valuable benefits. Agencies coordinating their efforts with mobility management strategies can pool their funding to increase potential resources for everyone. With increased funding, mobility managers can invest money in improved technology and communication. Transportation services that previously provided paratransit only for the elderly and people with disabilities can branch out to other groups in the community. Multiple agencies working together can increase their service area and provide rides to more people at lower costs, using fewer vehicles.

MOBILITY MANAGEMENT IN A RURAL AREA

While suburban communities can access established public transportation services in nearby urban centers, many rural communities cannot. Often, the transportation services available in small towns originate in human service or health care agencies that provide paratransit for the elderly and the disabled. In Kearny, Nebraska, Good Samaritan Health Services and other health care providers recognized the need for more efficient public transportation and created the Reach Your Destination Easily Program. This program serves an eight-county area from a centralized brokerage in Kearney. The brokerage coordinates rides for each of the involved agencies using DRT software. Using a transportation brokerage and mobility management, the program covers a large area with minimal resource use.

Mobility management creates efficient operations

Mobility management is an efficient solution to complications facing the transportation industry. First, the senior population is growing and will reach an all-time high as the baby boomer generation turns 65.

"I have seen a big increase in the demand for rural transit. I expect this to increase even more as the population ages," says McLary.

Also, despite state and federal funding increases for rural transportation, the demand for transportation in smaller communities often outstrips their resources, particularly funding from necessary local sources. Mobility management can cushion the effects of these problems by consolidating resources and increasing efficiency.

Mobility management in action

Mobility management uses similar strategies and public services in both rural and suburban communities. However, there are a few fundamental differences. In suburbs the main transportation provider is often the major transit service for a nearby urban center. For instance, the Suburban Mobility Authority for Regional Transportation (SMART)

program in Detroit, Michigan, started out as a traditional fixed route service that didn't fit the needs of the growing, surrounding communities. They decided to supplement their traditional services with programs such as a Job Express, Dial-a-Ride, and Community Transit. Job Express takes workers from fixed route bus stops straight to their jobs. Dial-a-Ride is a service that provides immediate curbside pickup. Community Transit is a service supplied and funded by SMART but operated by community members.

With this business model, SMART call-center employees act as mobility managers to coordinate the various transportation services and find rides for customers. SMART uses automatic vehicle locaters, demand-response transit software, call centers and standard radio communication to stay in better contact with their drivers, clients, and the community.

See above for a rural example of mobility management.

Mobility management is a strategy any community can use to improve its public transportation. This strategy can be particularly helpful in small communities with limited resources and a growing

demand for transportation. These communities deserve improved service; mobility management can help agencies meet that need.

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Coordinated transit planning,

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SAFETEA-LU, federal transportation legislation reauthorized in 2005, requires that projects selected for funding under the Elderly Individuals and Individuals with Disabilities Program (Section 5310), the Job Access-Reverse Commute Program (JARC - Section 5316), and the New Freedom Program (Section 5317) be "derived from a locally developed, coordinated public transit-human services transportation plan." The plan must be "developed through a process that includes representatives of public, private, and nonprofit transportation and human services providers and participation by the public."

So, what does this new planning requirement mean for your agency?

FTA issues interim guidance for FY06 implementation and proposed strategies for FY07

On March 15, 2006, FTA issued interim guidance and proposed strategies for planning requirements for the three programs. This document is available online through FTA's Docket Service. Go to http://dms.dot.gov, click on "Simple Search" and enter 24037 under Docket Number. The guidance, along with comments from the public, are listed here. Comments were accepted through April 21, 2006.

FY 2006, interim guidance for JARC planning requirements

JARC funding has always included a planning requirement; however, under SAFETEA-LU the funds are now distributed by formula to states and urbanized areas. Therefore, states and cities that have not previously participated in the program may now be receiving funding and will need to comply with the associated planning

requirements. For existing JARC projects, existing plans may satisfy the requirements.

In areas with no current JARC plan, for FY 2006 FTA proposes that the planning partners should, at a minimum, be consulted about projects. When possible, support letters should be obtained from these partners and documented. The application describes activities that can be

each state and local community. The goal must be to get the guidance flexible enough to meet the needs of each area while furthering human service transportation coordination needs. FTA has identified some of the desired stakeholders in the process and how they define adequate outreach to these stakeholders including public and private providers, consumers and others.

Transportation coordination is the target of proposed planning requirements for Sections 5310, 5316 and 5317 programs in FY2006 and FY2007.

undertaken to reach out to stakeholders—including providers and users of service—to identify community-wide needs and to begin to inventory available resources.

FY 2007 Sections 5310 and 5317 proposed strategies

The notice for proposed requirements for creating the coordinated plan is incorporated in the same docket. Coordinated planning requirements for all three programs will be in force for FY 2007 awards.

What are the elements of a coordinated plan? FTA identifies the key elements of the coordinated plan as: 1) an assessment of transportation needs for elderly, persons with disabilities and low income individuals; 2) an inventory of available services to identify gaps and duplication, 3) strategies to address gaps, 4) identification of coordination actions to eliminate or reduce duplication; and 5) prioritization of implementation strategies.

How will this plan integrate with other existing plans? An important element of this planning activity will be the integration and coordination with existing planning efforts in Is technical assistance available to assist with these plans? Yes. FTA is proposing that states can use up to 10 percent of their Section 5310 and 5317 funds to provide technical assistance, administrative and planning functions. There also are national technical assistance resources available; examples are the JobLINKS program which provides technical assistance for employment transportation and the National Rural Transit Assistance Program (RTAP) which provides training materials and other resources to rural agencies.

Brief update on Kansas "United We Ride" activities

A statewide summit on human service transportation was held in Salina on February 8 for the purpose of reviewing the action plan of the Governor's Committee on Human Service Transportation Coordination. This plan has been under development in Kansas for the past few months. Approximately 75 individuals participated, including representatives from several state agencies, state advocacy groups, public and private providers, and consumers.

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Driving under the influence... of antihistamines

by Justin Dorsey

The dangers of driving under the influence of alcohol are well known. However, do you know the dangers of driving under the influence of antihistamines? If not, this article's discussion will help you learn how antihistamines work, how they affect driving, and how to reduce their side effects.

How do antihistamines work?

When someone has an allergic reaction, cells in the body release the chemical histamine. Histamine attaches to cells and irritates them. This irritation causes the runny nose, watery eyes, sneezing, itching, and other allergic reactions we know and hate. Although histamine seems like an unwanted nuisance, it performs an

important brain function; it helps keep us alert and attentive.

To reduce allergy suffering, antihistamines were developed to stop histamine from attaching to cells.



that reduce an individual's ability to safely operate a vehicle. These side effects include: drowsiness, impaired thinking, and reduced reaction time. Effects can be quite dramatic. For example, separate studies from the University of Iowa and Minnesota found that driver impairment caused by (first-generation) Benadryl was similar to impairment caused by significant amounts of alcohol. Further, the Iowa study found that drivers taking Benadryl could not accurately judge its effect on their driving.

Newer, second-generation antihistamines, often called "non-sedating" antihistamines, have drastically reduced side effects. In fact, some have no side effects. The downside is that they are generally more expensive.

How to reduce antihistamine side effects

Because cold season is here, many drivers will be

Side effects from antihistimines can be debilitating and include drowsiness, impaired thinking and reduced reaction time.

Popular First-Generation Antihistamines

These typically have stronger side effects Alka-Seltzer Plus Night-Time Cold Medicine Benadryl Allergy Dimetapp Cold & Allergy Elixir Dramamine Original Robitussin Allergy & Cough Liquid Tavist Vicks NyQuil

Popular Second-Generation Antihistamines Side effects are typically milder

Allegra

Alavert

Claritin

Semprex

Zyrtec

Original antihistamines were very good at this. Maybe too good. They blocked histamine from attaching to cells in our respiratory system-and brain. The result: allergy suffering

was reduced, but alertness was too.

Affects on driving

Antihistamines can be divided into two groups: first-generation and second-generation. First-generation have significant side effects

taking antihistamines. What can be done to reduce their effects on driving? First, do not take antihistamines with alcohol. Second, ask a medical professional when to take them so that their possible drowsiness effect has worn off or is minimal by the time you drive. Finally, if taking them while on another medication, check with a medical professional about unexpected drug interaction effects.

According to Lieutenant John Eickhorn of the Kansas Highway Patrol, people tend to associate drugrelated driving impairment with illegal drugs only. This is not the whole

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Can a transit driver legally drive for 11 hours after being off duty for 8 consecutive hours?

by Justin Dorsey

he above question, and others, will be answered in this refresher on hours of service regulations for intrastate transit service in Kansas.

Who must comply with intrastate hours of service regulations?

The Kansas Corporation Commission (KCC) regulates intrastate hours of service for public motor carriers transporting passengers within Kansas (K.S.A. 66-1, 129). The KCC adopted the federal rules and regulations regarding hours of service that are found in 49 C.F.R. 395.5.

Intrastate passenger transportation is the transport of passengers solely within Kansas. A public motor carrier is an entity that transports passengers for hire in a motor vehicle (K.S.A. 66-1, 108.) This includes Kansas non-profit agencies providing transit service.

A public motor carrier using a vehicle designed to transport more than six passengers, including the driver, operating solely in Kansas, must comply with KCC hours of service regulations. However, if the vehicle is operated by a government entity such as the federal government, a state, a municipality, or any other political subdivision of Kansas, it is exempt from the regulations. For example, if your service is owned by your city or county government, then your agency is exempt from these regulations.



In other words, a driver can drive for a maximum of 10 hours during a 15-hour on-duty time period but must be off for a minimum of 8 consecutive hours before initial driving occurs.

Here are some examples of applying these rules:

Can a driver drive for 3 hours after being off for 7 consecutive hours? No, this will violate rule #1 because the driver will not be off for at least 8 consecutive hours before initial driving occurs.

It is important to record actual driving time, as well as time spent on any other work tasks, and time off, and to track those activities both daily and weekly.

Hours of service ruless for non-government vehicles

Hours of service regulations limit driving and on-duty time per day and per week. On-duty time, in this context, means more than driving time. It includes all the time from when a driver begins work to when the driver is relieved from work, whatever the corresponding responsibilities are. For example, on-duty time includes time spent waiting to be dispatched, inspecting a vehicle, or repairing a vehicle.

Daily rules

Daily regulations say that a driver:
1) Cannot drive more than 10 hours
after being off for 8 consecutive hours;
2) Cannot drive after being on-duty
for 15 hours after being off for 8
consecutive hours.

Can a driver drive for 11 hours after being off for 8 consecutive hours? No, this will violate rule #1 because the driver will drive for more than 10 hours.

After being off for 10 consecutive hours, can a driver dispatch for 14 hours and then drive for 3 hours? No, this will violate rule #2 because the driver will drive after being onduty for more than 15 hours.

Can a driver drive for up to 10 hours after being off for 9 consecutive hours? Yes, this complies with both rules.

After being off for 10 consecutive hours, can a driver dispatch for 2 hours, repair an agency vehicle for 3 hours, and then drive for up to 10 hours? Yes, this complies with both rules.

Weekly rules

Even if a driver complies with daily regulations, he/she also must be aware of weekly regulations. If service does not operate every day of the week, a driver cannot drive after being onduty 60 hours in any 7 consecutive days. However, if service does operate every day of the week, a driver cannot drive after being on-duty for 70 hours in any 8 consecutive days.

For example, can a transit driver drive 12 hours a day for 6 consecutive days? No.

Finally, remember that if a driver drives for more than one agency or has a non-driving side job, extra

Hours of service rules apply to drivers of private vehicles.

attention may be needed to ensure hours of service regulations are followed. For example, if a driver works 10 hours a week as a secretary in a doctor's office, that time is on-duty time when evaluating hours-of-service compliance.

If you need additional information contact Dale Moore of the Kansas Corporation Commission at (785) 271-3151 or visit their Web site at http://www.kcc.state.ks.us/trans/index.htm.

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Coordinated transit planning,

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It was an extremely productive meeting, and eight recommendations were made back to the Governor's Committee. The prioritized list of recommendations include:

- Increase communication with local agencies across networks;
- Develop outcome measures for each goal-part of overall evaluation plan;
- Leverage, utilize, and centralize funds and/or change, update, and coordinate regulations to achieve efforts and provide better service;
- Create marketing strategies for locals on "United We Ride" efforts, e.g. county commissions;
- Seek statutory authority for Governor's Committee on Public Transportation;
- Establish best practices and results of action steps;
- Create monetary incentives to achieve coordinated services;
- Study how to better leverage regional and local resources.

The Governor's Committee is scheduled to meet in April to continue work on these priorities. Thanks to Marla Flentje of the Austin Peters Group for her assistance in co-facilitating the day.

Please contact Pat Weaver at the Transportation Center if you have questions about the Kansas United We Ride effort, (785) 864-2595, weaver@ku.edu, or visit the Kansas United We Ride Web site at http://www.ksunitedweride.org.

Antihistamines,

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story. Although illegal drugs like marijuana and cocaine impair driving, so do legal drugs like antihistamines. Further, he suggests that, if taking a drug for the first time, avoid driving until you are familiar with its side effects.

Transit drivers rely heavily on alertness and reaction time to operate their vehicle. When a driver takes antihistamines, those skills may become diminished. Therefore, if you are a driver taking antihistamines, be extra careful, ask your medical professional if taking a second-generation instead of first-generation antihistamine is possible, and report your medications to your supervisor to determine your fitness to drive.

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American Academy of Family Physicians information on first and second-generation antihistamines. http://familydoctor.org/857.xml.

New NTI training courses help employees identify harassment and prevent it

by Laura Snyder

he National Transit Institute (NTI) has a history of helping transit agencies maintain a safe and healthy workplace through their training courses. One issue that threatens the safety of any workplace is workplace violence.

Violence in the workplace usually stems from harassment and diversity issues, according to Renee Haider, Associate Director of NTI. Therefore, Haider says that if workplace violence is to be prevented, workers and employers must be educated about harassment and diversity. NTI is offering three new courses to help deal with these issues, each of which is focused specifically on applicability to transit agencies.

"Harassment Prevention for Transit Employees" is a three-hour course that helps employees discover the impact that harassment, includment in the workplace are also discussed. "A lot of times the people

doing the harassment don't realize it's harassment, and the people on the receiving end don't know how to respond," says Haider. "We try to sensitize people to their own actions."

"Harassment Prevention for Supervisors" is a four-hour training course and

includes discussion of the supervisor's role to comply with the agency's harassment policy, including how to receive and respond to complaints of harassment, while maintaining appropriate confidentiality.

"Supervisors have a higher level of responsibility when it comes to enforcing the organization's harassment policy," Haider says.

"We want people to understand each others' differences, respect them, and focus on what pulls them together."

ing violence, can have on a transit agency. The instructors make use of the participating organization's harassment policy by discussing compliance with the policy and how to report violations. "Our goal is to help the employees understand that policy, not just from a compliance standpoint, but from how it promotes a better workplace," says Haider.

Strategies for preventing harass-

Like employees, supervisors are also taught how to recognize and prevent harassment in the workplace.

Harassment is often directed toward individuals with different races, genders, national origins or sexual preferences, says Haider, so understanding diversity is extremely relevant to preventing harassment. NTI's third course in this genre, "Building Diversity Skills," tries to

accomplish this by explaining the benefits of valuing diversity. When employees create an atmos-

> phere of friendliness and respect, the result is an increase in productivity, improved organizational efficiency, more innovativeness, stronger communication skills, and reduced workplace conflict, according to the course outline.

"It's a compliance issue, but we're trying to explain why they should want to comply," says

Haider. In the course, participants practice skills for acknowledging differences but respecting and dealing with them at the same time.

"Diversity" can apply to all sorts of differences, says Haider.
Sometimes people without children may feel treated unfairly compared with employees who are parents.
"We want people to understand each others' differences, respect them, and focus on what pulls them together," says Haider.

Each course is a combination of lecture, visual aids, participant interaction and learning activities.

Like all NTI courses, the harassment and diversity training courses are free of charge offered at a wide range of locations.

To request a training session, visit NTI's Web site at www.ntion-line.com to fill out a Course Request Form. For more information on these courses, contact Renee Haider at rhaider@nti.rutgers.edu.

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Create a press release that gets noticed

by Laura Snyder

ometimes you have to take the initiative to get word out to the press instead of waiting for the press to come to you. Press releases are a great tool to help you get publicity for your transit agency through the media. You know your agency and all of the important details best, so you can write it up and package it in a way that gives the media everything they need to know to write an article about your agency.

on the story in your press release, you must be truthful. The story must be current, as well, so don't delay writing up events for the media.

Painting the picture

A press release reads much like a newspaper article. As such, it should use short sentences and paragraphs. In other words, don't be wordy!

The first paragraph should contain the lead. This is a sentence that briefly explains the what, when, where and why of a story. It should tell the reader immediately what this story is about.

Content

What type of event warrants a press release? Anything that relates to the readers, listeners, or viewers of the media that will receive your press release. For example, if you know that the readers of a particular newspaper tend to be working professionals, consider what services they might be interested



There's an art to creating a good press release, but it doesn't take any special talent. It can be learned.

in. More specifically, you might want to report on an increase in ridership, driver training, new vehicles, new routes, new schedules, or awards and accomplishments.

Your press release, much like a newspaper article, should answer the basic journalistic questions of who, what, when, where, why and how.

While you can put a positive spin

The body of a press release should explain the first paragraph in more detail. Be sure to stick to the facts. You can also include a quote or two from an appropriate person related to the story.

Layout

You can print a press release on your agency's letterhead or plain white

paper. The text should be double-spaced and printed on only one side of the paper. A release date and contact name and phone number should be at the top, followed by a headline. To signal the end of the press release, the last page should end with "-30-" or "###" centered at the bottom of the page.

Delivery and follow-up

The method of delivery for press releases varies, depending on the media avenue. Contact the radio or television station or newspaper reporter before sending the release to find out if they prefer e-mail, fax, or mail delivery.

After sending the press release, follow up with a phone call in a day or two. This will give you the opportunity to make sure the release was received. You can also offer to help with the story or answer any additional questions.

Press releases are fairly simple to write and can help your agency get free promotion from the press. So take advantage of this cost-saving tool and drum up some press coverage for your agency.

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"Public Relations: Sample Press Releases." *Marketing Ideas to Get You There*. West Virginia Division of Public Transit, Jan. 2001.

"Writing a Press Release."

A Handbook for Effective Advertising and Marketing of Community Transit.

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20Advertising.pdf ▲



Dangerous discomfort: Avoiding repetitive strain injuries

throughout the day are especially by Laura Snyder susceptible to MSDs in the lower back. Heavy lifting, such as assisting

What are repetitive strain injuries?

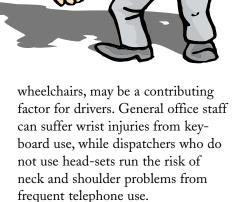
If you are a transit worker who spends most of your day sitting on a bus or in the office, or if you are a mechanic who uses hand tools, you might be at risk of developing a repetitive strain injury. Called musculoskeletal disorders, or MSDs, by the Occupational Safety and Health Administration of the U.S. Department of Labor (OSHA), these injuries encompass a number of more commonly known disorders, such as Carpal Tunnel Syndrome, tendonitis, and low back pain.

According to Jaye Cole, occupational therapist and director of Lawrence Memorial Hospital's Kreider Rehabilitation Services, the term musculoskeletal refers to the soft tissues supporting the skeletal system injured by chronic overuse or misuse, including muscles, tendons, ligaments, joints, and cartilage.

Common symptoms of musculoskeletal disorders include pain, swelling, numbness, tenderness, muscle spasms, weakness, or loss of joint mobility or coordination. One single strain or sprain will not cause an MSD. You are more likely to develop an MSD over time from repetitive use and misuse.

Who is at risk?

Drivers, dispatchers, and office staff who maintain sedentary positions



persons into

Maintenance workers and mechanics risk inflammation of the wrists and hands from using tool handles that are too short or dig into their wrists or palms. Vibration from power tools over time can cause MSDs, as can exerting extra force while lifting, pulling, pushing, or gripping a tool.

Pre-existing medical conditions and lifestyle add to work-related MSDs. Joint disease, arthritis, diabetes, gout, pregnancy, and the use of oral contraceptives increase the risk or worsen MSDs. Certain health conditions may slow the healing process.

Arthritis especially "puts fuel to the fire" by contributing to an existing inflammatory process, said Cole.

Workplace effects

Improving ergonomic conditions will increase your worker productivity, boost morale, and decrease workers' compensation premiums. The U.S. Department of Labor's Bureau of Labor and Statistics reports that MSDs accounted for 34 percent of the injuries and illnesses that caused employees in private industries to take days off work in 2002. MSDs cost the U.S. more than \$2.1 billion each year in workers' compensation, according to the National Occupational Research Agenda.

Cole compares trying to perform a job task with an MSD to trying to drive a car with a bent axle. "You're not going to get very far," she said. "If you're doing it in a position that puts a lot of stress on the joints, you're not going to be able to keep doing that."

What can workers do to prevent MSDs?

You can decrease the likelihood developing an MSD by getting moderate exercise, having good posture, and stretching. Cole said MSDs are more likely to result from misuse than overuse. Slouching can cause back pain for workers who spend the majority of their time sitting.

"If you sit it a slouched position all the time, it puts stress on ligaments that hold the bones in place," said Cole. Even worse, when you have to exert yourself to lift something heavy, like a wheelchair, your ligaments will not be as strong and you will put your body at risk of injury.

When sitting for extended periods of time, try to sit upright and tighten your abdominal muscles. Try placing a rolled up or folded a towel in the small of your back to prevent your body from slouching. You can also purchase lumbar pads that serve the same purpose.

Stretching is key to avoiding MSDs. If possible, Cole suggests planning stretch breaks every hour. During this break, stand up, walk around, stretch in the opposite direction of what your body has been doing, arch your back, then curl over and touch your toes. These exercises, called a Recovery Technique, send new oxygen into the muscles and prevent tightness and stiffness from building up.

What can transit agencies do?

Transit agencies can take some steps to make sure their workplaces are friendly to employee needs and minimize risk of MSDs. This practice, called ergonomics, is a science that fits workplace environments to individual workers. It involves redesigning equipment, work spaces, and job tasks to fit the physical capabilities of workers of all shapes and sizes to prevent injuries.

Your agency should look at bus design to see if the driver seats are comfortable, upright, and most importantly, adjustable. That way, the driver can ensure that there is a good distance from the seat to the foot pedals. The hips and knees of the driver in the seat should be at a 90 degree angle. Make sure the tilt on the steering wheel is adjustable, and the controls of the bus are within arms' reach of the driver.

Mechanics can limit the incidence of MSDs by examining tool size and shape. Look for tools that require the least amount of grip. Thick handle surfaces on vibrating tools will decrease vibration without requiring a stronger grip. Select vibrating tools that do not blow cold air over the hands. Cold air reduces blood flow in the hands and decreases

Tere are a few common musculoskeletal disorders and their symptoms:

Carpal Tunnel Syndrome is caused by constant bending of the wrist or pressing it against a hard object, like holding a tool or steering wheel too tightly. Compression of a nerve in the wrist causes inflammation in the hands, wrists, and fingers.

Tendonitis is the inflammation of a tendon or the sheath-like surrounding of a tendon. It affects a variety of tendons to produce specific conditions, including:

Tenosynovitis, which affects the wrist;

Trigger finger, which affects the palm side of the fingers;

DeQuervain's Disease, affecting tendons in the wrist which control the thumb;

Epicondylitis, including tennis elbow and golfer's elbow; and Rotator cuff tendonitis, affecting the shoulder and upper arm.

Low back pain is caused by frequent or incorrect lifting, pushing, pulling, bending, or reaching.

muscle strength, putting a worker at higher risk of injury.

In the office, use adjustable key-board trays to allow height to be fit-ted to individual workers. Keep your wrists straight while typing. Try using a padded wrist rest and be sure to keep the keyboard flat instead of tilted. The padded rest also keeps wrists off sharp desk edges. Position your computer monitor directly in front you so you can avoid twisting your neck. Dispatchers should use head-sets or speaker phones to decrease neck and shoulder discomfort.

According to Cole, it is also important to teach workers about MSD prevention and encourage them to stretch and improve posture.

Federal and state guidelines

Neither the Occupational Safety and Health Administration (OSHA) nor the Kansas Department of Labor (KDOL) has an ergonomic standard. This makes it difficult to cite hazards unless injuries are actually reported, according to Rudy Leutzinger, Administrator of Industrial Safety and Health at KDOL. If there is no injury reported, inspectors can make recommendations for hazard abatements.

OSHA does have a set of ergonomic guidelines, which Leutzinger said KDOL primarily relies upon when identifying hazards.

In state, city, and county agencies, hazards can be discovered either by employee complaints or during inspections. Employees can phone in complaints to KDOL or to the Kansas Department of Administration's Division of Personnel Services. Leutzinger said KDOL tries to perform inspections in the public sector every three to five years, but recent budget cuts have made it difficult to achieve the desired frequency of inspections. Another way KDOL discovers hazards is to monitor reports of workers' compensation, injuries and illnesses. A high number of injuries would prompt KDOL to notify an agency and offer assistance in hazard abatement.

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Repetitive strain injuries

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City or county agencies can be penalized under KSA 44-636 for \$25 to \$100 per hazard per day, but Leutzinger said KDOL has never assessed penalties. He said they are more concerned with getting the hazard corrected within the required 60 days. "As long as they do that, we don't see any reason to penalize or fine," he said.

In the private sector, OSHA's hazard penalties run up to \$7,000 for serious violations and up to \$70,000 for willful, repeated violations, but inspectors may reduce fines depending on the good faith of a business owner or the size of the business.

OSHA issues citations under its General Duty Clause, which states that an employer has an obligation to "furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees."

Private companies with less than 250 employees may request a consultation with KDOL's 21(d) Consultation Project. The service is free and confidential.

The 21(d) Consultation Project also oversees OSHA's Safety and Health Achievement Recognition Program (SHARP), which helps employers work with their employees to develop workplace safety programs. First, an agency must request a consultation. KDOL performs the consultation, during which KDOL assesses an agency's hazards, trains employees, and usually helps write a safety and health plan. Finally, before entering the SHARP program, injury and illness rates for the business must be below the national average for the business's particular industry.

Resources on repetitive strain injuries

The sources below also contain much more detailed information than we have space for here. All are available on-line:

Center for Disease Control: Ergonomics

http://www.cdc.gov/od/ohs/Ergonomics/ergohome

Kansas Department of Labor: Workers Compensation Industrial Safety and Health Section

http://www.dol.ks.gov/wc/html/wcSHARP_DEE.html

Kansas Legislature: Kansas Statute No. 44-636

http://www.kslegislature.org/cgi-bin/statutes/index.cgi

National Occupational Research Agenda. Musculoskeletal Disorders of the Upper Extremities

http://www.cdc.gov/niosh/nrmusc.html

National Transit Institute Musculoskeletal Disorders Hazard Fact Sheet http://www.ntionline.com/documents/NTI_36300_f_Sheet_disorder.pdf

U.S. Department of Labor: Occupational Safety and Health Administration: Consultation: Free On-Site Safety and Health Services http://www.osha.gov/dcsp/smallbusiness/consult.html

U.S. Department of Labor: Occupational Safety and Health Administration: Ergonomics: Enforcement http://www.osha.gov/SLTC/ergonomics/enforcement.html

U.S. Department of Labor: Occupational Safety and Health Administration: Ergonomics: FAQs

http://www.osha.gov/SLTC/ergonomics/faqs.html

U.S. Department of Labor: Occupational Safety and Health Administration: OSHA Facts Sheet: OSHA Inspections http://www.osha.gov/OshDoc/data_General_Facts/factsheet-inspections.pdf

U.S. Department of Labor: Lost-Worktime Injuries and Illnesses: Characteristics and Resulting Time Away From Work, 2002 http://stats.bls.gov/news.release/osh2.nr0.htm

Washington State Department of Labor and Industries: About Ergonomics

http://www.lni.wa.gov/Safety/Topics/Ergonomics/default.asp

No citations are issued during the consultation. After completing the consultation, SHARP program participants receive a two-year exemption from OSHA's General Schedule Inspections. For more information on the SHARP program, contact Rudy Leutzinger at (785)296-4386 or Rudy.Leutzinger@dol.ks.gov.



Things to think about when purchasing a transit technology system

by Justin Dorsey

new technology system can significantly improve the quality of service your agency provides. However, purchasing the wrong system—or purchasing the right system or components at the wrong price—can be very costly. By discussing tips to follow and pitfalls to avoid this article will help your agency purchase the correct system.

Identify the problems the technology can address

The first step to purchasing a technology system is to identify the problem you intend the technology to address. Define the problem specifically. This accomplishes two

A technology system typically includes:

- software
- hardware (computers, cables, monitors, etc.)
- training
- technical support and maintenance

An example is an automated vehicle location (AVL) system.

things: First, it makes it easier to write detailed system specifications and requirements. Second, it makes it easy to measure how successfully the system fixed the problem. For example, slow and inaccurate trip processing is a specific problem tech-



nology can address. Success would be measured by comparing the speed and accuracy of trip processing before and after system installation.

How to find a technology vendor

Finding a vendor to address your specific needs takes some legwork. Here are a few ideas for getting started:

- Contact transit agencies for a list of vendor(s) from which they have purchased systems
- Contact state transportation departments for vendor lists and/or recommendations
- Search transit publications for vendor advertisements
- Place a request for proposal (RFP) in transit publications and
- Attend intelligent transportation systems (ITS) conferences.

Once your agency has identified possible vendors, the next step is to choose the product to purchase. One way to accomplish this is to request product demonstrations. This will allow your agency to meet vendors, see their products, and ask questions based on demonstrations.

Ensure that staff who will use

the system are at the demonstrations. During the demonstrations take note of system characteristics such as ease of screen navigation, ease of inputting data, and ease of retrieving data. Also, ask vendors for a list of agencies that have bought similar systems. Contact these agencies and ask questions such as:

- Does your system do what the vendor advertised it would?
- Was training effective?
- Was the vendor responsive to inquiries after system installation?
- Would you purchase another system from the vendor?

Bottom line: educate yourself on vendors, products, and costs.

Pitfalls to avoid

Avoid having too few and/or the wrong people in your agency decide the system requirements. Include all future users in system requirement discussions. For example, don't assume one dispatcher will have the same ideas/needs as another dispatcher. Speak with them both.

Don't forget about customization charges. Technology systems are purchased as either generic or customized. Most likely the system your agency will purchase will have to be customized. Make sure quotes include customization charges.

Similarly, don't forget training and on-going technical support costs. According to the Transit Cooperative Research Program, quality training and technical support can often add up to 50 percent of total project costs. Also, ask if your agency will have to upgrade its computers and/or internet connec-

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Rural Transit Conferences and Workshops

May 26, 2006 Dealing Effectively With Unacceptable Employee Behavior Manhattan, KS Contact: SkillPath Seminars Phone: 1-800-873-7545 Web site: www.skillpath.com

June 4-9, 2006 Community Transportation Association Expo and Medical Transportation Conference Orlando, Fla.

Web site: www.ctaa.org

June 21, 2006 Coaching and Teambuilding Skills for Managers and Supervisors Kansas City, MO Contact: SkillPath Seminars

Phone: 1-800-873-7545 Web site: www.skillpath.com

August 7-8, 2006 2006 Annual Conference of the Kansas Public Transit Association Wichita, KS Contact: Ron Butts, KPTA

Phone: (785) 273-2498 Web site:

http://www.kstransit.com

Oct. 8-11, 2006 APTA Annual meeting San Jose, Calif. Web site: www.apta.com

Oct. 22-25, 2006 17th National Conference on Rural Public and Intercity Bus Transportation Stevenson, WA Contact: Robin Phillips, Transportation Research Board Phone: (360) 705-7929 Web site: http://www. trbruralconference.org

Editor's Note: To include meetings or workshops in our calendar, send information to: Kansas Trans Reporter, KUTC, 1530 W. 15th St., Room 2160, Lawrence, KS 66045. Email: weaver@ku.edu

Technology system,

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tivity, and get an estimate for that. Likewise, don't underestimate the difficulty and length of time it

—Total cost (including installation and training)

Product and vendor evaluation criteria

- —Compatibility with existing software
- —Vendor qualifications and experience
- —Installation support and schedule
- —Quantity and quality of training, technical support, and upgrades
- —Quality of vendor proposal and/or presentation

bilities. Management should make arrangements to temporarily relieve those learning the system. It is critical that staff become adequately trained, in a real world environment, using your own data. Finally, your

> agency should have a worse case scenario plan. For example, what will happen if the system crashes?

Thoughtful technology purchases can significantly improve your agency's ability to serve its clients. We hope this article's tips and pitfalls will help you get started

in identifying the right technology at the right price.

A list of transit technology vendors can be found on page 88 of: http://trb.org/publications/tcrp/tcrp_ rpt_76.pdf.

How to reduce post-installation problems

will take for employees to become

proficient using the system. This is

especially true for employees with

little computer experience.

Proper planning will help your agency avoid post-installation problems. Proper planning includes explaining to staff how the system will affect their individual responsi-

Sources:

Transit Cooperative Research Program Report 76, Guidebook for Selecting Appropriate Technology Systems for Small Urban and Rural Public Transportation Operators, 2002.

North Carolina State University, Department of Civil Engineering, Small Urban and Rural Advanced Public Transportation Systems, 1999. Sections 1 & 5. http://www2.ncsu.edu/eos/service/ ce/research/stone res/tahmed res/ www/contents.html

Harassment awareness,

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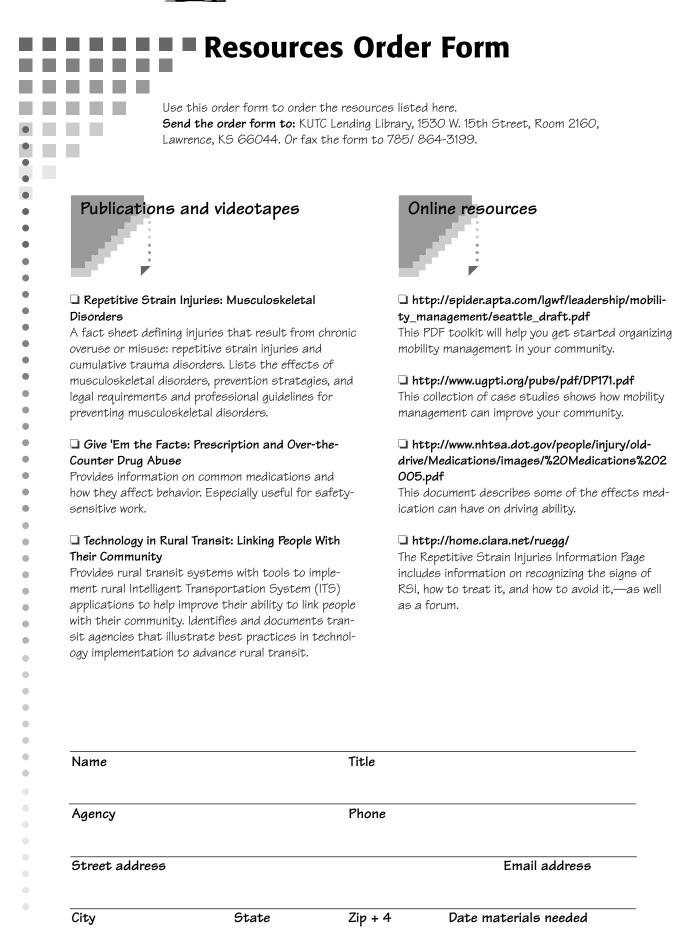
"Building Diversity Skills in the Transit Workplace" 2006 course description and outline, National Transit Institute.

"Free Harassment Prevention Training" flier, National Transit Institute.

"Harassment Prevention for Transit Employees and Supervisors" 2006 course description and outline, National Transit Institute.

"NTI Now Offers Harassment and Diversity Training," NTI Transitions Newsletter, Spring/ Summer 2005. ▲

Resources L



Kansas Trans Reporter

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