A BEST PRACTICES REVIEW

9-1-1 SERVICES

JULY 1997

1997-98 Joint Legislative Audit Committee Members

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July 1, 1997

Senator Robert W. Wirch and Representative Mary A. Lazich, Co-chairpersons Joint Legislative Audit Committee State Capitol Madison, Wisconsin 53702

Dear Senator Wirch and Representative Lazich:

We have completed a best practices review of local government operations as required by s. 13.94(8), Wis. Stats. The provision of 9-1-1 emergency telephone service was selected as the topic of our review with the assistance of the Local Government Advisory Council, which consists of representatives of counties, cities, villages, and towns.

State statutes allow local governments broad discretion in determining whether and how 9-1-1 telephone service will be provided. We estimate that 94 percent of Wisconsin residents have access to 9-1-1 telephone service, but service is not available to about 294,000 residents of 15 lesser-populated counties and portions of another county. Telephone companies collected approximately \$5.4 million in 1996 for providing 9-1-1 service and, based on responses of local officials to our survey, approximately \$70 million is spent annually by local governments to operate 9-1-1 answering points.

The organization, equipment, staffing, and services of 9-1-1 answering points vary widely. Based on the 9-1-1 experiences of several counties and municipalities, as well as professional literature, this report identifies best practices to follow when delivering 9-1-1 service. We also identify specific practices for local governments to consider in identifying equipment and staffing needs, establishing service area boundaries, processing incoming calls, and dispatching emergency service providers. In addition, we note that future 9-1-1 service delivery may be affected by advances in telecommunications technology, changes in public expectations, and proposed changes to how 9-1-1 service is funded.

We thank the Local Government Advisory Council for its assistance in the completion of this review, and we appreciate the courtesy and cooperation extended to us by local government staff.

Respectfully submitted,

Cattanach

Dale Cattanach State Auditor

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SUMMARY

Provisions contained in s. 13.94(8), Wis. Stats., direct the State Auditor to conduct periodic reviews of local government operations, commonly referred to as "best practices" reviews, to identify successful approaches to delivering public services. With the assistance of a five-member advisory council, the provision of 9-1-1 emergency telephone service was selected as the subject of this review.

As provided by s. 146.70, Wis. Stats., local governments have broad authority to provide 9-1-1 emergency telephone service, either independently or in combination with other counties or municipalities. This service allows citizens to contact any emergency service provider, such as police, fire, and emergency medical providers, by dialing the digits 9-1-1 from any telephone. 9-1-1 calls are routed to and processed at a central location, commonly referred to as a public safety answering point. Answering point staff, called telecommunicators, collect information from callers and then initiate a response either by directly dispatching the appropriate emergency service providers or by transferring the caller or relaying the request for services to another agency, which assigns service providers as needed.

To encourage the implementation of 9-1-1 service, the Legislature authorized counties to levy a charge on telephone users. This charge, which is separately identified on individuals' monthly telephone bills, funds the service costs incurred by telephone companies to route 9-1-1 calls to local answering points automatically. In 1996, telephone companies collected an estimated \$5.4 million for providing 9-1-1 service. All other costs, which we estimated to be about \$70 million statewide in 1996, such as costs for the capital equipment and staff needed to receive and process calls, are funded by local government general funds.

As of May 1997, an estimated 94 percent of the State's population was receiving 9-1-1 service from one of 121 answering points being operated in the 57 counties that provide 9-1-1 service. Because local governments have used a variety of strategies to deliver 9-1-1 service, the level of service provided and the methods used to process and respond to 9-1-1 calls vary depending on local priorities and the equipment being used. 9-1-1 service is not available to about 294,000 persons residing in 15 counties and portions of another where certain telephone exchanges cross county borders.

Of the 121 existing answering points, 105 operate an enhanced 9-1-1 system, which automatically identifies and displays the caller's telephone number, location, and the appropriate emergency service providers on a computer screen and allows calls to be routed selectively to specific answering points. The remaining 16 answering points operate a basic 9-1-1 system, which connects callers to an answering point but does not provide information on caller identification or location or allow calls to be routed selectively.

Some communities have found that consolidating operations with other communities reduces costs by eliminating duplicative equipment and increasing the efficiency of staff. Greater centralization of services may also enhance quality by ensuring adequate call volume, to allow telecommunicators to become more proficient at processing calls and dispatching emergency service providers.

Although consolidation of answering points may have a limited effect on telephone company costs for providing 9-1-1 service, consolidation may provide greater savings in operating costs, especially in staff, equipment, and administrative costs. A detailed comparison of operating costs and service quality is the best way to determine whether cost-effectiveness could be maximized by consolidating answering points. Such a comparison should consider the relative number of staff and work stations needed to answer all calls effectively without delay; the efficient use of supporting equipment, such as computer-aided dispatch (CAD) systems, paging systems, facsimile and copy machines, and recording and radio equipment; and facility needs.

To ensure the highest level and quality of 9-1-1 service, most answering points have either installed enhanced 9-1-1 when service was initially implemented or replaced basic 9-1-1 with enhanced 9-1-1. The additional information provided by enhanced 9-1-1 systems allows telecommunicators to establish communication with callers and helps them both to confirm important details when callers are distraught and to initiate precautionary measures when a telephone connection is lost. In contrast, telecommunicators at answering points with basic 9-1-1 systems are completely dependent on callers to provide accurate information regarding the location of emergencies.

To the extent resources are available to purchase supporting technology, quality of service can be further improved by the use of CAD systems to assist with call processing and dispatching. Such systems can include capabilities for:

• developing specialized electronic forms for use by telecommunicators in collecting information from callers;

- sharing information among telecommunicators or with service providers electronically;
- integrating locally approved criteria to help telecommunicators determine which and how many services should be provided;
- distributing calls to service providers and monitoring the location of all emergency units so that their status is readily available when additional services are requested; and
- efficient recall of caller history, such as whether frequent calls have been received from a location or a neighborhood, the nature of those calls, and any special needs, such as those of elderly persons or persons with disabilities.

While all answering points process incoming calls, those that also dispatch all emergency service providers directly, rather than transferring calls to another agency, provide the most effective service because they are able to reduce the risk of losing callers, minimize the time needed to respond to emergencies, and maximize coordination of multiple providers.

Staffing costs constitute the largest component of operating costs for most answering points, and the level of staffing influences the quality of service provided. The most effective ways to ensure appropriate staffing include establishing staff responsibilities that are focused solely on the delivery of 9-1-1 or related services, supplementing 9-1-1 related duties only with tasks that will not interfere with the effective delivery of 9-1-1 service, and determining the number of staff needed by assessing call volume and the time needed to complete related functions. Analyses of telecommunicator workload may include the volume of call and radio communications, the time required to perform other responsibilities, the range of experience required of the staff assigned to each shift, and the level and quality of service to be provided.

Because telecommunicators provide the critical link between callers and emergency service providers, providing telecommunicators with a complete understanding of their responsibilities and a detailed description of how essential duties are to be performed will help ensure the consistent delivery of high-quality 9-1-1 service. The most effective answering points, therefore, provide telecommunicators with written policies and procedures that describe the management structure for the answering point; the general conditions of employment; and the specific techniques to be used to process calls, prioritize requests for emergency services, and dispatch emergency service providers.

Although it is not practical to develop procedures for every possible call scenario, the most effective written procedures identify strategies by which telecommunicators can identify both critical information for initiating a timely and appropriate response and the information needed to prepare emergency service providers for the incident. Answering point administrators can best guide staff by developing written definitions of the relative importance of various types of requests, such as incidents that are in progress versus those that occurred in the past, and incidents that involve weapons versus threats to property but not persons, as well as written criteria for distinguishing among them.

Similarly, to ensure the timely and accurate communication of emergency service requests to the appropriate service providers, the most effective written procedures fully describe the steps to be taken to dispatch emergency service providers, monitor the progress of providers assigned to an incident, and conduct any follow-up necessary. The best procedures also typically identify the number and types of service units to be assigned to an incident and describe the methods for communicating with responding units via radio or computer. In addition, dispatching and emergency service provision are improved when administrative tasks, such as tracking shift changes for the emergency service providers, are performed accurately and any necessary background checks, such as researching law enforcement databases to identify information on arrest warrants and criminal histories, are conducted properly.

Answering points are also best able to meet public expectations for delivery of 9-1-1 service when they not only design their hiring strategies to identify and recruit staff with the skills needed to perform essential tasks in a stressful environment, but also provide comprehensive training to develop and expand staff skills. In addition, formal evaluation should be designed to assess staff performance and identify areas for which additional training may be needed. The most effective training programs concentrate instruction on the core functional duties of processing calls and dispatching emergency service providers. They include orientation to the answering point facility and its operational expectations, as well as providing instruction in the use of essential equipment and the procedures to be followed when answering calls, collecting information from callers, prioritizing requests for services, dispatching the appropriate emergency service providers, and performing any other tasks related to 9-1-1 operations. In addition, the most effective training programs are formally structured to provide new telecommunicators with opportunities to learn and practice required skills at increasing levels of complexity and stress, while also providing trainees with routine assessments of progress and ideas for how to improve performance.

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Advances in telecommunications technology and changes in the expectations of both the public and 9-1-1 professionals will affect how 9-1-1 service is delivered in the future, as well as the cost of providing service. Currently, information on a caller's location and telephone number is not automatically available to answering points when a 9-1-1 call is made from a cellular telephone. Although recent changes in federal regulations will require telephone companies to make such information available in the future, local governments will need to decide whether to incur the potentially significant costs of accessing the information, including compensating telephone companies for making the information available and purchasing the equipment needed to receive geographical coordinates for a location, rather than a standard address.

Finally, at least two issues of statewide importance may be brought to the Legislature for decision. First, the role of answering points is becoming increasingly specialized, and there is an increased expectation that telecommunicators will provide medical or other advice to callers awaiting the arrival of emergency service providers. Consequently, the Legislature may be called upon to decide whether to establish statewide training standards and require telecommunicators to be certified. Second, the Legislature may be asked to consider proposals directed at ensuring statewide access to enhanced 9-1-1 service and allowing the costs that can be levied on individuals' monthly telephone bills to be expanded to include 9-1-1 operating costs.



INTRODUCTION

As directed by s. 13.94(8), Wis. Stats., the State Auditor conducts periodic reviews of local government operations to identify practices that may save money or provide for more effective government service delivery. A five-member advisory council consisting of representatives from counties, cities, villages, and towns assists with the selection of topics for these "best practices" reviews. In contrast to typical audits, which identify problems or weaknesses in government operations, best practices reviews seek to build upon successful local efforts by identifying cost-effective approaches to providing government services. Local 9-1-1 emergency telephone service is the subject of this review. The council's members are listed in Appendix I.

The implementation of local 9-1-1 telephone service allows citizens to request any emergency service by dialing the digits 9-1-1 from any telephone. Those calls are then received at a central location, often referred to as a public safety answering point, and answered by staff responsible for collecting information from the caller, such as the type and location of an emergency. These staff, who are known as telecommunicators, then inform the appropriate emergency service providers of the need for services. The actual emergency response team may consist of law enforcement officers; fire fighters; emergency medical staff; or others, such as hazardous materials specialists or staff from public utilities.

Local governments are authorized by s. 146.70, Wis. Stats., to establish 9-1-1 telephone service, either independently or in combination with other counties or municipalities. As a result, each answering point serves a unique geographic area and population. For example, the answering point operated by Dane County serves a residential population of about 360,000 and employs about 65 staff responsible for processing about 420,000 calls annually, while the answering point operated by the City of Ripon serves a residential population of about 7,500 and employs about 4 staff responsible for processing about 41,000 calls annually.

The creation of a single, easily remembered telephone number has been expected to improve citizen access to all emergency services by eliminating the need to know a seven-digit telephone number for each. In addition, the use of enhanced 9-1-1 equipment, which automatically identifies the address of the caller and the emergency service providers for that location, as well as the number for the telephone from which the call is being made, is expected to reduce emergency response time by assisting in the identification of the caller's location. The successful

9-1-1 is intended to improve access to emergency service.

delivery of 9-1-1 service depends on the equipment and staffing practices each answering point follows to receive, answer, and respond to 9-1-1 calls.

We reviewed the organization and operations of 9-1-1 answering points statewide to identify successful and effective practices for delivering 9-1-1 service. To complete this study, we surveyed answering point administrators, as well as officials in areas for which 9-1-1 service has not yet been implemented, and conducted on-site visits to 31 answering points throughout the state. We received completed surveys from 71.9 percent of answering points, as well as from 82.4 percent of the other officials surveyed. In addition, we reviewed relevant state and federal laws, interviewed officials of statewide service organizations and state agency officials, identified 9-1-1 practices in other states, and reviewed documents from professional organizations.

Funding

The provision of 9-1-1 service involves two types of costs: the service costs incurred by telephone companies to route 9-1-1 calls automatically to the appropriate answering point, and the capital equipment and operating costs incurred by answering points to receive and process those calls. Provisions specified in s. 146.70, Wis. Stats., authorize counties to levy, by ordinance, a service charge on telephone users to fund the cost of automatically routing 9-1-1 calls. Telephone company costs include nonrecurring expenses for the development of the database needed to provide information on the caller automatically and for the installation of networking components, such as trunk lines and answering point circuits, as well as recurring service charges. For most counties, state statutes limit the amount that can be levied to a maximum of \$1.00 per line per month while both non-recurring and recurring charges are being recovered, and a maximum of \$0.40 per line per month for recurring service charges. However, state statutes limit the monthly rate that can be charged in Milwaukee County to no more than \$0.25 per line. Charges are assessed on user's monthly telephone bills, and revenues are collected by and distributed among telephone companies based upon agreements between the companies and local governments.

Currently, monthly per line charges range from a low of \$0.07 in Wood County for recurring service charges for basic service, to a high of \$0.87 in Marquette County for both recurring and non-recurring costs for enhanced service. Four counties —Kenosha, Kewaunee, La Crosse, and Manitowoc —pay telephone companies directly for basic 9-1-1 service, using their local funds, rather than levy a per line charge on telephone users. We estimate that in 1996, telephone companies collected \$820,000 statewide for non-recurring costs, and \$4.6 million for recurring charges.

Telephone company charges for 9-1-1 service in 1996 were estimated at \$5.4 million statewide. Local governments spend an estimated \$70 million annually for 9-1-1 operating costs. All costs associated with the operation of 9-1-1 answering points, such as costs for personnel and the equipment needed to answer and process 9-1-1 calls, are funded by local governments. Based upon information provided by the answering points that responded to our survey, we estimate that local governments spend approximately \$70 million annually to operate 9-1-1 answering points. Most answering points indicated that personnel costs accounted for at least 80 percent of budgets, and equipment costs were most of the remainder. Our survey form is Appendix II.

Coverage

Because all telephone users in a county are required to have access to 9-1-1 service before a county is authorized to levy a service charge, service has generally been implemented on a county-wide basis. As illustrated by Figure 1, as of May 1997, 9-1-1 service was available county-wide in 56 counties, including 29 in which calls are received and processed by a single answering point, and 27 in which calls are received and processed by multiple answering points. In Chippewa County, which is one of the 16 counties without county-wide service, 9-1-1 service is available in the telephone exchanges serving the City of Chippewa Falls, but not in the remainder of the county. No 9-1-1 service is available in the remaining 15 counties. However, because those areas without 9-1-1 service tend to be sparsely populated, we estimate that 94 percent of the state's population lives in areas that have access to 9-1-1 service. Appendix III provides the status of 9-1-1 service in each county.

A total of 121 answering points receive and process 9-1-1 calls, including 52 operated by counties, 63 by municipalities, and 6 by intergovernmental agencies. Most 9-1-1 answering points are operated by law enforcement agencies, such as a sheriff's department or a municipal police department; however, 12 are operated by separate agencies established specifically for providing 9-1-1 service. Some answering points directly dispatch all responding personnel, while others transfer callers to another agency that dispatches personnel. Appendix IV lists all 9-1-1 answering points and the departments under which they operate.

94 percent of the state's population has 9-1-1 service.

Figure 1

Countywide 9-1-1 Systems



Based on the experiences of local governments, we have identified successful and effective practices in the following areas:

- the organization of 9-1-1 answering points, including the use of equipment and staff and the creation of answering-point boundaries;
- policies and procedures followed to process 9-1-1 calls and communicate service requests to emergency service providers; and
- strategies for managing staff resources in the areas of hiring, training, and performance evaluation.

In addition, we have identified several areas for which advances in telecommunications and changes in public expectations may affect how 9-1-1 service is delivered in the future, including efforts to accommodate the increasing use of cellular telephones and to ensure statewide access to 9-1-1.

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ANSWERING POINT ORGANIZATION

State statutes require 9-1-1 answering points to meet several fundamental expectations, such as answering all types of emergency calls and operating 24 hours per day. However, there is no State oversight of 9-1-1 service delivery, and local governments have considerable flexibility in organizing 9-1-1 service. To provide cost-effective service at a level that meets public expectations, the best organized answering points balance cost and quality objectives in four key areas:

- using equipment that ensures a timely response to emergencies by assisting telecommunicators to collect essential information quickly and accurately;
- communicating requests for emergency services to law enforcement, fire fighting, and emergency medical service providers in a way that minimizes response time;
- establishing answering-point responsibilities and staffing patterns that maximize the quality and efficiency with which 9-1-1 service is delivered; and
- establishing service area boundaries that minimize equipment and staff costs without compromising the level or quality of service expected by the public.

Equipment

Variations in the resources of local governments and the technology available at the time 9-1-1 service was established have led to variations in the level of 9-1-1 service being provided. However, the experience of local governments indicates that the use of enhanced 9-1-1 technology provides the best citizen accessibility by enabling calls to be routed to a specific answering point and allowing the caller's location to be more easily identified. Further, the most effective answering points use computer-aided dispatching (CAD) systems to assist with call processing and dispatching.

Enhanced 9-1-1

Enhanced 9-1-1 provides improved service.

Basic 9-1-1 service improves citizen accessibility to emergency service providers relative to the use of seven-digit telephone numbers. However, the additional benefits made possible with enhanced 9-1-1 technology improve an answering point's ability to meet public expectations in several areas.

First, enhanced 9-1-1 technology enables calls from telephones located in the same telephone exchange to be selectively routed to a specific answering point. As a result, 9-1-1 callers from telephone exchanges that overlap answering point boundaries are less likely to experience delays while telecommunicators determine the answering point that serves the caller's location, such as when all calls from a telephone exchange are routed into a single answering point even though the customers in the exchange are served by different emergency service providers. In addition, selective routing may allow access to 9-1-1 service for locations that are currently not served. For example, implementation of enhanced 9-1-1 will allow all residences located in Wood County to have access to 9-1-1 service. Currently, a small number of residences are unable to receive basic 9-1-1 service from Wood County because most of the telephone exchange in which they reside is located in a county not currently providing 9-1-1 service.

However, because the service area boundaries of emergency service providers do not always coincide with the borders of local governments, the occasional need to transfer callers to another answering point for dispatching can never be completely eliminated. For example, staff from the answering point serving the City of Wisconsin Dells, which is located on the border of Adams, Columbia, Juneau, and Sauk counties, are often required to transfer requests for emergency services to an answering point serving one of these neighboring counties.

Second, enhanced 9-1-1 technology allows telephone companies to provide telecommunicators with a caller's location and telephone number, as well as the identity of emergency service providers responsible for the caller's location, automatically. This feature assists telecommunicators in meeting the fundamental objectives of 9-1-1 by improving the speed and accuracy with which crucial information is obtained from callers, enabling the rapid identification and notification of the appropriate emergency service providers for the location, and enabling telecommunicators to re-establish contact if a caller hang ups without relying on telephone companies to trace the call. The immediate availability of such information also assists telecommunicators in establishing effective communications with callers who are excited or distraught. Third, because the billing address for a telephone may not correspond to its location, the implementation of enhanced 9-1-1 requires the development of an addressing system that improves service by establishing a unique and easily locatable address for each telephone served by the answering point. In rural areas, for example, postal service addresses do not provide a useful address for identifying the location of a caller relative to the emergency service provider, such as the distance or direction that providers must travel to reach a location.

Although the process of developing an addressing system and linking each address to the appropriate service providers can be complicated and time-consuming, it may also improve the delivery of emergency services by identifying possible gaps or overlaps in the jurisdictions of emergency services providers. For example, staff indicated that during the development of Richland County's addressing system, areas of duplication or gaps in service delivery were commonly identified. Because implementation of enhanced 9-1-1 required that the appropriate law enforcement, fire fighting, and emergency medical service providers were identified for every address and property in the county, continuous coverage can now be ensured.

Equipment to Answer and Process Calls

Local governments must also select the equipment needed to answer and process incoming calls, including the equipment used to communicate with callers, to analyze and store information obtained from callers, and to communicate with emergency service providers. The experience of several answering points indicates that using a CAD system maximizes the efficiency with which information can be obtained from callers and processed by telecommunicators. In addition, communities with the resources to provide mobile data terminals, which are portable computer terminals that can be transported in service provider vehicles and used to exchange information with the computers located at an answering point, have found them to be an effective alternative to radio communications.

The CAD system used by the Rusk County Sheriff's Department assists with the collection of information from callers by prompting telecommunicators to complete electronic questionnaires designed for different types of call, such as questions on whether weapons are involved, whether persons have been injured, the nature of any injuries, and whether the victim is conscious. Typical of such systems, the county's CAD system is programmed to recognize standard abbreviations and codes to speed the entry and analysis of critical information. Because a CAD system allows telecommunicators to enter information into an electronic format as it is being received, accuracy is increased and it is

Enhanced 9-1-1 can help identify duplication or gaps in service delivery. less likely that pertinent information will be lost during transmission to service providers.

Numerous vendors of CAD systems exist, and each system can typically be tailored to reflect the priorities and resource capacities of local communities. For example, some answering points with high call volumes or the responsibility for dispatching a large number of law enforcement personnel have programmed their CAD systems to prioritize service requests automatically based on information entered into the CAD system by telecommunicators, such as whether persons are injured or weapons are involved. In addition, such systems may be programmed to recommend how services should be provided, such as the number of fire engines to be assigned and the fire station from which engines should be dispatched. To ensure calls are processed appropriately, all CAD systems should allow staff to override recommendations to reflect circumstances that may not have been considered.

At the answering point operated by the Waukesha Police Department, once information regarding the nature and location of an incident has been entered into the CAD system by a telecommunicator, the priority dispatching CAD system automatically assigns a priority level to the emergency. Further, the CAD system:

- suggests the emergency service providers and number of units to be dispatched, such as the number of fire engines or police officers to be dispatched, based on criteria developed by the affected agencies and incorporated into the CAD program;
- is used to monitor the distribution of calls to service providers, such as the number and the relative priority of requests awaiting a response;
- helps telecommunicators to identify the most appropriate service providers to re-assign to higher-priority requests, if needed, by tracking the location and status of all police, fire, and medical units; and
- provides information on past incidents, such as the frequency and nature of past law enforcement calls to a residence or business; special needs, such as whether elderly or disabled persons reside at a location or hazardous materials may be present; and management information for use by administrators, oversight bodies, or the public.

CAD systems can be tailored to local needs.

CAD systems improve efficiency.

Mobile data terminals can also assist with the dispatching process. For example, telecommunicators at the Sheboygan Police Department transmit information obtained from callers and entered into the CAD system to the mobile data terminals located in service providers' vehicles. Such information may include the descriptions of incidents as entered into the CAD system, dispatching instructions, incident updates, and the results of record checks. As a result, services can be delivered more effectively because officers can refer to descriptions of requests for services while en route, without over-burdening dedicated radio frequencies, and can receive sensitive information without the information being intercepted by police scanners or other devices. In addition, because officers can send information to the CAD system, such as the time they arrive at and depart from a location, the service delivery process can be better monitored.

The cost of 9-1-1 related equipment varies depending on its features and capabilities, as well as the vendor from which it is purchased. For example, officials in Richland County, which is in the process of implementing 9-1-1, stated that initial costs for equipment will be about \$60,000 to \$75,000, not including the \$19,000 that county already spent to develop a new addressing system or costs for additional equipment capabilities, such as a geographical positioning satellite system. Sheboygan officials indicated that their costs for mobile data terminals included \$20,000 for computer programming beyond the costs of the CAD system, and \$8,000 per lap top computer for service providers to carry in their vehicles.

Direct Dispatching

Statutes allow answering points to process requests for emergency services either by directly dispatching service providers or by transferring callers or relaying requests to another agency for dispatching. However, the most effective answering points are responsible for directly dispatching all emergency service providers within their service boundaries, because this reduces the risk of losing callers and maximizes the ability to coordinate the activity of multiple providers. Further, while it may only take a few seconds to transfer a call to another agency for dispatching, direct dispatching can reduce overall response times.

For example, Iowa County Sheriff's Department staff are responsible for answering all 9-1-1 calls and directly dispatching all service providers, including county law enforcement officers and staff who do not report to the county sheriff. As a result, the only calls or requests for services that are transmitted to another location are those for which the emergency site is located outside of Iowa County. In contrast, because some local officials are willing to allow calls to be answered by a consolidated

Direct dispatching is quicker and reduces the risk of losing calls.

Equipment costs vary

with capabilities.

answering point but still want to maintain direct control over the dispatching of their staff, some answering points routinely receive calls that are then transferred to another agency for dispatching.

Service providers that have maintained control over dispatching argue service delivery is enhanced when they, rather than an answering point, dispatch staff because residents prefer to speak directly with the service providers and because the service providers' knowledge of the community enables them to respond more appropriately. However, this approach can increase the time needed to respond to a request for services and frustrate callers if they have to re-state critical information. In addition, there is increased potential that a call will be lost, either because of technical failures or because the caller hangs up. The experience of answering points that directly dispatch service providers suggests that direct dispatching is more effective because the need for distraught callers to re-state information is eliminated, critical information is less likely to be lost while transferring either the call or the service request to another agency, and the ability to coordinate follow-up is improved because answering point staff will already be familiar with the previous incident.

Staffing

Local officials are responsible for staffing 9-1-1 answering points. To ensure the cost-effective use of staff resources, the most effective answering points balance both cost and quality expectations by:

- establishing answering point responsibilities that are focused solely on the delivery of 9-1-1 or related services, and supplementing those duties only with tasks that will not interfere with the effective delivery of 9-1-1 service;
- determining the number of staff required to provide the level and quality of services expected by the public and by emergency service providers served by the answering point; and
- assigning staff responsibilities consistent with call volume and the types of calls received.

Staff Duties and Responsibilities

Other duties should not interfere with 9-1-1 duties of telecommunicators. While the tasks being performed at 9-1-1 answering points vary widely across the state, local experience suggests that confining answering point duties to only 9-1-1 related functions provides greater opportunity for staff to develop expertise than when staff perform other functions in addition to their 9-1-1 duties. However, when it is not practical to dedicate staff solely to 9-1-1 duties, such as in less-populated areas where call volume is relatively low, the assignment of additional job duties should not interfere with the provision of 9-1-1 service.

For example, while the Rock County 9-1-1 Communications Center employs about 40 staff to process about 270,000 calls annually, or an average of about 31 calls per hour, the Price County answering point employes only 5 staff and receives about 45,000 calls annually, or an average of about 5 calls per hour. As a result, it may not be practical for the duties of staff at some answering points to consist exclusively of 9-1-1 duties, and telecommunicators at some 9-1-1 answering points are also responsible for answering administrative telephone lines, monitoring alarm systems, completing clerical duties, or performing jailer duties.

However, some answering points have found that the effective performance of 9-1-1 tasks is no longer compatible with the performance of other duties because 9-1-1 tasks increasingly require unique levels of expertise. Further, because other assignments, such as jailer duties, can also require specialization or present immediate needs, there is potential for conflict regarding the relative priority of those duties. As a result, the most effective answering points supplement the 9-1-1 duties of telecommunicators only with duties that are consistent with the skills common to telecommunicators or with duties for which timeliness is not essential.

Determining Staffing Levels

If minimum and peak staffing levels are to be identified, measures must be established for assessing the adequacy of staffing levels and for determining telecommunicator workload. Indicators of staffing level adequacy may include the number of calls being processed by a telecommunicator during a given time period or the amount of time needed to answer incoming calls. Analyses of telecommunicator workload may include the number of calls and radio transmissions processed, the time required to perform other responsibilities, and the range of experience of the staff assigned to each shift.

Rock County developed an effective methodology for determining the minimum number of staff to be assigned to a 9-1-1 answering point. The

Staffing should be based on analysis of actual workload. county measured telecommunicator workload using estimates of the number of emergency incidents, such as accidents or fires, and the duration of calls and radio messages for each type of incident. The number of incidents was multiplied by the typical duration of calls and radio messages to reach an estimate of the total amount of time for which telecommunicators would be needed to process calls. The county then determined the minimum number of staff required by dividing the total estimated workload, measured in minutes, by 40 minutes, the maximum amount of each hour that the county believed telecommunicators could effectively be engaged in active communication with callers or service providers.

Because the volume of calls received may be greater during certain times of the day or parts of the year, the most effective strategies for determining staffing levels also consider how staffing levels must vary to ensure that all calls are answered immediately and responded to in a manner consistent with public expectations. Such assessments can be performed both initially and periodically to identify whether adjustments in existing staffing levels are necessary. For example, the Sheboygan Police Department examined telecommunicator workload over a one-month period by collecting data for each hour of the day on the required duties of processing incoming calls and performing office reception duties. This process required data to be collected on the number of contacts made with the public by telecommunicators. The department concluded that the busiest time of day was 11:00 a.m. to 7:00 p.m., when it became increasingly necessary to place non-emergency calls on hold for longer than one minute, the department's overall standard for maximum time on hold for any type of non-emergency call. After the public began to file complaints that calls were not being processed on a timely basis and administrators expressed concern that clerical duties were not being completed during the identified time period, the department concluded that an additional staff position was needed and supported by its workload analysis.

Staff Deployment

The type and volume of calls received, as well as the number of service providers for which an answering point processes calls, influences how to deploy staff to effectively meet service objectives such as timeliness and accuracy. Answering points with high call volume typically find it most effective to separate functions among dedicated pools of telecommunicators so that some are assigned to answer calls and others to dispatch service providers.

For example, in Dane County, which receives about 420,000 calls annually, duties are separated among staff by assigning staff to one of

Some agencies separate staff duties between call-taking and dispatching. three functions: answering incoming calls, dispatching service providers, or assisting law enforcement officers with data searches. Dispatching responsibilities are further separated by dedicating two staff person to dispatch for the Madison Police Department and one staff person each to dispatch for the Dane County Sheriff's Department, fire and medical services within the City of Madison, and fire and medical services in other areas of the county. Similarly, Waukesha Police Department telecommunicators are assigned to the specialized duties of either answering calls, police dispatching, or fire dispatching.

Further, the best staffing practices also include having sufficient staff available so that when some staff are involved with a call, other staff are available to process incoming emergency calls. For example, if a major incident occurs in one of the outlying townships, Dane County staff assigned to dispatch fire and emergency medical services for the City of Madison are capable of assisting with dispatching calls to the rural areas of the county. Similarly, some low-volume answering points, such as Sun Prairie, which receives about 40,000 calls annually, crosstrain officers, clerical staff, or administrators to operate 9-1-1 equipment so that additional staff are available if the volume of calls unexpectedly increases or if staff have personal emergencies that prevent them from working.

Answering-Point Boundaries

Local officials also have the authority to determine the area served by each answering point. While the most expansive answering points provide service countywide, some local governments have established municipal answering points because they believe the quality and level of service is better if calls are answered and service providers are dispatched locally. To provide service at the lowest cost to the public, the most cost-effective answering points serve boundaries that incorporate areas with similar service needs and that allow costs to be distributed over a larger population. Countywide answering points are often able to address concerns regarding the quality of service provided to individual municipalities by adjusting staffing levels, assigned duties, or training, or through improvements in equipment.

Local governments in about one-half of the counties with 9-1-1 service, particularly rural counties, agreed to have 9-1-1 calls routed to a single answering point when service was first established. In response to restricted financial resources, other local governments, such as the cities of Wausau and Green Bay, are considering consolidating answering points at the county level to eliminate duplicative operating costs. Discussions to implement a consolidated answering point in La Crosse County began when it became apparent that both the city and the county

Many agencies have found efficiencies in countywide systems. of La Crosse needed to upgrade their radio communication systems. The county and city eventually agreed to establish one consolidated 9-1-1 answering point responsible for dispatching all emergency services directly.

In addition, several areas with answering points at both the county and municipal level have attempted to consolidate at least some portion of operations either to reduce costs or to improve service quality. For example, the Fond du Lac County Sheriff's Department and City of Fond du Lac Police Department have decreased their operating costs by operating a joint answering point facility. Because telecommunicators from both entities work in the same room with the same equipment, staff are able to assist one another during periods of peak call volume. Similarly, the three answering points in Wood County all use the same CAD system, which improves service delivery by allowing all answering points access to the same database of client information and gives them the ability to monitor where services have been dispatched in the county.

Assessing Cost-Effectiveness

While consolidation of answering points may have little effect on telephone company costs, consolidation does have the potential for savings in the costs of operating answering points, such as reductions in costs for:

- personnel, including, potentially, the overall number of staff needed to process emergency calls, the need for part-time staff, shifting non-related duties to lower-cost staff, and filling telecommunicator positions with civilian staff rather than sworn officers;
- general telephone equipment to answer seven-digit emergency and non-emergency calls, and computer screens to view automatic number and location information;
- CAD systems and computer equipment, as well as the radios and paging equipment needed to communicate service requests to service providers; and
- space and maintenance costs, including costs for maintenance contracts for equipment and training.

Personnel costs, which constitute about 80 percent operating costs according to information provided in response to our survey, are influenced by staffing practices in several areas. For example, 31 of 81 answering points responding to our survey question regarding staff duties indicated they use staff only for 9-1-1 duties; 50 indicated that staff are also responsible for duties not directly related to the provision of 9-1-1 service, such as administrative tasks, including 8 counties for which staff perform both 9-1-1 and jailer duties. Due to relatively low call volumes, about one-third of the answering points responding to our survey assign minimal staff to 9-1-1 functions to ensure that at least one staff person is available 24 hours per day, and about one-half reported using both full-time and part-time staff. In addition, while 61 of the 82 answering points reported using only civilian staff, 8 indicated they use only sworn officers, and 13 indicated they use a combination of both sworn officers and civilians.

To determine whether personnel cost savings could be achieved with fewer answering points, Rock County extended its analysis of the number of telecommunicators required to process calls, measured in estimated minutes of activity, to include estimates of the number of telecommunicators necessary under different answering point configurations. As shown in Table 1, the study concluded that fewer staff would be needed to operate a countywide answering point.

Further, Rock County officials concluded that savings of \$130,000 in non-personnel operating expenses could be achieved annually by operating one answering point rather than two, because the need for some equipment would be eliminated. In particular, consolidation reduced the need for some general telephone equipment used to answer seven-digit emergency and non-emergency lines, computer screens to view automatic number and location information, CAD terminals, radio equipment and frequency capacity, and paging systems, as well as for facility costs and maintenance contracts.

Consolidation may reduce equipment costs.

Table 1

Number of Answering Points	Number of <u>Telecommunicators</u>	Personnel <u>Costs</u>	Increase over Base Costs
1	25	\$ 736,421	
2	28	859,389	16.7%
3	34	1,042,521	41.6
4	38	1,148,813	56.0

Estimated Personnel Costs for Rock County

Source: Rock County 9-1-1 Plan, May 1991.

Some local officials believe that consolidation may reduce the level of local control over service delivery and diminish the quality of services provided, including that consolidated answering points will not dispatch requests for some services, such as to address parking or noise complaints, as quickly as would be done by a smaller answering point. In addition, they argue that consolidated answering points require uniformity in the services being provided even though service providers in smaller communities may wish to provide services that larger communities have eliminated, such as assisting motorists with locked cars. Further, concerns have been raised that the telecommunicators staffing consolidated answering points cannot process calls from smaller communities as effectively as staff at a smaller answering point because they are not familiar with the public expectations of or landmarks in smaller communities.

However, the experience of several consolidated answering points suggests that service quality concerns can be effectively addressed through staffing and training practices, and the development of specific policies and procedures. For example, consolidated centers may dedicate telecommunicators to dispatch service requests from callers located in smaller communities, so that those requests are not commingled with calls from larger communities, and telecommunicator training programs can be designed to emphasize the unique expectations of smaller communities, including requiring staff to ride along with local service providers to become familiar with landmarks. To ensure that the expectations of the small communities being served by an answering point are involved in the development of its policies and procedures and the oversight of its operations, several answering points have also established governing boards that include representatives from smaller communities. For example, the 11-member governing board of the La Crosse County Dispatch Center consists of:

- the city of La Crosse police and fire chiefs;
- the county sheriff;
- the emergency government coordinator;
- the chairperson of the county's Law Enforcement Committee;
- the city of Onalaska police and fire chiefs;
- a member of the La Crosse City Council;
- a police and fire chief from the county at large; and
- representatives of emergency medical service providers in the county.

The La Crosse County 9-1-1 governing board is responsible for hiring the center administrator, setting policies and procedures, addressing service complaints, discussing and advocating new equipment purchases and staffing changes, and overseeing system operations. Staff from the center indicate the governing board is instrumental in making policy and procedural decisions because it is a forum through which differences in opinion can be discussed and consensus achieved.



POLICIES AND PROCEDURES

Effective policies and procedures can ensure the efficient and appropriate delivery of high-quality service by standardizing the way in which similar situations are processed by staff. Developing a manual that provides employes with a description of how essential duties are to be performed is the best way to ensure that adequate policies and procedures will be followed. Although most answering points develop a standard approach to delivering 9-1-1 service, the best policies and procedures for processing calls and dispatching service providers are reflected in manuals that:

- describe the organizational structure and the functions of the answering point, including the jurisdictions and agencies served, the lines of authority, employe responsibilities, job qualifications, and conditions of employment;
- provide a thorough description of standard operating procedures, including instructions for processing emergency calls, prioritizing calls, and dispatching emergency service providers; and
- clarify expectations for related administrative responsibilities, including procedures for processing requests for information and complaints regarding the provision of 9-1-1 service.

In addition, the most effective manuals are routinely updated and easily accessible to telecommunicators, and they focus specifically on the tasks of the answering point rather than being part of a larger law enforcement manual.

Structure and Employer Expectations

Policy and procedures manuals guide telecommunicators in their jobs. Developing a policies and procedures manual that thoroughly describes the management structure for the answering point, employe responsibilities, and the performance expectations of managers is the best way to ensure that telecommunicators have a complete understanding of their responsibilities and how their performance relates to the overall provision of emergency services. In addition, providing background information on and a description of the emergency service providers coordinated by the answering point assists telecommunicators by identifying any unique circumstances that may affect how service is to be delivered.

For example, the Outagamie County policies and procedures manual includes a description of the department responsible for management of its communications center; the lines of authority for the answering point; the primary purpose of the department's communications function; and an explanation of the law enforcement agencies, fire departments, and emergency medical units served by the center. The Lake Area Communications Center policies and procedures manual includes an explanation of staff qualifications, such as the ability to speak clearly and distinctly at all times, think and act promptly in emergencies, and analyze a situation accurately and suggest a specific course of action. Further, the manual includes job descriptions for staff telecommunicator positions that specify duties and responsibilities, such as receiving and processing emergency and medical calls; processing data inquiries regarding wanted persons, stolen vehicles, and property crimes; and operating the paging systems.

The best policies and procedures also clarify employers' expectations of employes. Manitowoc County's policies and procedures manual includes rules and standards for conduct, such as compliance with orders and directives; expected manner of behavior; and maintaining the confidentiality of information provided by callers. Further, the purpose and procedures for conducting employe evaluations is described, including the frequency of evaluations, duties to be evaluated, and opportunities for employe response. In addition, consistent with applicable collective-bargaining agreements, the policies and procedures specify the progressive discipline to be followed when employe performance does not meet expectations, such as verbal warnings, written warnings, and suspensions, and the conditions under which such steps may be taken.

To help telecommunicators understand the geographic areas for which they dispatch service, policies and procedures manuals should also provide important facts about each of the jurisdictions served by the answering point. Rock County, for example, has developed a listing of all townships, municipalities, and law enforcement agencies served by the center, as well as specific descriptions of each jurisdiction. The description for the City of Edgerton includes a listing of the city's law enforcement, fire, and emergency medical service providers; identifies major roads, highways, and bodies of water; provides the names and addresses of major landmarks, such as banks, restaurants, and churches; lists all telephone exchanges served; and provides an alphabetical list of all the city's streets.

Manuals should clarify employers' expectations of employes.

Standard Operating Procedures

Standard operating procedures improve consistency of service. Answering points are typically the initial contact for citizens attempting to access local emergency services and are the critical link between callers needing assistance and the timely provision of appropriate emergency services. Standard operating procedures facilitate the consistent delivery of service by providing telecommunicators with an understanding of overall objectives, as well as a description of how critical tasks are to be completed. To be most effective, the best standard operating procedures specify steps for:

- processing emergency calls, such as the type of information to be gathered from callers and the techniques to be used to gather such information;
- determining the priority of requests for service, including a definition of the relative importance of multiple requests and the criteria to be used to distinguish among them; and
- dispatching emergency service providers, such as the proper methods of communicating with responding units and the appropriate response to different types of incidents.

In addition, the best standard operating procedures identify any special instructions relating to incidences for which unique service delivery strategies are used, such as domestic abuse complaints and drug-related activity; extraordinary circumstances, such as natural disasters; or unusual equipment needs, such as how to operate communication devices for the hearing impaired.

Call Processing

The effective delivery of 9-1-1 service, including the safety of citizens and service providers, depends largely on the ability of telecommunicators to obtain information quickly and accurately. The best standard operating procedures identify the communication techniques to be used when processing calls, as well as strategies for guiding conversations with various types of callers, prioritizing the identification of information essential to initiating an immediate response, and obtaining information needed to prepare emergency service providers for the incident. In addition, the best policies and procedures provide instructions for responding to calls that are interrupted or are ended prematurely by the caller.

Standardization of call processing improves efficiency.

For information to be obtained professionally and effectively, telecommunicators must treat callers with courtesy and communicate in a clear and orderly manner so that essential information can be obtained quickly and accurately. In an effort to achieve these objectives, standard operating procedures should specify how staff are to identify themselves to callers, lead a telephone conversation in a courteous manner, provide clear information to callers without using jargon or slang, and terminate calls as quickly as possible. In addition, the best procedures also describe listening techniques to be used by telecommunicators, such being cognizant of background noises and characteristics of the caller, such as gender and age.

Although the type and priority of information to be obtained from a caller may vary depending on the service being requested, developing procedures that specify both the order in which information is to be obtained from callers and the specific information needs of service providers better enables service providers to respond to emergencies effectively. For example:

- The City of Milwaukee Police Department's standard operating procedures direct telecommunicators first to obtain the location of the emergency, because this allows a unit to be dispatched immediately, even when a caller is unable or unwilling to provide further information. After the location of the incident is identified, the procedures direct telecommunicators to obtain information in the following order: the nature of the incident and when it occurred; additional pertinent incident information, such as vehicle descriptions, potential injuries, and number of persons involved; and verification of the caller's name, address, and telephone number.
- The City of Green Bay's policies and procedures state that when taking fire emergency calls, telecommunicators should determine the address and type of location, such as a house, apartment, or commercial facility; the type of fire; whether anyone is inside the structure or in danger; whether injuries are involved; and the caller's name and telephone number.

Green Bay has established the order in which information should be obtained.
• Outagamie County has developed policies and procedures for emergency medical calls that require telecommunicators to determine the address or specific location of the emergency, the caller's telephone number, the nature of the emergency, whether the caller is the victim, the age of the victim, and whether the victim is conscious.

In addition, the best policies and procedures manuals identify steps to be taken to determine whether terminated calls are actual emergencies that warrant response, or nuisance calls. Without such procedures, a call that is disconnected because the caller is subject to physical violence may not receive response from law enforcement units, or prank calls may be responded to unnecessarily. Under Rock County's standard operating procedures, for example, whenever a hang-up call occurs on 9-1-1 lines, the telecommunicator must attempt to contact the caller to verify the need for services. If contact with the caller cannot be re-established, a patrol unit will be dispatched to the location of the call. The City of Sheboygan's policies and procedures state that for repeated nuisance calls involving false reporting or a pattern of hang-up calls, a police officer should be dispatched to a location to investigate and take appropriate action, such as issuing a warning or ticketing the offender.

Call Prioritization

The ability of telecommunicators to evaluate the relative importance of multiple requests for service promptly is essential to the appropriate and timely dispatching of emergency services. The best standard operating procedures enable staff to prioritize emergency service requests effectively by clearly identifying the service priorities of the communities being served. Such procedures identify the criteria to be used in assessing the relative priority of requests for services and the order by which different requests for services should be dispatched.

Brown County's policies and procedures, for example, state that telecommunicators should consider severity of need, which includes the potential threat to life and property; passage of time since an incident occurred; and any other extenuating circumstances that may affect the priority of the call, such as time of day and weather conditions. Similarly, Green Bay's policies and procedures define the highest-priority calls as those entailing a life-threatening situation or the high probability of escalating into a life-threatening situation and enumerate examples of these type of calls, such as an officer in trouble, serious assaults and injuries, and a shooting or knifing incident.

Sheboygan investigates repeated nuisance calls.

Brown County has established priorities for various types of calls. Standard operating procedures that identify the types of incidents included in each prioritization category can help telecommunicators to distinguish between multiple requests. For example, the City of Milwaukee's standard operating procedures not only identify criteria telecommunicators are expected to consider, such as the potential threat to life and the time an incident occurred, but also provide an assignment classification manual that includes an alphabetical list of possible incidents, the priority of such incidents, and the numerical classification for each incident on the city's CAD. For example, a vehicle theft is generally considered a priority-three call unless the theft is in progress, in which case it would be classified as a more serious priority-two call.

Dispatching

Once a request for services has been received and its relative priority determined, telecommunicators complete the essential link between a caller and the delivery of emergency services by communicating the request for services to the appropriate emergency service providers. The best standard operating procedures identify the type of services and number of units to be dispatched based on the information received from a caller, including the circumstances under which special equipment is required. Further, standard operating procedures describe the methods staff are expected to follow when communicating with responding units, such as standard word choice and the proper use of radio commands, as well as responsibilities intended to ensure the safety and well-being of responding personnel.

For example, to ensure clear and effective communication between telecommunicators and service providers, Outagamie County dispatch procedures require staff to use several communication skills, such as articulating and repeating all pertinent information when communicating with officers. In addition, the manual describes the language protocol that emergency service providers in Outagamie County prefer staff to use when communicating via radio, such as the phonetic alphabet and the 10-code commands, as well as the appropriate use of these protocol.

The procedures developed by Fond du Lac County and the City of Fond du Lac for dispatching law enforcement units require telecommunicators to monitor the activity and the status of emergency service providers to ensure the safety of field staff, and so that they can be assigned or reassigned as needed. For example, procedures direct that if the telecommunicator receives no response from an officer on a traffic stop after three attempts at contact, additional units are to be assigned to assist and assure the well-being of the officer. The procedures also specify conditions under which a telecommunicator may restrict radio transmissions, such as during high-speed chases or crimes in progress.

Standardized dispatching procedures improve efficiency.

Outagamie County staff provide medical information to service providers and callers. Outagamie County's standard operating procedures also illustrate how answering points that expect telecommunicators to provide medical information to emergency service providers or medical advice to callers can provide guidelines for achieving such objectives. The county's procedures include the method of obtaining information about the victim's condition and how to use the county's emergency medical reference system, which provides step-by-step instructions on giving first aid instructions to callers. In addition, the procedures specify how to inform the appropriate emergency service provider; how to communicate relevant information to the responding unit, including the location of the incident, the age and sex of the victim, the nature of the emergency, and if the victim is conscious and breathing; and how to coordinate communication among various emergency service providers.

Because communication capabilities of fire departments may vary from full-time departments with central alert systems to volunteer departments with paging systems, the best standard operating procedures also describe how dispatching requirements differ for each department. For example, the Rock County standard operating procedures specify the language protocol that each fire and emergency medical unit prefer staff to use when communicating via radio and the instructions for dispatching each department and emergency medical service provider served by the answering point. For the Town of Turtle Fire Department, telecommunicators are required to: 1) access the "fire page" on the paging system; 2) select the "Beloit Fire" module; 3) select the page button "Turtle Fire"; and 4) deliver a voice message stating the department name, a brief description of the nature of call, where the incident is occurring, and nearby cross streets. The entire dispatching process is to be repeated within 60 seconds, and telecommunicators must await acknowledgment of the incident from the responding units.

Special Instructions

Telecommunicators must sometimes process requests for emergency services that are not routine or that present unique circumstances, such as bomb threats or hostage situations. In addition, some emergency needs, such as responding to domestic complaints or drug offenses, may require special instructions to coordinate the responses of several different service providers or to deploy specialized service units. To ensure that all telecommunicators are prepared to process these special incidents appropriately, the best standard operating procedures detail call processing, dispatching, and special instructions for such incidents. Some agencies have established standard procedures for special incidents. Outagamie County's policy and procedures manual includes special incident processing procedures for responding to financial institution or burglary alarms, bomb threats, domestic disturbances, high-speed pursuits, and airport emergencies. For each special incident, the procedures detail information to be obtained from callers, the appropriate units to dispatch, and the special instructions to be followed. For example, the county's procedures for responding to calls reporting a bomb threat require telecommunicators to: 1) identify the location of the device, time of planned detonation, type of devise used, voice characteristics of the person making the call, and any distinctive background noises; 2) immediately assign an officer and an answering point supervisor to the incident; 3) alert fire and emergency medical service providers and notify them to await further instructions; 4) restrict radio communications and cellular telephone use within 1,000 yards of the location of the bomb; and 5) contact authorized bomb technicians.

Equipment

Telecommunicators are often required to use special equipment to process and prioritize calls and to dispatch emergency service providers in the most efficient and effective manner. The best standard operating procedures detail the appropriate use and method of operation for relevant equipment. Other answering points include procedures for using equipment that will assist in processing calls and reviewing the information provided by callers. For example, the City of Milwaukee's standard operating procedures detail the purpose and operation of a teletypewriter (TTY), which is a device used to communicate with the hearing impaired. In addition, Milwaukee's procedures also provide instructions for operating instant recall recorders, which enable the telecommunicator to replay a conversation instantly to verify information provided during a call.

Administrative Responsibilities

Procedures should define the appropriate use of recorded calls. Because the completion of essential 9-1-1 functions may require telecommunicators to perform certain administrative duties related to the processing or dispatching of emergency service providers, such as entering information into CAD systems and tracking service agency shift changes, the best policy and procedure manuals specify how telecommunicators are expected to perform such responsibilities. Further, because the content of emergency calls and dispatch communications may be relevant to judicial proceedings and the subject of public inquires, the best policies and procedures include detailed statements regarding the recording of communications, how long recordings will be maintained, and how to comply with requests for information consistent with the State's open records law, including making exceptions for records containing personally identifiable information that may lead to enforcement action or judicial proceedings, endanger an individual's life or safety, or identify a confidential informant.

Rock County's polices and procedures, for example, require that all recorded information be secured by the center's director for a period of 120 days. Further, all requests for such information are required to be submitted in writing; to be responded to as soon as possible, given other telecommunicator responsibilities; and to be released in accordance with the State's open records requirements. Telecommunicators are required to document the copying of tape recordings and to indicate the reason for the request, the beginning and ending time of the call, the nature of the call, and the name and title of the person making the request.

Some answering points have also established a process for resolving complaints regarding the performance of the answering point or individual telecommunicators. A complaint resolution process ensures the efficient and consistent processing of each complaint and a flow of information from the complainant to management to the staff person, if any, who was the subject of the complaint. Effective procedures require that complaints be completed in writing, both to ensure that all pertinent facts are included and to allow for their review by different persons. Further, to ensure the objectivity of the complaint review process, some 9-1-1 answering points require the investigation and adjudication of complaints by a third party. Manitowoc County Public Safety Joint Services, for example, has developed a complaint resolution process that includes the following steps:

• complaints are submitted in writing using a formal complaint form and forwarded to the answering point manager;

- the manager discusses the complaint with the complainant, notifies the employe who is the subject of the complaint in writing, and advises the answering point's oversight board regarding the complaint;
- after investigating the complaint, the answering point manager documents findings for review by the oversight board, which makes a decision regarding the disposition of the complaint; and
- the manager informs the complainant and the employe, in writing, regarding the final disposition of the complaint.

STAFF RECRUITMENT AND DEVELOPMENT

Because telecommunicators are the critical link between the public and the provision of emergency services, ensuring the delivery of high-quality service that meets public expectations requires the effective management of staff resources in three areas:

- establishing a hiring process that identifies the most qualified candidates to perform telecommunicator duties;
- developing a comprehensive training program that provides new employes with the knowledge and skills required to perform telecommunicator duties; and
- implementing a process for routinely evaluating employe performance and providing continuing education to maintain and expand the skills of veteran staff.

Hiring

Identifying the essential skills and abilities needed to be an effective telecommunicator and designing recruitment procedures that attract and identify persons with those qualifications is essential to meeting overall goals for 9-1-1 service. Although local governments have been hiring staff to process emergency calls since before the implementation of 9-1-1, the increasing specialization of 9-1-1 service has led to a need for more focused hiring practices. The best methods for hiring telecommunicators use established position descriptions and minimum qualification standards as criteria for selecting employes.

Qualification standards for telecommunicators typically include minimum education and experience requirements, as well as skill requirements such as the ability to reason and maintain composure during stressful conditions. Because some of the qualifications needed to be an effective telecommunicator may be difficult to assess based on application materials, the best strategies for evaluating whether candidates meet established hiring standards also include the following methods:

• a written test to measure basic skills aptitude;

Specialization of 9-1-1 service requires focused hiring practices.

Hiring procedures should include tests and interviews.

- a simulation test to assess the ability to handle multiple tasks and retain and comprehend information; and
- interviews to verify information provided on a job application and evaluate communication skills and job-related behaviors.

Written Tests

Most telecommunicators are required to process information from callers, relay such information to a responding unit, conduct information searches, and perform some basic clerical duties. Certain basic skills are required to perform these duties, such as the ability to comprehend and retain information and the ability to transmit information both orally and in writing. While the educational background and prior experience of a candidate will give an employer some indication of aptitude in these areas, written tests can be useful measures of the degree to which candidates possess these skills and may be used to compare the qualifications of one candidate to another.

The type of skills evaluated by a written test will depend on the duties of and expectations for telecommunicators. When the duties of telecommunicators are primarily processing and dispatching, written tests may focus on an applicant's memory and analytical skills. For example, the City of Milwaukee's test requires applicants to take factual information about calls and determine their relative importance based on the city's call prioritization criteria. In addition, applicants read several call scenarios and write the five most important questions to ask the caller in each situation.

For counties and municipalities in which telecommunicators have varied duties, such as collecting parking tickets and other types of payments, filing reports, and processing restraining orders, written tests should also assess the basic skills needed to accomplish these functions. For example, the City of Brown Deer uses a written test that assesses knowledge of arithmetic, including the ability to calculate fees and accurately collect money; clerical skills, such as how to spell, properly construct sentences, and alphabetize; and public relations skills, including how to respond to the public under different circumstances.

Simulation Tests

While many of the skills required to be an effective telecommunicator may be assessed by a written test, some skills cannot be measured in this way. Answering point managers agree that the ability to handle multiple tasks is a key skill in processing and dispatching emergency calls, including the ability to remain focused and controlled when dealing with emergency situations. Tests that simulate telecommunicator duties, such as the need to comprehend diverse oral communications and to exercise judgment under limited time constraints, are good indicators of how an individual will respond under stressful circumstances.

Some answering points have developed simulation tests customized to evaluate the skills they believe are necessary to function successfully as a telecommunicator. For example, Dane County has developed a test to assess the comprehension and reasoning skills of applicants. The first part of the test assesses the ability to recall information quickly by requiring the applicant to listen to and immediately write a series of ten letters, ten numbers, and a combination of ten letters and numbers being read at increasing levels of speed. The second part of the test requires applicants to listen to simulated emergency calls, which include pertinent and extraneous information, and to identify the information that would be relevant for dispatching units to the scene of the incident.

Many answering points have also purchased simulation tests from private vendors. Depending upon the format and complexity of such tests, either answering point staff or a vendor representative may need to administer the test and determine its results. Because the purpose of such tests is to assess how the applicant will react under working conditions, answering point managers may consider talking either to other local governments that use a specific test or to vendor representatives if they wish to identify tests that are reliable indicators of telecommunicator job performance. For example:

The City of Brown Deer uses the PERFEX simulation test, which was developed by a private firm and has also been used to assess applicants for Wisconsin State Patrol dispatching positions. The seven-phase test is designed to assess communication skills and the ability to remain calm under stressful circumstances. The test requires applicants to listen to and write down a series of number and letter combinations that are read at increasing speeds, listen to simulated radio and emergency calls and write down the relevant information from the communications, follow a series of oral instructions to do manual functions on a control console, and quickly locate 13 different streets on a map. According to city staff, the vendor that administers the examination charges \$60 for the first six applicant tests and \$25 per test thereafter.

Simulation tests can help evaluate critical skills.

• Marathon County uses a public safety telecommunicator examination developed by the International Personnel Management Association that is designed to assess listening skills, reading comprehension, and the ability to apply information and make judgments. As part of the test, applicants listen to oral simulations of calls and are tested on their ability to recall facts and make judgments regarding the appropriate response to the emergency situation. The test also includes a written component that assesses reading comprehension and reasoning ability. According to county staff, in 1995 the county paid a \$40 fee for the right to use the test, and an additional fee of \$11.50 for each copy of the test used.

Interviews

Structured interviews can be an effective method for assessing not only the interpersonal and reasoning skills needed by telecommunicators to determine the best response to reported concerns, but also for assessing skills such as cooperation, assertiveness, and flexibility to change behavior according to circumstances. The most effectively designed interviews require candidates to respond to questions that focus on the skills valued by the answering point and incorporate the perspectives of several staff persons when evaluating applicants.

Outagamie County, for example, uses an interview process designed to assess the personal qualities of applicants. Each applicant is interviewed by a four-member panel that typically consists of a communication center supervisor, a lead telecommunicator, a staff telecommunicator, and an administrator from another answering point. The county has developed interview questions regarding the applicant's job history, ability to accept criticism, experience dealing with stressful situations, and course of action under various emergency call scenarios. Each member of the interview panel rates an applicant on experience, communication ability, personality for the position, insight and alertness, and poise.

Training

The goal of telecommunicator training programs is to ensure that newly hired telecommunicators acquire the knowledge and skills necessary to perform all required duties consistent with the established policy and procedures and with limited supervision. While some answering points rely on on-the-job training for newly hired telecommunicators, the best

Structured interviews assess communication skills.

training programs have clearly defined content and methods of providing instruction on all necessary training elements.

Training Program Content

Whether a training program is directed at a single newly hired telecommunicator or multiple new staff, the most effective training programs concentrate instruction on the core functional duties of the call-taking and dispatching processes, as documented in the policy and procedures manual. These elements include:

- orientation to the answering point facility, operations, organizational structure, and policies;
- operation of telecommunications, radio, computer, and general office equipment;
- answering, prioritizing, and dispatching the variety of incoming calls that may be received; and
- performing any other tasks assigned, such as processing informational queries.

The training strategy used by the Wisconsin Dells Police Department is representative of the best training programs in that it provides a new telecommunicator with a basic understanding of the structures and guidelines under which he or she will be performing by familiarizing him or her with the communications facility and the department's general policies and procedures, including its personnel policies and its mission statement. In addition, new staff receive information on the emergency government and organizational structures and on other pertinent rules and regulations, such as Federal Communications Commission (FCC) guidelines.

Another common orientation strategy is to require new telecommunicators to ride along with both police and fire department personnel to become acquainted with the geographic location they are serving and the emergency service agencies they will be supporting, as well as with what occurs in the field during the dispatching process. For example, the Cedarburg Police Department identifies for new staff the areas of the community assigned to each patrol unit, so that telecommunicators learn where many calls from patrol officers will originate.

Effective training includes requiring telecommunicators to ride along with service providers. Training on all equipment is essential.

The second essential element of all training programs is instruction on the use of all required equipment. The Rusk County communications field training program includes training on the equipment used for processing and dispatching calls, conducting informational queries, logging and recording calls, and other miscellaneous clerical duties. In addition, the training program includes instruction on the use of all relevant data systems; their associated rules and regulations; and resource manuals, including the Department of Justice's Transaction Information for Management of Enforcement (TIME) system, the Department of Transportation data system.

A third essential element of training programs is instruction on how to answer calls from the public and to dispatch the required emergency service providers. Training new telecommunicators on how to perform the core functions of 9-1-1 centers consistent with locally established policies and procedures covers:

- the types of incoming calls that will be answered, including emergency and non-emergency calls, administrative calls, and radio calls from patrolling police units;
- information to be acquired and interrogation techniques to be used in obtaining information from callers for each type of law enforcement, fire, and emergency medical incident;
- how to establish priorities among emergency, non-emergency, and administrative calls and the specific requirements of each responding agency for the processing of requests; and
- appropriate radio techniques and the specific information to be relayed while dispatching emergency service providers, such as how to relate physical descriptions of persons and vehicles using the preferred words and codes.

The best approaches to training are also tailored to coincide with the skill and experience level of the telecommunicators being hired. While some answering points prefer to hire and train persons with no previous telecommunicator experience, others prefer to hire persons with previous experience, who will require less training on basic job skills. For example, because the Waukesha Police Department tends to hire telecommunicators with previous experience in priority dispatching, it structures its training program to emphasize the specific equipment and processes it uses and does not provide extensive training in fundamental call-processing skills.

Finally, the best training programs also include instruction on how to perform any other duties assigned to the telecommunicator position, such as logging and recording incoming and outgoing communication, processing warrants, and sending administrative messages and using electronic mail.

Training Program Methods

The most effective training programs are structured to provide instruction on the knowledge and skills necessary to perform all required duties at the desired level of service. The best training programs also use a phased approach that provides new telecommunicators with opportunities to learn and practice required skills under increasingly stressful situations, as well as a clear understanding of performance expectations and how training progress will be measured.

The La Crosse County Emergency Dispatch Center is planning revisions to its training program that will provide new staff with basic information and training in skill development through both classroom instruction and practical application. During the instruction phase, La Crosse County's training will focus on learning basic job responsibilities, county policies, orientation to the center and the employe handbook, and background information on how to answer emergency calls and dispatch the various emergency service providers coordinated by the answering point. Laboratory instruction will provide opportunities for trainees to learn how to use the dispatch center equipment to perform the required duties, including processing and dispatching calls. Administrators expect classroom sessions to include the use of purchased training videos on topics such as telephone techniques, radio dispatching skills, responding to hazardous materials incidents, and stress management. Use of these videos will be integrated with discussions of how the topics specifically relate to the answering point.

Phased training programs are designed to provide exposure to variations in workload throughout the day and the week, as well as to variations in job duties and trainers. For example, the Sheboygan Police Department requires all new staff to begin training on the day shift, which is the slowest time of the day for emergency service requests but a busy time for non-emergency calls. In this way, a new staff person can learn how to use the telecommunications and computer systems and prepare to answer emergency calls. All new staff eventually are assigned to shifts during which higher volumes of calls and more challenging emergency calls tend to be received. Further, the training program, which is 12 to 15 weeks in

Training programs should be phased.

length, is arranged so that new staff receive mentoring first from more-experienced telecommunicators who can explain how to apply policies and procedures to practical situations, and then from less-experienced telecommunicators.

Similarly, the training methods used by the Tri-Community Dispatch Center, which is an answering point for several police, fire, and emergency medical services along Milwaukee's north shore, illustrate how training programs can include opportunities for trainees to practice handling various types of calls under realistic conditions. The center allows trainees to use idle consoles equipped with computer software designed to simulate the steps involved in processing emergency calls. Answering points that do not have idle consoles may create other methods to practice processing calls without involving trainees in actual emergency situations for which they have insufficient training. For example, the Chippewa Falls Police Department uses tape recordings of actual calls and role-playing through various call situations to assist with the training and development of staff.

Phased training programs are also designed to provide trainees with a clear understanding of the extent to which training expectations and goals are being met. Techniques to provide information on training program content, goals, and expectations include training manuals, trainer and trainee evaluations, and examinations.

The Brown Deer Police Department uses a training manual to describe the purpose and elements of the training program, as well as to provide any forms that will be used to document progress. This training manual includes:

- a policy and procedure section describing the training program and the requirements of the trainee;
- the purpose and content of the program's performance evaluation and post-training review processes, a copy of the daily observation report to be used to evaluate the trainee during the program, the trainee's selfevaluation report form, the probationary employe review form, and the standardized evaluation guidelines for the communications officer training program;
- the training program task check sheet; and
- an organizational chart and position description.

Training programs should provide regular and frequent feedback. The Rusk County Sheriff's Department conducts formal evaluations of new employes at the end of each training phase. These evaluations measure trainees' attitudes toward the training process, such as their willingness to learn new skills and accept criticism, and trainees' knowledge of the equipment, policies, procedures, and skills required to perform all aspects of the job. Weekly observation reports are also used to describe the extent to which a trainee has successfully completed aspects of the training program and to communicate that progress to others not as closely involved in the training process, such as answering point administrators. The department also includes a formal method by which trainees can evaluate training officers' performance and the content of the training program, which is helpful in identifying how training may be improved in the future.

Performance Review

Continuous review of employe performance is critical to providing the level and quality of service demanded by the public and the user agencies served by an answering point. Local experience suggests that best practices for monitoring performance and ensuring service quality include routine supervision and structured employe performance evaluations from a variety of perspectives. Annual and periodic employe evaluations are useful tools for identifying areas in which service can be improved through additional training.

The most effective evaluations include performance indicators that are specific to the task of processing calls. For example, in annual telecommunicator performance evaluations, Manitowoc County Public Safety Joint Services grades the following indicators based on written criteria provided to staff:

- general performance and knowledge, which includes assessments of the ability to comprehend and retain information, to be in contact with the public, to respond to stressful situations, to use resource materials, to solve problems, and to make decisions;
- critical incident performance, as measured by familiarity with communication codes and equipment, the ability to handle routine and emergency calls, and knowledge of procedures to handle fire and rescue calls; and
- relationships with co-workers and supervisors, and general attitude toward work.

In addition, performance reviews can also provide opportunities to receive feedback from the emergency service providers being served by the answering point, and from peers. For example, staff at the Chippewa Falls Police Department developed a peer evaluation program in which telecommunicators select calls to which their peers listen. Peer evaluators both critique how well the calls have been processed and suggest improvements in technique. Administrators stated that the program improved job performance by raising skill levels in a non-threatening manner. The department also provides recordings of telephone calls and radio transmissions to user agencies, for their review and to provide feedback on how performance could be improved, as well as to illustrate how attempts to transmit a radio message when a frequency is already in use can interrupt radio communications and result in confusion and inefficiency.

Finally, performance reviews can often serve as useful tools in identifying the need for additional training. Even though there are no state-imposed mandatory training or in-service requirements for telecommunicators, most answering points provide continuing education opportunities. Some answering points have staff attend programs offered at local technical colleges on such topics as officer safety, stress management, high-speed pursuits, oral communication skills, and hostage situations. Training programs also can be designed to meet the specific needs of an answering point. For example, the Sheboygan Police Department developed an in-service training program that included additional training on SWAT procedures, CPR and TDD (TTY) updates, responding to domestic abuse calls, assisting with court services and providing testimony, and additional fire department training. Department officials stated that these topics were selected to improve telecommunicator awareness and knowledge. Future programs will include training on basic first aid, gang situations, and community policing programs.

FUTURE ISSUES

Advances in telecommunications technology and changes in federal regulations that would provide answering points with automatic information on the telephone numbers and locations of callers using cellular telephones are likely to change the future provision of 9-1-1 service. However, taking advantage of such opportunities will require answering points to undertake potentially costly upgrades in equipment. In addition, ongoing changes in public expectations of 9-1-1 service may influence future 9-1-1 service delivery in areas such as the level of service provided, training requirements for staff, the extent to which service is available statewide, and the manner in which 9-1-1 operations are funded.

Changing Technology and Federal Requirements

The use of cellular telephones has the potential to reduce emergency response time, particularly in remote areas. Nevertheless, efforts to process calls from cellular telephone users often pose difficulties for answering points. These difficulties include obtaining accurate information about the location and nature of an incident, receiving sudden increases in calls relating to the same incident, and reestablishing contact when a caller ends a call. While advances in technology and recent changes to federal regulations provide an opportunity to improve how these calls are processed, such improvement will likely increase answering point operating costs.

The growing use of cellular telephones has contributed to an overall increase in the volume of 9-1-1 calls received. Estimates reported by 9-1-1 administrators indicate that cellular users may make up to 15 percent of all calls, an amount that will likely increase as cellular telephones become more common. Further, answering points often receive large numbers of calls from cellular telephones for a single incident, especially traffic accidents. Sudden increases in call volume can flood available 9-1-1 lines, making it difficult for other emergency calls to get through. As a result, the volume and pattern of calls from cellular users affect the staffing practices needed to ensure that all calls are processed professionally and accurately and that 9-1-1 lines are available for the reporting of other emergencies.

Because current technology does not allow answering points to receive information about a cellular caller's telephone number and location automatically, telecommunicators are more dependent on cellular callers

9-1-1 technology is changing.

Cellular telephone use increases 9-1-1 call volume. for accurate information. Obtaining such information increases the length of a call and may be complicated because cellular users may be unfamiliar with their surroundings at the time of an emergency. When multiple calls are received for the same incident, a telecommunicator may use information provided by different callers to clarify needs but must rapidly determine whether a call is referencing the same or a new incident and whether the caller can provide information that will add to the telecommunicator's understanding of emergency needs, all without discouraging the willingness of callers to report future incidents.

In June 1996, the FCC issued a ruling requiring cellular telephone companies to provide answering points, by April 1, 1998, with both the telephone number needed to call back a cellular caller and the location of the cellular tower being used to transmit the call. Further, by October 1, 2001, service providers must also provide answering points with the location of the cellular telephone from which a call is being made within 125 meters, or about 410 feet. In all cases, telephone companies must provide the information only if requested to do so by the answering point and if they are compensated for their costs.

While 9-1-1 calls from cellular telephones are currently routed to the answering point that serves the cellular tower activated by a call, which may not be the answering point serving the area in which the caller is located, these changes will make it easier for telecommunicators to identify the location of an emergency even when callers are unfamiliar with surroundings. Location information will also increase telecommunicators' efficiency in determining whether a call relates to a previously reported incident and whether the incident occurred in an area served by the answering point or must be transferred to another answering point. Further, telecommunicators will be able to investigate whether callers who end calls are reporting real emergencies, because they will have the information for reestablishing contact with these callers. In addition, the changes will improve the ability of answering points to manage unique situations that may occur because of the mobility of cellular users, such situations involving a caller who attempts to follow a suspect.

Because the equipment used by most answering points is designed to accept only standard seven-digit telephone numbers and the telephone numbers needed to call back a cellular telephone user consist of ten digits, equipment upgrades or other improvements will be needed to enable answering points automatically to receive the telephone number needed to call back a cellular user. In addition, because the location of cellular callers is not static and cannot be identified using traditional addresses, such as house numbers and street names, equipment upgrades will also be needed for answering points to receive information on the location of cellular callers automatically. Geographical locating

Automatic location of cellular callers will be available in the future.

Equipment upgrades will be costly.

equipment will be needed to define the location of cellular callers based on coordinates that specify location according to longitude, latitude, and altitude.

Estimates are not yet available concerning how much it will cost an answering point to purchase equipment that will automatically receive number and location information for cellular users and to make operational adjustments such as additional training. Although some equipment needed to achieve these objectives currently is available, rapid changes in technology and increased future demand for such equipment may contribute to decreases in costs before service providers are required to make information available to answering points. Further, costs will be affected by the extent of variation in equipment capability and the preferences of the answering points purchasing the equipment. Nevertheless, if answering points decide to take advantage of the recent changes in federal regulations, it does appear now that they will need both to obtain local funds to upgrade equipment and to increase assessments for increased telephone company costs.

Changing Expectations

In the future, the delivery of 9-1-1 service will also be influenced by changes in the expectations of both 9-1-1 professionals and the public. Three areas that have received particular attention recently are whether 9-1-1 answering points should be required to provide instructions, such as medical advice, to callers awaiting the arrival of emergency services; whether statewide certification should be required of all 9-1-1 answering point staff; and the dedication of 3-1-1 as the number to call to request assistance in non-emergency situations. Both ongoing advances in technology and recent efforts to designate 3-1-1 for access to non-emergency public services suggest that public expectations and the shape of service delivery will continue to evolve.

Pre-Arrival Instructions

Law enforcement officers, fire fighters, emergency medical staff, and other personnel dispatched to incidents are best situated to assess an individual's needs and deliver services. However, telecommunicators may also be in a position to remain on the line with callers and provide useful information, referred to as pre-arrival instructions. The most common situations in which pre-arrival instructions are provided are medical emergencies; however, such information may also be provided in other types of situations. The extent to which pre-arrival instructions should be provided is a matter of debate among 9-1-1 professionals and others, particularly because of questions regarding liability, whether the

The responsibilities of 9-1-1 staff may increase.

service is the appropriate role for telecommunicators, and whether it improves service.

Our survey of 9-1-1 answering points indicates that about 44 percent provide some pre-arrival instructions. Discussions with administrators suggest that some answering points avoid providing pre-arrival instructions based on a belief or legal advice that their liability will increase if inappropriate instructions are provided. In contrast, other administrators believe that as long as staff are trained, providing such instructions in good faith may reduce liability. Whether answering points provide pre-arrival instructions to callers may also be influenced by public expectations that such information will be provided, the qualifications of telecommunicators to provide such information, and the resources available for developing standards for providing such advice and for training telecommunicators. In determining whether to provide pre-arrival instructions to callers, local officials need to consider the potential for improving the delivery of medical care without increasing the risk of causing additional harm to patients, through, for example, misdiagnosis.

Certification

Some answering points employ staff who are certified in certain skill areas, such as emergency medical technicians, and certification is required for specific duties that may be assigned to 9-1-1 staff, such as the training certification required by the Department of Justice to receive access to the TIME system. However, there currently are no statewide certification requirements for employes of 9-1-1 answering points. Some 9-1-1 professionals advocate statewide certification of telecommunicators to ensure 9-1-1 staff have minimum qualifications and that consistent service delivery is available across the state. Other administrators believe certification is not necessary to provide high-quality service and could be detrimental, by focusing efforts on developing minimum skills rather than maximizing specialized skills, and by increasing staffing and training costs. Opponents further argue that calls for statewide certification are the result of unrealistic public expectations regarding the ability of telecommunicators to resolve emergencies, such as by providing medical advice, which they believe have been influenced by the glamorization of 9-1-1 in the media and by television.

As directed by 1993 Wisconsin Act 251, the Emergency Medical Services Board of the Department of Health and Family Services established a committee to assess whether emergency medical service (EMS) dispatchers should be certified and, if so, to identify conditions related to certification. Although the study was specifically directed at telecommunicators assigned responsibility for dispatching EMS units, the study would affect most answering points because most expect telecommunicators to be capable of dispatching all types of emergency service providers.

In its December 1995 report, the committee recommended development of necessary statutory language to require certification for EMS telecommunicators, reasoning that telecommunicators are critical to reducing response times and are in a position to act as the first professional responder by providing pre-arrival instructions. In addition, the committee recommended clarifying statutes to ensure that any certified telecommunicators who provide advice in good faith would be immune from civil liabilities, and to place sanctions on any answering points that do not ensure their staff are appropriately certified. Further, the study recommended that the Department of Health and Family Services be designated the agency responsible for overseeing EMS dispatcher certification, although the report recognized that most such staff are under the supervision of law enforcement agencies.

While only general performance standards were identified, the committee recommended that any certification consist of two primary components: successful completion of an initial training program, and a combination of ongoing training and continuing education to maintain certification. Initial certification requirements would be expected to meet or exceed the current federal Department of Transportation curriculum for EMS dispatchers, which provides a suggested lesson plan for instructors and sets minimum hours for instruction in certain areas, such as two to three hours on basic EMS telecommunications equipment and operating procedures and four to six hours on how to provide emergency care instructions. Further, certification requirements would be expected to meet current American Heart Association standards for CPR.

3-1-1

At the urging of the President, the FCC recently set 3-1-1 as the dedicated number for citizen access to essential public services in non-emergency situations. Proponents believe that by reducing the number of calls placed on high-priority 9-1-1 lines, the use of 3-1-1 will enable requests for genuine emergencies to be processed more effectively by 9-1-1 answering points, particularly in urban areas that have found it difficult to keep up with the number of 9-1-1 calls. While the FCC ruling makes it possible for answering points to implement 3-1-1 in the future, the extent to which 9-1-1 professionals believe 3-1-1 is needed for effective service delivery varies.

Certification of 9-1-1 staff is being discussed.

3-1-1 may reduce pressure on 9-1-1.

Currently, the City of Baltimore is operating a pilot project using 3-1-1. Under this system, 3-1-1 and 9-1-1 calls are automatically routed to a separate pool of telecommunicators. Calls that 3-1-1 telecommunicators believe reflect immediate needs may be quickly transferred to 9-1-1 telecommunicators, and vice-versa for non-emergency calls received by 9-1-1 telecommunicators.

While perceptions regarding the appropriate use of 9-1-1 vary among both the public and 9-1-1 professionals, staff of the answering points we visited indicate that citizens call 9-1-1 for a variety of reasons, ranging from clear emergencies to situations that reflect a need for public services but are not emergencies—such as questions about parking violations—to blatant misuses, such as asking directions or prank calls. Unlike in some large cities in other states, answering points in Wisconsin have not indicated that call volume prevents the timely processing of genuine emergencies. Nonetheless, to the extent demographics and the public perception of appropriate uses for 9-1-1 change over time, answering points may consider future implementation of 3-1-1 as an alternative way of processing emergency and non-emergency calls. Answering points considering alternative strategies may want to consider the extent to which simplicity of using 3-1-1 will:

- expedite the processing of emergency calls by better enabling citizens to make their own determinations regarding the severity of their calls by providing equally convenient alternatives for contacting public authorities;
- cause confusion regarding which number pertains to emergency services and which is for non-emergency services, as has been suggested by officials of the National Emergency Number Association; and
- contribute to an overall increase in call volume, rather than simply offset calls that may otherwise have been received via 9-1-1 or a 7-digit telephone number, by either expanding the public perception of when it is appropriate to seek assistance from public agencies or encouraging calls from those unable or unwilling to identify the appropriate seven-digit telephone number.

In addition, answering points will need to consider the cost of implementing and operating 3-1-1 service compared to alternative strategies that may be available for improving the efficiency of 9-1-1 operations. For example, some believe that public resources would be better spent educating the public on the proper use of 9-1-1 and the

simplicity of alternatives, such as using the non-emergency 7-digit telephone numbers listed in the front cover of every telephone directory.

Statewide 9-1-1 Access

As indicated, the establishment of 9-1-1 service is not mandatory, and service is not available at all in 15 counties and in some areas of another county. We estimate that 294,000 Wisconsin residents live in the areas where 9-1-1 is not available, not including persons who may travel through or vacation in these areas. While viewpoints about why some areas have not yet implemented 9-1-1 service vary, several options may be considered if it is determined that 9-1-1 service should be made available statewide.

Local governments not served by 9-1-1 are already incurring some of the operating costs that would be involved in operating an answering point. For example, they must employ staff to answer 7-digit calls, process those calls, and dispatch services. In addition, they already own radio equipment needed for dispatching. However, establishing 9-1-1 service will require the purchase of some equipment, as well as training and telephone costs.

Although the public and some local officials may perceive less of a need for 9-1-1 service in their communities, others believe the most significant impediment to implementing 9-1-1 in less-populated areas of the state is funding the two types of costs: the costs of developing the database required for enhanced 9-1-1 service, and the costs of having telephone companies provide 9-1-1 service within the maximum rates provided for by statutes. However, because statutes do not restrict the size of answering point boundaries or require local governments to fund 9-1-1 costs with the surcharge, local officials could consider consolidating 9-1-1 service across county boundaries to allow costs to be spread over a larger population, and using local funds to pay telephone companies directly for 9-1-1 service costs that exceed the maximum monthly surcharges allowed by statutes.

In addition, the Legislature could consider statutory changes that may make it more feasible for less-populated areas of the state to implement 9-1-1. One such change would be to raise the cap on the amount each telephone user may be charged per month to ensure that telephone company costs for providing 9-1-1 can be fully funded through user charges. Even broader statutory changes that would affect how all existing and future 9-1-1 answering points could be funded have also been proposed.

9-1-1 service is not available to all Wisconsin residents.

Future Funding

Although local governments have traditionally been expected to fund the costs of receiving and processing calls for emergency services, some believe 9-1-1 funding mechanisms should be expanded to ensure adequate resources are available as telecommunications improve and specialization increases. Statutory changes that would allow counties to assess telephone users for the full costs of providing 9-1-1 service, including both telephone company charges and operating costs, have been suggested.

Provisions of 1993 Wisconsin Act 496 directed the Universal Service Fund of the Public Service Commission, which is charged with ensuring that low-income persons have access to essential telephone service, to study whether the Fund should be used to ensure all areas of the state have such service, as well as alternative 9-1-1 funding mechanisms. In a November 1996 study, the Universal Service Fund developed seven alternative funding options for 9-1-1. These options included:

- discontinuing county surcharges and assessing a universal statewide per line charge on telephone users, with revenues to be collected by the Commission and used to fund four regional 9-1-1 answering points, although local governments would continue to be required to operate their own dispatch centers;
- providing matching funds through the Fund as an incentive to encourage counties to establish and operate 9-1-1 answering points jointly;
- amending the statutes to raise the limit on monthly per line surcharges assessed by counties;
- using the Fund to subsidize the implementation of 9-1-1 service when costs exceed the existing limits;
- changing the definition of which costs may be funded with the surcharge, to allow more costs to be covered;
- having the Fund continue to play no direct role in the funding of 9-1-1 service delivery; or
- providing grants through the Fund to cover the costs of specific items, such as address database creation and answering point equipment.

After reviewing the alternatives, the Universal Service Fund Board decided to continue to play no direct role in financing 9-1-1 service, reasoning that its goal of ensuring low-income persons have access to basic telephone service, including 9-1-1 service, is being met through its current practice of assisting qualified persons whose basic service charges, including 9-1-1 service charges, exceed \$15 per month. Further, the committee reasoned that subsidizing the costs of implementing 9-1-1 service in some areas may be unfair to other areas that have already implemented such service. The Public Service Commission concurred with this recommendation.

Other states have taken a variety of approaches to funding 9-1-1 service. For example, while most states are like Wisconsin in that they fund telephone company costs to provide 9-1-1 service through charges on telephone users, 13 states fund 9-1-1 service entirely through other revenue sources, such as general tax revenues. Still others use a combination of a universal statewide charge on all telephone users and locally determined charges. However, because few states allow the fees collected from telephone users to support answering point operating costs, such as staffing, the total cost of providing 9-1-1 is typically funded by a combination of charges on telephone users and local funds.

Some states have attempted to ensure that all telephone users are assessed comparably by establishing a flat rate, such as \$1 per line, or a percentage rate, such as 0.5 percent of the cost of basic telephone service. Others allow the fees to vary depending on local costs, as is the case in Wisconsin. The states that have established a universal statewide fee typically also mandate that local governments provide 9-1-1 service. The funds collected at the state level either are used to pay telephone companies directly or are distributed to local governments on an as needed basis or through a formula.

While many specific strategies have been used to fund 9-1-1 service in other states, if the Legislature wishes to consider changing the way 9-1-1 is funded in Wisconsin, it may wish to take into account whether:

- the provision of 9-1-1 service should be mandatory and, if so, whether the costs should continue to be funded at the local level or through a statewide funding mechanism, as well as whether basic or enhanced service should be required;
- allowing answering points to fund operating costs through charges on telephone users, rather than through local property taxes, would provide adequate accountability and oversight of those resources; and

States use differing methods to fund 9-1-1.

• the costs of providing 9-1-1 service should be shared by both land-line telephone users and cellular telephone users.

APPENDIX I

BEST PRACTICES LOCAL GOVERNMENT ADVISORY COUNCIL

Betty Balian, Town Board Chair Town of Lebanon (Dodge County)

Daniel Elsass, Governmental Affairs Unit University of Wisconsin-Extension (Originally Appointed as City Administrator, City of Baraboo)

Steve Fredericks, County Administrator Marinette County

Anne Spray Kinney, Executive Director Milwaukee Metropolitan Sewage District (Originally Appointed as Director of Administration, City of Milwaukee)

John Krizek, County Administrator St. Croix County

APPENDIX II

INSTRUCTIONS: Please provide the information or indicate the response that best describes the provision of 911 service by your answering point. Additional sheets are welcome. If you have questions, please contact Chris Black at (608) 267-0412.

1. In what year did your 911 system begin operating? (If no system exists, skip to question 26).

2. Please verify the following contact information for your 911 answering point.

a. Location of Answering Point		
b. Responsible Agency		
c. Responsible Administrator		
d. Administrator's Title	Please Provide	
e. Administrator's Telephone #	Please Provide	

3. What other 911 answering points are located in your county, if any?

4. Please identify the number of agencies for which your answering point provides direct dispatching in each of the following service areas:

Law Enforcement (police and sheriff departments)	
Fire Protection (professional and volunteer)	
Emergency Medical (EMS, ambulance, and others)	
Department of Natural Resources	
Other (please specify)	a 44

5. Please identify any communities for which your 911 center answers calls and then transfers those calls to another agency for dispatching, if any.

6. Please identify the information that is immediately available to 911 center staff on a caller identification screen upon answering a 911 call.

□ General location of caller	□ Caller telephone number
□ Caller name	\Box Caller address
□ Name of responding units	□ Caller history* (i.e., previous calls, medical
conditions)	
\Box Other (please list):	

7. If 911 operations are supported by a computer-aided dispatch or other in-house computer system, identify the information that is available from that system.

□ No in-house computer system exists	□ Constituent names and addresses
□ Constituent telephone numbers	□ Name of responding units
□ Caller history	□ Number of rings before a call is answered
\Box The time of a call	\Box The time a call is completed
\Box The length of time a caller is on the line	□ Other

8. How many of each of the following types of calls were received in 1995?

Calls from Land-based Lines	Cellular Calls
 911 calls Other emergency calls (7-digit lines) Non-emergency calls (7-digit lines) Other calls (i.e., dispatch, radio traffic) Total calls answered 	911 calls Other emergency calls (7-digit lines) Non-emergency calls (7-digit lines) Total calls answered

Are the numbers of calls provided above: \Box actual counts \Box estimated?

9. What percentage of 911 calls received would you define as emergency calls?

10. Please identify the criteria used to determine the number of staff assigned to each shift.

-

11. If call volume is one of the criteria used to determine staffing levels, how many calls per hour and calls per shift are expected to be handled by:

	Volume/Hour	Volume/Shift
Staff assigned to answer calls?		
Staff assigned to dispatch calls?		
Staff assigned to both answer and dispatch calls?		

12. Please describe the staffing pattern for employes assigned to your 911 center, including the number assigned and the begin and end times for each work shift.

<u>Shift</u>	Begin Time	End Time	Number of Staff
First			-
Second			
Third			
Additional Shifts			
We do and Oh Store			
weekend Shifts		·	

13. Briefly describe the duties of staff assigned to your 911 center, such as responsibilities for answering calls, dispatching calls, monitoring a jail, clerical duties, or other tasks.

14. Are 911 center staff expected to provide medical instructions to callers awaiting the arrival of emergency service providers? □ Yes □ No

15. Please indicate the number of full-time equivalent staff positions assigned to your **911** center in each of the following categories.

Full-time civilians_____Full-time sworn officers_____Part-time civilians_____Part-time sworn officers_____

- 16. How many members of your 911 center staff are considered protected employes as it relates to the Wisconsin Retirement System?
- 17. Briefly explain the standards your jurisdiction has used, if any, to evaluate applicants for 911 center positions.
- 18. Identify the areas in which 911 center staff are provided training and the number of hours each employe is provided such training during the first year of employment.

	First-Year
□ None	Training Hours
□ Basic call-handling procedures	·
□ Procedures for handling cellular telephone calls	
Use of basic telephone, radio, and computer equipment	
□ Use of TDD equipment	
Department of Justice TIME system	
□ Stress-management training	
□ Cardio-pulmonary resuscitation (CPR)	
Emergency medical procedures	
□ Hazardous materials management	
□ Other (please list):	

19. To what extent are 911 center employes provided additional training following their first year of employment?

20. Describe the extent to which the training provided to employes is developed internally or is purchased from outside organizations.

21. Has a policy and procedures manual been adopted for your 911 center?

22. What is your 1996 budget for 911 center operations?

 Total budget
 Amount for Personnel (including fringe benefits)
Amount for Telecommunications Services
 Amount for Capital Equipment
 Amount for Training
 Amount for Other (please specify):

23. What sources are used to fund 911 operating costs?

- □ Property tax revenue (county or city tax levy)
- \Box Fees charged to the jurisdictions served
- □ Others (please list): _____

24. What information regarding 911 services in other jurisdictions would be useful to you?

25. What strategies do you use for delivering 911 services that may be useful to other jurisdictions?

26. If your county does not have 911 services, has formal planning begun for the establishment of a 911 system? \Box Yes \Box No

IF NO, what reasons have been identified for not initiating a 911 system? **IF YES**, please describe those plans, such as the anticipated implementation date (month/year), the services to be provided, and the responsible agencies.

Person Completing Survey Title Telephone Number Name of County/Municipality

Please return the completed survey by Wednesday, December 11, 1996, to Mr. Chris Black, either by fax at (608) 267-0410 or by mail to:

Legislative Audit Bureau 131 West Wilson, Suite 402 Madison, WI 53703 (A postage-paid envelope is enclosed.)

APPENDIX III

COUNTYWIDE 9-1-1 SYSTEMS

	Current		Number of	Local
	System	Year	Answering	Governments Operating
<u>County</u>	<u>Type</u>	Implemented*	Points	Answering Points **
Adams	Enhanced	1996	1	Adams County
Ashland	None	NA		
Barron	Enhanced	1996	2	Barron County,
				City of Rice Lake
Bayfield	None	NA		
Brown	Enhanced	1990	2	Brown County,
				City of Green Bay
Buffalo	None	Planning		
Burnett	Enhanced	1993	1	Burnett County
Calumet	Enhanced	1996	1	Calumet County
Chippewa	None	Planning	1	City of Chippewa Falls
Clark	None	Planning		
Columbia	Enhanced	1993	- 3	Columbia County,
				City of Columbus,
				City of Wisconsin Dells
Crawford	None	Planning		
Dane	Enhanced	1989	4	Dane County,
				City of Middleton,
				City of Monona,
				City of Sun Prairie
Dodge	Enhanced	1995	2	Dodge County,
				City of Beaver Dam
Door	Enhanced	1995	1	Door County
Douglas	Enhanced	1997	1	Douglas County/City of Superior
Dunn	Enhanced	1995	2	Dunn County, City of Menomonie
Eau Claire	Basic	1970	1	City of Eau Claire
Florence	None	NA		
Fond Du Lac	Enhanced	1995	3	Fond du Lac County/City of
				Fond du Lac, City of Ripon, City of
				Waupun
Forest	None	NA		
Grant	Enhanced	1996	2	Grant County, City of Platteville
Green	Basic	1985	2	Green County, City of Brodhead
Green Lake	Enhanced	1996	2	Green Lake County, City of Berlin
Iowa	Enhanced	1994	1	Iowa County
Iron	None	NA		
Jackson	None	NA		

	Current		Number of	Local
	System	Year	Answering	Governments Operating
<u>County</u>	Type	Implemented*	Points	Answering Points **
Jefferson	Enhanced	1992	3	Jefferson County, City of
				Fort Atkinson, City of Watertown
Juneau	Enhanced	1993	1	Juneau County
Kenosha	Enhanced	1988	1	Kenosha City/County Joint Services
Kewaunee	Basic	1983	1	Kewaunee County
La Crosse	Basic	1983	1	La Crosse County
Lafavette	Enhanced	1996	1	Lafavette County
Langlade	Enhanced	1992	1	Langlade County
Lincoln	Enhanced	1994	2	Lincoln County, City of Tomahawk
Manitowoc	Basic	1995	1	Manitowoc County Public Safety
				Joint Services
Marathon	Enhanced	1993	2	Marathon County, City of Wausau
Marinette	Basic	1983	2	Marinette County, City of Marinette
Marquette	Enhanced	1995	1	Marquette County
Menominee	None	NA	-	
Milwaukee	Enhanced	1989	16	Milwaukee County, City of Cudahy,
1111111000100				City of Franklin. City of Greenfield.
				City of Milwaukee, City of
				Oak Creek City of South Milwaukee
				City of St. Francis City of
				Wauwatosa City of West Allis
				Tri-Communications Village of
				Brown Deer, Village of Fox Point
				Village of Greendale Village of
				Hales Corners Village of
				West Milwaukee
Monroo	Pasia	1080	2	Monroe County City of Tomah
Qaanta	Enhanced	1980	2 1	Oconto County, City of Tolliali
Ocolito	Enhanced	1992	1	Opeide County City of Minorque
Oneida	Enhanced	1997	ے 1	Outogamia County, City of Millocqua
Outagamie	Enhanced	1992	1	Oraganne County
Ozaukee	Enhanced	1992	3	Ozaukee County, Vinage of Granton,
				City of Cedarburg, City of Mequon,
D '	NT	DT 4		City of Port wasnington
Pepin	None	NA 1005	1	D'a Caracter
Pierce	Enhanced	1995	l 1	Pierce County
Polk	Enhanced	1993	1	Polk County
Portage	Basic	1981	2	Portage County, City of Stevens Point
Price	Enhanced	1993	l	Price County
Kacıne	Enhanced	1991	6	Racine County, Town of Caledonia,
				Town of Mt. Pleasant, Village of
				Sturtevant, City of Burlington, City of
				Racine
<u>County</u>	Current System <u>Type</u>	Year <u>Implemented</u> *	Number of Answering <u>Points</u>	Local Governments Operating <u>Answering Points</u> **
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Richland	None	Planning		•
Rock	Enhanced	1993	1	Rock County
Rusk	Enhanced	1993	1	Rusk County
Sauk	Basic	1980	1	Sauk County
Sawyer	None	Planning		
Shawano	Enhanced	1997	2	Shawano County, City of Shawano
Sheboygan	Enhanced	1990	2	Sheboygan County, City of Sheboygan
St. Croix	Enhanced	1991	1	St. Croix County
Taylor	Enhanced	1996	1	Taylor County
Trempealeau	Enhanced	1995	1	Trempealeau County
Vernon	None	NA		-
Vilas	Enhanced	1997	1	Vilas County
Walworth	Enhanced	1994	4	Walworth County, City of Delavan, City of Lake Geneva, City of Whitewater
Washburn	Enhanced	1996	1	Washburn County
Washington	Enhanced	1992	4	Washington County, Village of Germantown, City of Hartford, City of West Bend
Waukesha	Enhanced	1990	9	Waukesha County, City of Muskego, City of New Berlin, City of Oconomowoc, City of Waukesha, Lake Area Communications, Village of Mukwonago, Village of Menomonee Falls, City of Brookfield
Waupaca Waushara	Enhanced None	1996 Planning	1	Waupaca County
Winnebago	Enhanced	1991	1	Winnebago County
Wood	Basic	1988	3	Wood County, City of Marshfield, City of Wisconsin Rapids

* Answering points may have provided basic 9-1-1 services prior to implementing enhanced 9-1-1 services.

** Municipal answering points may have provided local 9-1-1 services prior to the implementation of a countywide system.



APPENDIX IV

PUBLIC SAFETY ANSWERING POINTS

Table 1

County Operated Answering Points

Answering <u>Point</u>	Responsible <u>Agency</u>	Contact <u>Person</u>
Adams	Adams County Sheriff's Department	Mary Gruber, Emergency Government Coordinator
Barron	Barron County Sheriff's Department	Wendy Sorum, Communications Supervisor
Brown	Brown County Sheriff's Department	Captain Thomas Martin
Burnett	Burnett County Sheriff's Department	Sergeant Pat Pope
Calumet	Calumet County Sheriff's Department	Captain Paul Rusch
Columbia	Columbia County Sheriff's Department	Lieutenant Darrel Kuhl, Jail Administrator
Dane	Dane County Public Safety Communications	Richard Ellingson, Operations Manager
Dodge	Dodge County Sheriff's Department	Sergeant Molly Soblewski
Door	Door County Department of Emergency Services	Richard Burress, Director
Dunn	Dunn County Sheriff's Department	Eddie Goldsmith, Director of Emergency Planning and Communications
Grant	Grant County Sheriff's Department	Captain Maurice Krohn
Green	Green County Sheriff's Department	Deputy Stephen Miller
Green Lake	Green Lake County Sheriff's Department	Gary Podoll, 9-1-1 Coordinator

Answering <u>Point</u>	Responsible <u>Agency</u>	Contact <u>Person</u>
Iowa	Iowa County Sheriff's Department	Chief Deputy Steve Norlander
Jefferson	Jefferson County Sheriff's Department	Lieutenant Richard Wellner
Juneau	Juneau County Sheriff's Department	Randy Tyler
Kewaunee	Kewaunee County Sheriff's Department	Chief Deputy Dan Brusky
La Crosse	La Crosse County Emergency Dispatch Center	Jeanette Lenser, 9-1-1 Administrator
Lafayette	Lafayette County Sheriff's Department	Sergeant Joe Thompson
Langlade	Langlade County Sheriff's Department	Sergeant Brad Hendricks
Lincoln	Lincoln County Sheriff's Department	Chief Deputy Robert Lee
Marathon	Marathon County Sheriff's Department	Captain David Mason, 9-1-1 Coordinator
Marinette	Marinette County Sheriff's Department	Chief Deputy Michael Wangus
Marquette	Marquette County Sheriff's Department	Lieutenant Gary Gardner
Milwaukee	Milwaukee County Sheriff's Department	Lieutenant Esther Moore
Monroe	Monroe County Sheriff's Department	Lieutenant Charles Schwarz
Oconto	Oconto County Sheriff's Department	Chief Deputy Gregory Olson
Oneida	Oneida County Sheriff's Department	Lieutenant Thomas Hagney
Outagamie	Outagamie County Sheriff's Department	Mary Schuelke, Communications Supervisor
Ozaukee	Ozaukee County Sheriff's Department	Jeff Schmidt, Dispatch Supervisor
Pierce	Pierce County Sheriff's Department	Lieutenant Michael Knoll
Polk	Polk County Sheriff's Department	Linda Arts, 9-1-1 Coordinator

Answering <u>Point</u>	Responsible <u>Agency</u>	Contact <u>Person</u>
Portage	Portage County Sheriff's Department	Chief Deputy Richard Kostuchowski
Price	Price County Sheriff's Department	Lynn Wallace, 9-1-1 Coordinator
Racine	Racine County Sheriff's Department	Captain William Greer
Rock	Rock County 9-1-1 Communications Center	David Sleeter, 9-1-1 Director
Rusk	Rusk County Sheriff's Department	Dean Hon, 9-1-1 Coordinator
Sauk	Sauk County Sheriff's Department	Sergeant Fred Collier
Shawano	Shawano County Sheriff's Department	Sergeant William Mott, Communications Supervisor
Sheboygan	Sheboygan County Sheriff's Department	Deputy Inspector Jon Hoffmann
St. Croix	St. Croix County Emergency Communications Committee	Bruce Brantner, 9-1-1 Director
Taylor	Taylor County Sheriff's Department	Deputy Daniel Gillett
Trempealeau	Trempealeau County Sheriff's Department	Dawn Camacho, Emergency Management Director
Vilas	Vilas County Sheriff's Department	Julie Tomlanovich, Jail
Walworth	Walworth County Sheriff's Department	Sheriff Dean McKenzie
Washburn	Washburn County Sheriff's Department	Bob Hall, Emergency Management Coordinator
Washington	Washington County Sheriff's Department	Jill Raffay-Schmidt, Dispatch Supervisor
Waukesha	Waukesha County Sheriff's Department	Kaye Schwartz-Kumbier

Answering <u>Point</u>	Responsible <u>Agency</u>	Contact <u>Person</u>
Waupaca	Waupaca County Office of Emergency Government Management	Jeffrey Kubitz, Director
Winnebago	Winnebago County Sheriff's Department	Sheriff Michael Brooks
Wood	Wood County Sheriff's Department	Steve Krueser, Emergency Management Director

Table 2

Municipally Operated Answering Points

Answering	Responsible	Contact
Point	Agency	Person

Cities

Beaver Dam	Beaver Dam Police Department	Chief Lawrence Huettl
Berlin	Berlin Police Department	Gary Podoll, Green Lake County 9-1-1 Coordinator
Brodhead	Brodhead Police Department	Chief David Wickstrum
Brookfield	Brookfield Police Department	Stephan Jurasek, Telecommunicator
Burlington	Burlington Police Department	Assistant Chief Gary Large
Cedarburg	Cedarburg Police Department	James Hafemeister, Telecommunicator
Chippewa Falls	Chippewa Falls Police Department	Captain Wayne Nehring
Columbus	Columbus Police Department	Chief Anthony Brus
Cudahy	Cudahy Police Department	Chief Mark Hayes
Delavan	Delavan Police Department	Chief Lawrence Malsch
Eau Claire*	City of Eau Claire Police Department	Pam McInnis, 9-1-1 Director
Fort Atkinson	Fort Atkinson Police Department	Chief Greg Gilbert
Franklin	Franklin Police Department	Chief Norman Pollman
Glendale	Glendale Police Department	Chief Thomas Czarnyszka

* The City of Eau Claire Police Department operates a countywide answering point.

Answering <u>Point</u>	Responsible <u>Agency</u>	Contact <u>Person</u>
Green Bay	Green Bay Police Department	Captain Mike Mason, Communications Supervisor
Greenfield	Greenfield Police Department	Lieutenant William Tiegs
Hartford	Hartford Police Department	Administrative Lieutenant Ben Hopkins
Lake Geneva	Lake Geneva Police Department	Susan Jensen, 9-1-1 Coordinator
Marinette	Marinette Police Department	Sandy Becker, Office Coordinator
Marshfield	Marshfield Police Department	Barb Fleisner, Staff Services Supervisor
Menomonie	Menomonie Police Department	Chief Dennis Beety
Mequon	Mequon Police Department	Captain Jack Hockinson
Middleton	Middleton Police Department	Lieutenant Larry Foss
Milwaukee	Milwaukee Police Department	Lieutenant Debra Davidoski
Minocqua	Minocqua Police Department	Chief Robert Lee
Monona	Monona Police Department	Captain Zeno Reithmeyer
Muskego	Muskego Police Department	Lieutenant Paul Gieszler
New Berlin	New Berlin Police Department	Chief Michael Neuens
Oak Creek	Oak Creek Police Department	Lieutenant Warren Endthoff
Oconomowoc	Oconomowoc Police Department	Lieutenant Garilyn Truttschel
Platteville	Platteville Police Department	Administrative Lieutenant Tim Charles
Port Washington	Port Washington Police Department	Chief Edward Randolph

Answering <u>Point</u>	Responsible <u>Agency</u>	Contact <u>Person</u>
Racine	Racine Emergency Services	Daniel DeMatthew, Director
Rice Lake	Rice Lake Police Department	Wendy Sorum, Barron County Sheriff's Department
Ripon	Ripon Police Department	Chief David Lukoski
Shawano	Shawano Police Department	Chief Norman Jahn
Sheboygan	Sheboygan Police Department	Lieutenant Jan Reinheldt
South Milwaukee	South Milwaukee Police Department	Captain Timothy Talaska
St. Francis	St. Francis Police Department	Chief James Burgess
Stevens Point	Stevens Point Police Department	Lieutenant Brian Kudronowicz
Sun Prairie	Sun Prairie Police Department	Deputy Chief Carl Wilkenson
Tomah	Tomah Police Department	Lieutenant Wes Revels
Tomahawk	Tomahawk Police Department	Chief Jack Duplayee
Watertown	Watertown Police Department	Inspector Larry Sukow
Waukesha	Waukesha Police Department	Captain Jan Knudten, Communications Supervisor
Waupun	Waupun Police Department	Donna Smith, Dispatch Supervisor
Wausau	Wausau Police Department	Deputy Chief Paul Luoma
Wauwatosa	Wauwatosa Police Department	Chief Barry Weber
West Allis	West Allis Police Department	Chief John Butorac
West Bend	West Bend Police Department	Lee DeRuyter, Head Dispatcher
Whitewater	Whitewater Police Department	Lieutenant Thomas Guequierre

Answering <u>Point</u>	Responsible <u>Agency</u>	Contact <u>Person</u>
Wisconsin Dells	Wisconsin Dells Police Department	Chief Dean Edgington
Wisconsin Rapids	Wisconsin Rapids Police Department	Lieutenant Michael Rude
Villages		
Brown Deer	Brown Deer Police Department	Captain Steven Pokrandt
Fox Point	Fox Point Police Department	Chief Thomas Czaja
Germantown	Germantown Police Department	Susan Mourey, Communications Supervisor
Grafton	Grafton Police Department	Sergeant Dennis Kasprzak
Greendale	Greendale Police Department	Chief David Leack
Menomonee Falls	Menomonee Falls Police Department	Captain Scott Stienert
Mukwonago	Mukwonago Police Department	Chief James Frank
Sturtevant	Sturtevant Police Department	Charlotte Gottschalk, Communications Supervisor
West Milwaukee	West Milwaukee Police Department	Chief Eugene Oldenburg
Towns		
Caledonia	Caledonia Police Department	Joline Schelling, Telecommunications Coordinator
Mt. Pleasant	Mt. Pleasant Police Department	Sergeant Tom Proschaska

Table 3

Intergovernmentally Operated Answering Points

Answering	Responsible	Contact
<u>Point</u>	<u>Agency</u>	<u>Person</u>
Douglas County	Douglas County Division of Emergency Government/City of Superior Police Department	John Reichensperger, 9-1-1 Coordinator
Fond Du Lac County	Fond du Lac Sheriff's Department/City of Fond du Lac	Sergeant Mike Thome, Fond du Lac Sheriff's Department
Kenosha City/County	Joint Municipal/County	Annetta Brennan,
Joint Services	Agency	Communications Manager
Lake Area	Independent	Judy Beasley, Dispatch
Communications*	Intergovernmental Agency	Supervisor
Manitowoc County Public	Joint County/Municipal	Kay Schnell, 9-1-1
Safety Joint Services	Agency	Administrator
Tri-Communications**	Independent Intergovernmental Agency	Gary Mikulec, Administrator (Chief of Whitefish Bay Police Department)

* Lake Area Communications, located in Waukesha County, provides dispatching servicess to several municipalities, including the City of Delafield and the villages of Chenequa, Hartland, Nashotah, and Pewaukee.

** Tri-Communications, located in Milwaukee County, provides dispatching services to the Glendale, Shorewood, and Whitefish Bay police departments and the North Shore Fire Department.



APPENDIX V

9-1-1 SERVICE ORGANIZATIONS

The Association of Public Safety Communications Officials (APCO)

2040 South Ridgewood Avenue South Daytona, FL 32119 (904) 322-2500, Fax (904) 322-2501 Internet Address: http://www.apcointl.org

APCO's mission is to foster the development and progress of the art of public safety communications by means of research, planning, training, and education. APCO staff responds to information requests, coordinates an annual conference, and publishes the *APCO Bulletin*. Further, APCO provides customized education and training programs and technical and operations publications to its members. The Wisconsin APCO Chapter President is Annetta Brennan, Communications Manager, Kenosha City/County Joint Services, (414) 605-5001.

The National Emergency Number Association (NENA)

47849 Papermill Road Coshocton, OH 43812 (614) 622-8911, Fax (614) 622-2090 Internet Address: http://www.nena9-1-1.org

NENA's mission is to foster the technological advancement, availability, and implementation of a universal emergency telephone number system by promoting research, planning, and education. NENA offers several products, including books, publications, and training videos and courses, aimed at improving provision of 9-1-1 service. The Wisconsin-NENA Chapter President is Richard Ellingson, Operations Manager, Dane County Communications Center, (608) 267-3912.

