

National Rural Health Association

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Recruitment and Retention of a Quality Health Workforce in Rural Areas

A Series of policy papers on The Rural Health Careers Pipeline

Number 12: Emergency Medical Services

Introduction and Background

The traditional goal of prehospital emergency medical services (EMS) has been to provide immediate medical assistance and rapid transportation to the closest hospital. The traditional definition of EMS is the delivery of prehospital health care to patients with real or perceived emergencies from the time of emergency communication access until arrival and transfer of care at a hospital.¹ This role has grown significantly, and in many systems, EMS is now a full partner in the identification, implementation and coordination of acute patient treatment so the most seriously injured or ill are quickly and efficiently triaged to the closest appropriate medical facility. In some communities EMS has even become a part of injury and chronic illness prevention, as well as rehabilitative care.

The emergency health care system is now widely regarded as including the full spectrum of emergency care from recognition of the emergency, telephone access of the system, provision of prehospital EMS care, to definitive care in the hospital. It also includes medical response to disasters, planning for and providing medical coverage at mass gatherings, and interfacility transfers of patients.

The success of this system of care can depend greatly on where in the US it exists. Compare providing emergency medical care to a couple of hundred thousand people in a 200 square mile area versus 200 people in a couple of hundred square mile area. While most concerns regarding the delivery of services in the former

are more widely reported – it is the latter situation that can bring the most logistical challenges. The success of rural and frontier EMS response depends, in large part, on appropriate integration of health care resources at local, regional and state levels.

Seventy-five percent of the nation's geography is rural and frontier.² Over 56 million Americans, 25 percent of the population, live in an area that meets the federal definition of rural.³ The people who reside in these locations, as well as the private and commercial traffic that travels through these regions, have the same emergency health care needs as their counterparts living in urban and suburban areas.

The day-to-day realities of EMS systems in rural and frontier environments are vastly different when contrasted with their urban and suburban counterparts. Poorly defined geographical boundaries, low population density and call volumes, elongated response and transport times, the need for more well-established communication infrastructure over remote areas, and the lack of acute or specialty care facilities are all factors that impact operations. These facets can also widen the disparity between the services delivered and the public's expectations.⁴ To add to all the factors mentioned above is the recently demonstrated need for EMS readiness and response planning for emerging infections (SARS, etc.) and the possibility of natural disasters and terrorist events.

Workforce Issues

*The Rural and Frontier EMS Agenda for the Future*⁵, *the Rural EMS Initiative*⁶ and numerous other state assessments and position papers from national organizations have assisted in identifying the difficulties facing the rural and frontier EMS environment and made strides in bringing about an understanding of this critical component of the health care system. While some of these issues are not unique to just these remote areas, they are more persistent and inherent. These challenges include:

- Difficulty in recruiting and retaining an adequate number of both volunteer and career providers of all skill levels: (First Responder, Emergency Medical Technician-Basic, Emergency Medical Technician – Intermediate and Emergency Medical Technician – Paramedic.

Very few small communities have paid EMS services. As of 2005, volunteer providers respond to medical emergencies in over 50 percent of the country. Even in those rural and frontier areas that do have career services, salaries are often not commensurate with the cost of living and providers are easily lured elsewhere with the promise of higher pay. Contributing to the staffing shortfalls are issues such as overall direct and indirect training costs; time commitments for initial and continuing training; low pay/decreased benefits; long hours; a decrease in the pool of volunteers; difficulty getting time off from other employers; and, low-volume work. Retention of personnel in these systems is also hampered by a lack of a satisfactory career ladder, inadequate or unskilled leadership, and insufficient technical support or equipment for training.

- Financial considerations strain provider ability to adequately compensate staff.

Nationwide Medicaid and Medicare reimbursement for EMS continues to be inadequate to cover real costs. The financial portfolio for EMS systems varies from one system to the next. For most systems, financial support for providing EMS comes from a combination of government subsidies and reimbursement from insurance companies. Among those that

bill insurers, reimbursement from Medicare constitutes 41 percent, a majority, of all reimbursement.⁷ Lack of know-how and resources prevent many rural systems from billing for reimbursement.⁸ For systems that do bill, there is no guarantee of reimbursement.^{9,10} Further complicating the financial portfolio of rural and frontier EMS systems is the reality that most responses and transports involve long travel distances and high operating expenses. These and other financial considerations combine to limit what rural EMS systems can do to adequately compensate staff. Additionally, the current EMS reimbursement system is built upon perverse incentives, such as paying for transport instead of the health services provided, and limiting the facilities to which patients can be transported.

- Training/educational issues.

Rural and frontier areas experience longer distances for providers and instructors to travel to receive or deliver critical initial and continuing training. The application of newer technologies such as video interactive learning, internet or telemedicine based training and satellite television classes can address some of these issues. Some of these courses are in development or already available using diverse distance delivery models. According to the National Center for Educational Statistics, over three million students enrolled in 127,400 different distance courses between 2000 and 2001.¹¹ Recent data show a threefold increase between 2000 and 2004 in the number of undergraduate students taking an entire program using distance education resources. EMTs and paramedics are being bombarded with numerous opportunities for attaining initial and continuing education outside of the traditional classroom setting.¹² Anecdotal evidence suggests EMTs and paramedics working or residing in rural or frontier areas do not take full advantage of these resources. Development and dissemination of these resources for EMS education purposes should be evaluated and improved where necessary.

- Distances to definitive care often requires a more skilled provider.

As rural and frontier medical facilities are traditionally smaller, located farther apart and have fewer technical capabilities than those located in more metropolitan areas, there is more of a need to bring advanced clinical treatment modalities and interventions to the prehospital environment. This includes, but is not limited to, the ability to capture and transmit 12-lead EKGs, the screening for and administration of thrombolytic agents and an increased dependence on aero medical evacuation for both medical and trauma patients.

- Obtaining adequate medical oversight is problematic.

The lack of qualified medical oversight in rural and frontier EMS systems is a major concern in a number of states. While local non-emergency physicians often fill the need, these doctors often lack the training, interest or incentives (including compensation) to participate actively as EMS medical directors. In fact, EMS personnel may be the only health care providers and must seek medical direction from physicians many miles away – sometimes hundreds.¹³ This situation increases the challenge by limiting the opportunities for training, quality improvement activities and personal interaction between EMS medical directors and local EMS providers.

Recommendations

1. EMS: The Under-Developed Resource

The National Rural Health Association (NRHA) believes that all communities should have comparable levels of EMS preparedness and response. Whether provided by volunteer or career services, by governmental agencies or the private sector, this is a basic health need. The following recommendations will define workforce needs that are matched to community need:

- **Rural communities** (those with clinics and hospitals and those without) should complete a health care needs assessment and then build a system that matches the role of EMS personnel to meet those needs.
- **States** should examine and modify their current Basic and Advanced Life Support proto-

cols¹⁴ to better meet the needs of rural and frontier communities. States should integrate EMS programs into health care education pipeline programs beginning at the secondary school level. States should adopt a nationally consistent definition of “volunteer” for EMS personnel.

- **Federal agencies** should continue to recognize the unique issues of rural and frontier communities, embrace policies that are rural-friendly, remove disincentives, and provide incentives for states (including model state legislation) to implement these policies.
- **NRHA, the National Organization of State Offices of Rural Health (NOSORH) and the Rural EMS & Trauma Technical Assistance Center (REMSTTAC)** should remain engaged in the rural component of NHTSA’s EMS Workforce Agenda for the Future. They should also continue participation in the International Roundtable on Community Paramedicine to encourage adoption of internationally successful expanded scope and expanded service models in the United States.
- **Congress** should provide funding to create and implement innovative pilot programs supporting these recommendations. Congress should also assure rural and frontier EMS careers are categorically eligible for federal funds that support health care workforce development.

2. EMS: The Under-Funded Resource

The NRHA supports grant programs that bring necessary equipment and training to the underserved rural and frontier communities and cost-based rural ambulance reimbursement. The following recommendations will assure funding for an adequate workforce that is matched to community need:

- **Rural communities** should assure their EMS agencies are incorporated under an appropriate model and community leaders should assume roles as board members of these corporations. As volunteer systems become more difficult to maintain, transition to paid services must be considered.
- **States** should assure the EMS is included in the statutory minimum benefit set for

Medicaid programs – and in the required benefit set for insurance companies and managed care organizations that they regulate. States should also consider adopting specialized funding mechanisms to support rural and frontier ambulance services.

- **Federal agencies** should assure, where flexibility exists, payment policies for rural and frontier ambulance services reflect the increased cost due to an inherent cost of readiness and low volume, and assure that ambulance services can recover their costs related to Homeland Security and disaster-related events through grant programs.
- **NRHA, NOSORH and REMSTTAC** should develop and make readily available tools to assist rural and frontier ambulance services in identifying costs; preparing budgets; accounting; and, identify reimbursement best practices.
- **Congress** should pass legislation assuring that rural areas are appropriately identified for federal program reimbursement, for cost-based Medicare reimbursement, to alleviate the burden of un-due taxes, and to assure EMS agencies are eligible participants in grant programs whenever possible. Reverse reimbursement incentives should be eliminated; ambulance payment policy should encourage treat and release and transportation to the most appropriate facility, including physician clinics and free-standing urgent care centers.

2. EMS: The Under-Technolized Resource

The NRHA believes improvements in the infrastructure and technology of EMS communications systems — including improved internet access, the adoption of remote patient monitoring and transmission devices, better links to telemedicine and distance learning resources, the dissemination of electronic EMS patient care record keeping technologies, and enhanced training of EMS dispatchers — are a critical necessity. The following recommendations will improve access to an adequately funded workforce with reduced risks, having modern technology, matched to community need:

- **Rural communities** should assure that timely dispatch of EMS resources is accomplished,

there is coordination among EMS and other public safety agencies and at least basic access to medical direction is in place.

- **States** should oversee the 100 percent implementation of enhanced (E-9-1-1) and wireless enhanced (WE-9-1-1) access statewide.
- **Federal agencies** should assure that unless explicitly excluded by Congress, rural EMS agencies have full access to technology grants and technical assistance
- **NRHA, NOSORH and REMSTTAC** should collect and distribute rural ambulance technology best practices.
- **Congress** should assure that rural ambulance services can access the Universal Service Fund and other technology grant programs.

3. EMS: The Under-Supported Resource

The NRHA encourages State and regional EMS entities to take the lead role in developing specific outreach efforts for training and supporting rural and frontier physicians to serve as EMS medical directors, including the use of distance learning techniques and employing multiple methods of delivering a national standard medical direction curriculum. The following recommendations will improve access to an adequately funded workforce with reduced risks, having modern technology, with appropriate medical oversight, matched to community need:

- **Rural communities** should identify local funds to pay EMS medical directors for their service.
- **States** should encourage the maximum use of licensed and certified health personnel (such as Nurse Practitioners and Physician Assistants), who are credentialed at a level greater than the community EMS personnel and have completed medical direction courses using the national standard curriculum, to assist in the supervision of EMS personnel under the direction of a physician at more distant sites.
- **Federal agencies** should provide technical assistance to communities and ambulance services for obtaining adequately trained medical direction resources, including web-

based access to a national standard course. EMS medical directors should be engaged in writing grant guidance for programs EMS agencies are eligible applicants for, and in grant reviews.

- NRHA, NOSORH and REMSTTAC should assure that communities and ambulance services are aware of the national standard training materials and how to access them.
- **Congress** should assure that EMS medical direction physicians are engaged in all appropriate Homeland Security and Bioterrorism advisory committees, as well as all federally sponsored EMS training academies.

Summary

Emergency Medical Services are not a “one size fits all” proposition. The recently published Rural and Frontier EMS Agenda for the Future from

the National Rural Health Association has increased the overall awareness of government policymakers around the country of the distinctive workforce features and issues facing rural and frontier EMS systems. It has presented realistic recommendations for needed improvements to the prehospital services in these environments. Government and community leaders, rural health practitioners and policy makers of all levels who interact with EMS systems, as well as rural and frontier EMS providers and system managers themselves, would also be well served to read this important document.

As recently as 2003, the lack of any federal government initiative to address the myriad of problems faced by rural and frontier EMS was clearly identified and with it came a call for further development of rural EMS by state and local governments.¹⁵

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³ Becknell, J. et. al. EMS in Rural America. *Emergency Medical Services*. Nov. 2002 Vol. 31, Number 11, pp. 41-48

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⁹ Hauswald M, Jambrosic M. Denial of ambulance reimbursement:—Can reviewers determine what is an emergency? *Prehosp Emerg Care*. 2004;8:162-165.

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¹¹ U.S.Department of Education and National Center for Education Statistics. Distance Education at Degree-Granting Postsecondary Institutions: 2000-2001. Tiffany Waits, Laura Lewis. NCES 2003-017, 1-95. 2003. Washington, DC, U.S. Department of Education.

¹² Bruce ML, Klonoski E. Schools Out! The pros and cons of distance education in EMS. *Emerg Med Serv.* 2004;33:49-54.

¹³ U.S.Congress, O T A. Rural Emergency Medical Services - Special Report. OTA-H-445, 1-97. 1989. Washington, D.C., U.S. Government Printing Office.

¹⁴ Training curriculums have been developed to prepare emergency responders for working in rural and remote environments – such as the Wilderness EMT (WEMT) program offered by Wilderness Medical Associates and UCLA as well as the nationally recognized Cornell University Farmmedic program – should serve as a cornerstone for these educational efforts.

¹⁵ Knott, A. Emergency medical services in rural areas: the supporting role of state EMS agencies. *Journal of Rural Health.* 2003 Fall; 19(4):492-6.

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