Analysis and Evaluation

Utilization of Licensed Healthcare Professionals on Ambulances

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House Substitute for Senate Bill 112 of the 2015 Legislative session required the Emergency Medical Services Board to conduct this analysis and evaluation of state law and county regulations as to the current and future utilization of licensed health care professionals, other than those EMS certified providers, to provide emergency health care services on ambulances.

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Acknowledgements

The Kansas Board of EMS would like to thank the following Kansas licensed ambulance services for their time and effort in completing the Service Survey utilized for this report. Without their input and expertise, this report would have been extremely difficult to complete within the timeframe allowed. Thank you!! *(Services are listed in alphabetical order by EMS Region)*

Region 1 – NW Kansas

Cheyenne County Ambulance
Decatur County Ambulance
Ellis County EMS
Logan County EMS
Northwest Kansas Ambulance
Norton County EMS
Phillips County EMS
Plainville Ambulance Service
Quinter Ambulance Service
Rush County EMS
Russell County EMS
Sheridan County EMS
Thomas County EMS
Trego County EMS
Wallace County Ambulance

Region 2 – SW Kansas

Ford County Fire & EMS
Grant County EMS
Gray County EMS
Greeley County Ambulance
Hamilton County EMS
Haskell County Ambulance
Hodgeman County Ambulance
Kearny County EMS
Meade County EMS
Morton County EMS
Scott County EMS
Stanton County Ambulance
Stevens County EMS

Region 3 – SC Kansas

Arkansas City Fire/EMS
Barber County Ambulance
Belle Plaine EMS
Burrton CFD #5
Butler County EMS
Claflin Ambulance Assoc.
Clearwater EMS
Comanche County Ambulance
Conway Springs Volunteer EMS
EagleMed LLC
Edwards County Ambulance
Great Bend Fire/EMS
Halstead Fire/EMS

Region 3 – SC Kansas (cont)

Haven Community EMS
Hesston Ambulance
Hoisington Ambulance
Hutchinson Reg Med Ctr / Reno Co EMS
Kiowa County EMS
Larned EMS
Lindsborg EMS
Marion County EMS
Marquette Ambulance
McPherson EMS
Medicine Lodge Memorial Hosp. Amb.
Moundridge EMS
Mulvane EMS
Newton Fire/EMS
Norwich Ambulance
Pratt County EMS
Pretty Prairie Ambulance
Rice County EMS
Sedgwick County EMS
Stafford County EMS
Wellington Fire/EMS

Region 4 – NC Kansas

Clay County EMS
Clifton City Ambulance
Clyde Community Ambulance
Concordia Fire/EMS
Ellsworth County EMS
Life Touch EMS Inc
Lincoln County Ambulance
Miltonvale Ambulance
Mitchell County EMS
Republic County EMS
Salina Fire Department
Smith County EMS

Region 5 – NE Kansas

American Medical Response
Axtell Community Ambulance
Bonner Springs Ambulance
Chase County EMS
Doniphan County RFD #2
Edwardsville Ambulance
Fire District #11 EMS

Region 5 – NE Kansas (cont)

Frankfort Ambulance Service
Franklin County EMS
Horton EMS
Jackson County EMS
Johnson County Med-Act
Junction City Fire Department
Kansas City Kansas Fire Department
Linn City Ambulance
Lyon County City of Emporia Fire
Miami County EMS
Osage County EMS
Pottawatomie County EMS
Riley County EMS
Sabetha Emergency Service
Seneca EMS
Washington EMS

Region 6 – SE Kansas

Allen County EMS
Cherokee County Ambulance Assoc.
Cherokee County Ambulance Dist #3
Cherryvale EMS
Coffeyville Reg Med Ctr EMS
Elk County EMS
Independence Fire/EMS
Labette Health EMS
Mercy EMS Fort Scott
Neodesha Ambulance
Neosho Mem Reg Med Ctr Ambulance
Transcare of KS LLC
Woodson County Ambulance

Out of State

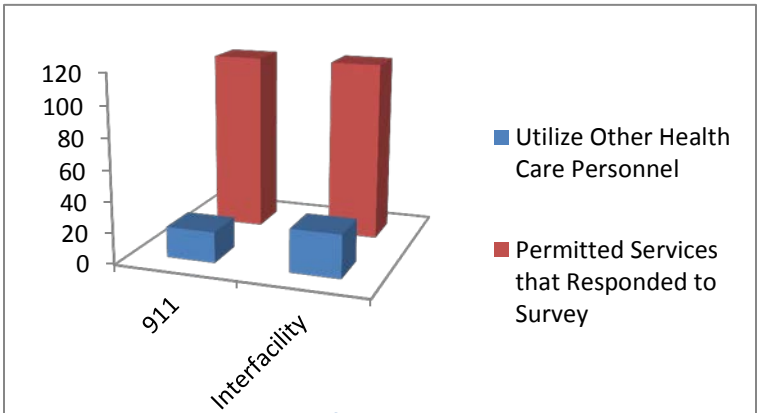
Miller EMS LLC (also responds in Region 3)

5 services wishing to remain anonymous

Executive Summary

House Substitute for Senate Bill 112 of the 2015 Legislative session required the Emergency Medical Services Board to conduct an analysis and evaluation of state law and county regulations as to the current and future utilization of licensed health care professionals to provide emergency health care services on ambulances. This analysis shall include a cost analysis as well as the current utilization of licensed health care professionals to staff ambulances, other than the certified EMS professionals, and the findings reported to the house committee on appropriations prior to the first day of the 2016 legislative session.

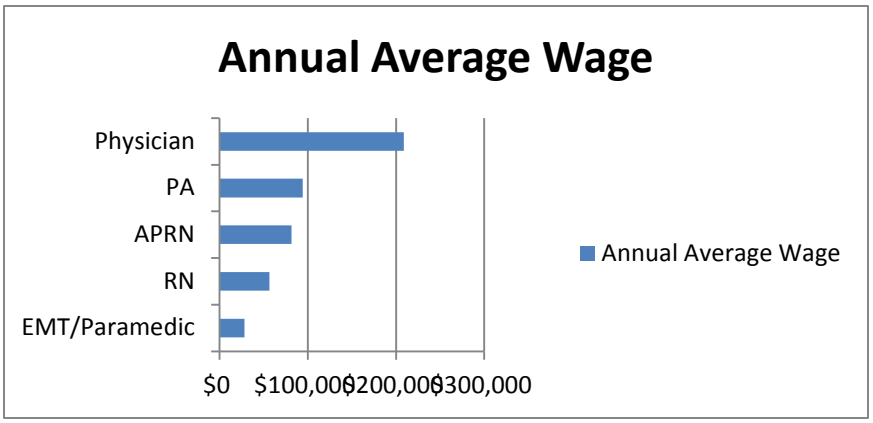
Current statute and regulation allow for the utilization of some licensed health care professionals to provide emergency health care services on ambulances. Those licensed health care professionals currently allowed are: physicians, physician assistants, advanced practice registered nurses, and professional nurses. There have been no significant changes in statute regarding staffing since the governance of EMS within Kansas began in 1975. Although these other licensed health care providers are currently allowed, very few ambulance services utilize this level of care. The use of other licensed health care providers occurs more frequently for interfacility transports, but its occurrence is rare.



Current Utilization of Other Health Care Providers

Some local jurisdictions have enacted local codes, ordinances, or resolutions that pertain to ambulance staffing, but none were found that further limit or restrict staffing of an ambulance or conflict with current state statute or regulation.

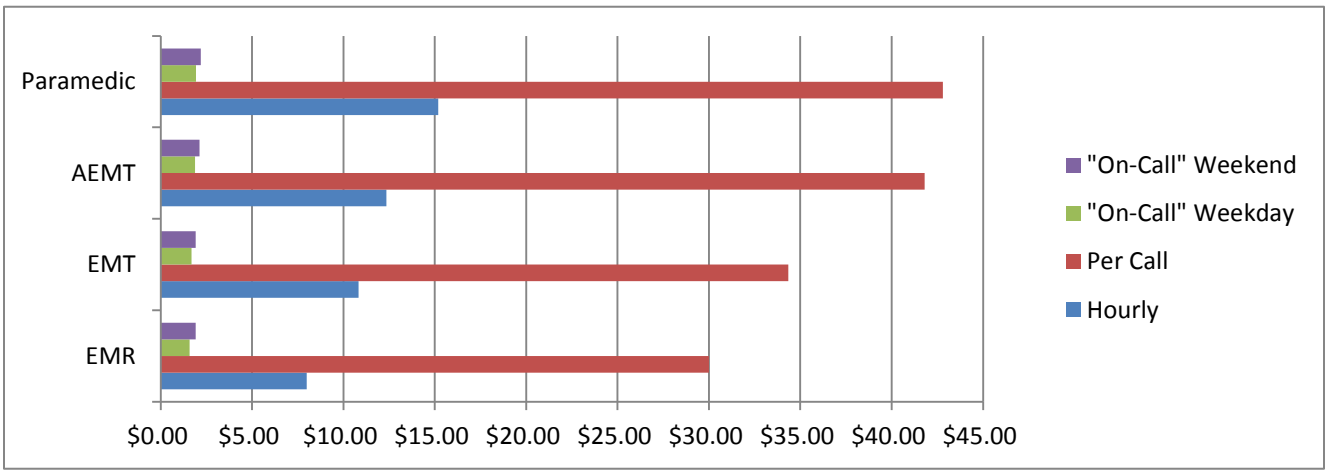
The current legislative requirements for ambulance staffing allow for the most cost-effective delivery model of prehospital or 911 emergency medical care. However, the current legislative requirements for ambulance staffing on *interfacility* transports may not provide for the most cost-effective delivery model for maintenance of physician level care during transportation, in all instances. In these situations, the most cost-effective model is to scale the provider to the care necessary to be provided, or maintained, during transportation. Regulatory revisions are in process to address the ability to meet this more cost-effective model for interfacility transports.



EMS certified personnel are among the least monetarily compensated occupational groupings of health care providers within the state of Kansas. The Kansas Department of Labor reports that the average Emergency Medical Technician / Paramedic earns approximately 50% less than an average Registered Nurse annually.

Other variables exist when it comes to the utilization of other licensed health care providers and include, but are not limited to: availability of resource; compensation and budgetary support; willingness to volunteer/work; education upon scene management; liability of providing care; EMS service willingness to employ; and physician oversight of non-EMS certified personnel.

Compensation patterns for the emergency medical services workforce are not consistent. This is due in part to the wide variance of full-time employees, part-time employees, and a volunteer workforce.



Successful utilization of other health care providers in lieu of EMS certified providers must address:

- Working for similar compensation as EMS certified providers or increasing budgetary support to compensate appropriately;
- Addressing the knowledge gap in ambulance operations, orientation, scene management, etc.;
- Educating upon the limitations of standing orders/protocols and internal policies/guidelines in order to reduce inadvertently placing liability upon the license of the other health care provider;
- Establishing appropriate physician oversight of other health care providers;
- Recruiting of these other health care providers to respond as part of the ambulance service; and
- Scaling of response in order to utilize the most appropriate provider for the care needed.

Ambulance service is not necessarily limited to the provision of emergency health care only during transportation. In many instances, the provision of care begins with the initiation of the ambulance service to respond. EMS providers are specifically trained to take information from multiple sources, to decipher this information, to form a preliminary care plan (based upon physician input through medical protocols), and to execute the care plan. Many times, this occurs in sub-optimal conditions in unsecured locations with the potential for hazards present and with a limited amount of equipment and manpower. EMS providers differ from other health care professionals in that EMS providers are specifically trained, and continuously practice, to provide emergency medical care in these specific types of situations in addition to the provision of care during transportation.

Emergency Medical Services has transformed in both service lines and value over time. Emergency Medical Services began as only a means of quick transportation and are now becoming more integrated into health care and are meeting an identified gap in the current health care system. With this transformation, the utilization of other health care providers to assist with the provision of patient care is anticipated to increase as necessary to meet the needs of the patient and of the overall health care community.

Methods

The Kansas Board of EMS developed a survey to obtain current utilization of other healthcare providers in the prehospital transport setting and interfacility transport setting. This survey tool also asked for compensation data utilized for the cost analysis portion of this report. This 25 question survey was sent out to all 169 ambulance services that were licensed as of August 1, 2015. This survey was made available via Survey Monkey for completion. Each service director was allowed to email, fax, or mail in the completed survey or complete the survey via Survey Monkey. All completed surveys not completed within Survey Monkey were hand entered by Kansas Board of EMS staff and verified for completeness and accuracy. There were 116 responses received – 103 via Survey Monkey and the other 13 via email, fax, or U.S. mail – Statewide response rate was 68.6%. A breakdown of response rate via EMS region follows:

Region 1 – 14 of 20 services – 70%
Region 2 – 13 of 19 services – 68.4%
Region 3 – 35 of 47 services – 74.5%
Region 4 – 12 of 17 services – 70.1%
Region 5 – 23 of 40 services – 57.5%
Region 6 – 13 of 18 services – 72.2%
Out of State – 1 of 8 services – 12.5%
Unknown – 5 services

A search of HeinOnline was completed to find all previous versions and amendments of Kansas statute pertaining to ambulance staffing. This search yielded previous versions and all session law pertaining to K.S.A. 65-4326 and K.S.A. 65-6135.

A search of previous versions of the Kansas Register from the Kansas Secretary of State was completed to find all previous versions and amendments of Kansas administrative regulations pertaining to ambulance staffing. This search yielded previous versions and amendments to K.A.R. 109-2-7 and K.A.R. 109-2-11.

A search of HeinOnline was completed to find federal rules and regulations pertaining to ambulance staffing and yielded 42 CFR 410 Ch. IV (10-1-14 Edition) and 42 CFR 414 Ch. IV (10-1-14 Edition). Specifically sections 410.40, 410.41, and 414.605.

A search of municipal codes and ordinances was initially completed via a web search on MuniCode. If unable to be found on MuniCode, county and/or city clerks were contacted to obtain copies of county and/or city ordinances pertaining to emergency medical services, if available.

The Occupational Employment and Wage Rates (OES) for Multiple Occupations in Kansas in 2014 report obtained from the Kansas Department of Labor was utilized for wage and cost analysis of the health care provider occupational classes.

The Centers for Medicare and Medicaid Services (CMS) Benefit Policy Manual – Chapter 10 (Ambulance Services) was obtained for the purposes of this study.

History of Emergency Medical Services (EMS)

In 1966, the National Academy of Sciences published a paper entitled "Accidental Death and Disability: The Neglected Disease of Modern Society." This paper very simply stated that people were perishing from preventable accidents and from survivable injuries at an alarming rate due to a lack of access to urgent medical care. This was published based upon facts that most people did not have basic first aid training and that those that had some basic training had little to no training for CPR, childbirth or other life saving techniques. This grouping of people included law enforcement, fire departments, and many ambulance services.

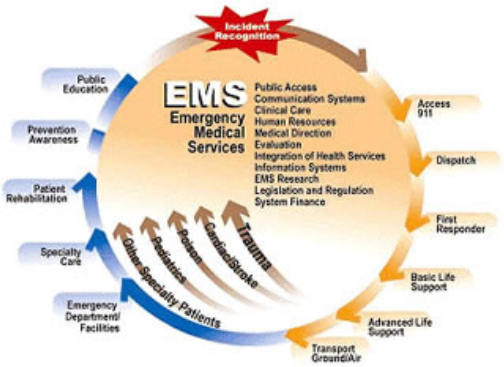
1957 Ford Mainline Ambulance

In order for a service line to be effectively delivered, it must have expected value(s). Before this paper was published, ambulance service operators were focused on a primary service line of transportation. The values associated with this service line were fast response to an emergency and fast transportation to an emergency care facility. Services were not focused on providing patient care. Most ambulance services were operated by the local funeral home and there was little to no patient care provided during transportation.

This 1966 paper sparked the birth of modern EMS and led to the passage of the EMS Systems Act of 1973. This added the value of the appropriate handling of the ill or injured and the administration of stabilizing care and some life-saving emergency treatments in an organized system of emergency care to rapid response and transportation.

In 1973, a visionary trauma surgeon joined the University of Kansas - School of Medicine as an Academic Associate Professor of Surgery. This physician, Dr. Norman McSwain, is credited with establishing a standardized and statewide curriculum and training for emergency medical technicians within Kansas and for guiding the development and implementation of a national curriculum for EMTs and Paramedics and the development of a national certification examination. By 1977, 1 out of every 500 hundred Kansans (including the entire Kansas Highway Patrol) was trained as an EMT and 90% of the population was covered by paramedic quality care with response times within 10 minutes. Today, approximately 1 out of every 200 hundred Kansans are EMS certified.

During the late 1970's and through the 1980's, a revised set of EMS values were considered, but never took on a strong following. States were trying to establish governance of EMS and legislation resorted to focusing on the service lines of medical transportation and emergency medical intervention. This revised set of EMS values added prevention and rehabilitation and further defined the existing service lines. Prevention was defined as the ability to prevent injuries and emergency illnesses from occurring. Rehabilitation was defined as the ability to provide care to prevent the reoccurrence of the injury or emergency illness. The values for Response and Transportation were further defined to include the ability to respond rapidly to emergencies when prevention failed and to mitigate the impact of the evolving condition.



EMS System Vision

This revised set of EMS values reappeared in the 1996 EMS Agenda for the Future in which EMS was requested to consider adding service lines and therefore value to its communities served through a system of community-based health management. A system that is fully integrated with the overall health care system with an ability to identify and modify illness and injury risks, an ability to provide acute illness and injury care and follow-up, and the ability to contribute to the treatment of chronic conditions and community health monitoring.

Nearly 20 years after this revised set of EMS values first reappeared, this thought of complete health system integration has continued to remain the priority. Staffing is a small component of this integration plan, but the future of EMS and community based health management relies upon access to individuals with the skills, training, and knowledge to mitigate illnesses and injuries.

As part of the integration into a system of health care, EMS services and agencies will need to assess current staffing strategies and solutions in order to meet the ever-changing demands of their patients' needs. The state will need to continue to reassess statutes and regulations to ensure that appropriate patient care and access to appropriate patient care remain as priorities when addressing staffing requirements of an ambulance service.

Comments on image:

This is a picture of the University of Texas Health Science Center at Houston (UT Health) mobile stroke unit. Mobile stroke units are ambulances that are equipped with Computed Tomography scanners (CT scanners) and have a capability to send the image and data directly to a radiologist for an immediate confirmation of the results. This specific unit also has the capability of telemedicine (as noted by the tablet towards the top of the image). This telemedicine capability allows the physician provider to physically view the patient and interact with the patient throughout transport to the facility.

Time is of the essence in stroke patients and CT scans are the tool utilized to confirm a definitive diagnosis of either a stroke caused by a blood clot or a stroke caused by an internal bleed. If the stroke is determined to be caused by a blood clot, a medication to "bust" the clot can be administered. This medication must be given within the first three hours of the first signs of the stroke and earlier administration has shown increased benefit.

2015 Mobile Stroke Unit Ambulance - UT Health

State Legislative History for Staffing

Summary

In the 40 years of governance over Emergency Medical Services within the state of Kansas, minimal statutory or regulatory changes have occurred in the staffing requirements of an ambulance and have revolved around terminology changes. Staffing has been the utilization of 2 attendants, where 1 attendant had to be certified as an EMS provider or licensed as another healthcare provider (specifically a physician, a physician assistant, or a registered nurse). For the past 30 years, statute and regulation have dictated that the EMS provider or other licensed healthcare provider be present within the patient compartment and providing care during transportation. Currently proposed legislation (HB 2387) reduces confusion by utilizing the definition of "attendant" to mean an individual certified by the Kansas Board of EMS and allows for a physician, physician assistant, advanced practice registered nurse, or professional nurse to provide emergency medical care for a permitted ambulance service.

Statutory and Regulatory History

April 21, 1975 – K.S.A. 65-4326 was created by SB 204 of the 1975 Kansas Legislature (L. 1975, ch. 335, § 13) stating:

"(a) All ambulance services providing emergency care as defined by the rules and regulations adopted by the secretary of health and environment shall offer service twenty-four (24) hours per day every day of the year and shall staff each vehicle with at least two (2) attendants.

(b) Whenever an operator is required by section 4 to have a permit, at least one attendant on each vehicle used by such operator in his ambulance service shall be an attendant certified pursuant to section 8, a licensed physician, a registered physician's assistant or a registered nurse."

May 11, 1978 – K.S.A. 65-4326 was amended by SB 963 of the 1978 Kansas Legislature (L. 1978, ch. 253, § 6) to remove the minimum staffing of at least two attendants stating:

"(a) All ambulance services providing emergency care as defined by the rules and regulations adopted by the secretary of health and environment shall offer service twenty-four (24) hours per day every day of the year.

(b) Whenever an operator is required by K.S.A. 1977 Supp. 65-4317 to have a permit, at least one attendant on each vehicle licensed by such operator to provide emergency service in his or her ambulance service shall be an attendant certified as an emergency medical technician or a mobile intensive care technician pursuant to K.S.A. 1977 Supp. 65-4321, as amended, a licensed physician, a registered physician's assistant or a registered nurse."

May 7, 1984 – K.S.A. 65-4326 was amended by SB 831 of the 1984 Kansas Legislature (L. 1984, ch. 244, § 18) to switch from the secretary of health and environment to the EMS council stating:

"(a) All ambulance services providing emergency care as defined by the rules and regulations adopted by the council shall offer service twenty-four hours per day every day of the year.

(b) Whenever an operator is required by K.S.A. 65-4317 and amendments thereto to have a permit, at least one attendant on each vehicle licensed by such operator to provide emergency service in the ambulance service shall be an attendant certified as an emergency medical technician or a mobile intensive care technician

pursuant to K.S.A. 65-4321 and amendments thereto, a licensed physician, a registered physician's assistant or a registered nurse."

May 1, 1985 **–** K.A.R. 109-2-7 became effective - authorized by K.S.A. 1984 Supp. 65-4320, implementing K.S.A. 1984 Supp. 65-4326. This regulation named five classes of ambulance vehicles in the state and detailed staffing for each class of ambulance as follows:

- Type I – Staffed with at least two attendants during patient transport, including at least one currently certified mobile intensive care technician. The second attendant may be either a currently certified emergency medical technician or currently certified mobile intensive care technician.
- Type II – Staffed with at least one currently certified emergency medical technician and one other person trained in cardiopulmonary resuscitation and first aid care approved by the director. An emergency medical technician shall be in the patient compartment during patient transport.
- Type III – Staffed at all times with at least two persons. A person trained in cardiopulmonary resuscitation and first aid care approved by the director shall be in the patient compartment during transport.
- Type IV – Staffed with at least one currently certified emergency medical technician and one other person. The emergency medical technician shall be in the patient compartment during patient transport.
- Type V – Staffed with a driver or pilot and at least one attendant who shall be a licensed physician, a registered nurse, or a certified mobile intensive care technician.

May 1, 1987 **–** K.A.R. 109-2-7 was amended. The amendments that pertained to staffing altered Type IV and Type V as follows:

- Type IV – Staffed with at least one currently certified emergency medical technician and one other person trained in cardiopulmonary resuscitation and first aid care approved by the director. The emergency medical technician shall be in the patient compartment during patient transport.
- Type V – Staffed with a driver or pilot and at least two attendants, one of whom shall be a licensed physician, a registered nurse, or a certified mobile intensive care technician. The second attendant shall be a licensed physician, a registered nurse, a certified mobile intensive care technician, or a registered respiratory therapist. All attendants shall be certified in advanced cardiac life support, or shall be eligible for board certification in their specialty.

July 15, 1987 – K.A.R. 109-2-7 was amended temporarily. This amendment added a sixth class of vehicle (Type II-D) with staffing requirements as follows:

- Type II-D – Staffed with at least one currently certified emergency medical technician – defibrillator and one currently certified emergency medical technician. An emergency medical technician – defibrillator shall be in the patient compartment during patient transport.

April 14, 1988 – K.S.A. 65-6135 was created by Sub HB 2639 of the 1988 Kansas Legislature (L. 1988, ch. 261, § 35). This bill also repealed K.S.A. 65-4326. K.S.A. 65-6135 read:

"(a) All ambulance services providing emergency care as defined by the rules and regulations adopted by the board shall offer service 24 hours per day every day of the year.

(b) Whenever an operator is required to have a permit, at least one person on each vehicle providing emergency medical service shall be an attendant certified as an emergency medical technician or mobile intensive care technician, a person licensed to practice medicine and surgery, a registered physician's assistant or a registered professional nurse."

May 1, 1988 – K.A.R. 109-2-7 was amended. This amendment pertained to the Type II-D class and released the requirement that the other person be a currently certified emergency medical technician as follows:

- Type II-D – Staffed with at least one currently certified emergency medical technician – defibrillator and one other person trained in cardiopulmonary resuscitation and first aid course approved by the director. An emergency medical technician – defibrillator shall be in the patient compartment during patient transport.

April 27, 1989 – K.S.A 1988 Supp. 65-6135 was amended by HB 2079 of the 1989 Kansas Legislature (L. 1989, ch. 205, § 2) to add emergency medical technician – intermediate and emergency medical technician- defibrillator into paragraph (b) to read as follows:

"(b) Whenever an operator is required to have a permit, at least one person on each vehicle providing emergency medical service shall be an attendant certified as an emergency medical technician, emergency medical technician-intermediate, emergency medical technician-defibrillator or mobile intensive care technician, a person licensed to practice medicine and surgery, a registered physician's assistant or a registered professional nurse."

July 17, 1989 – K.A.R. 109-2-7 was amended. This amendment pertained to removing 3 classes of ambulance vehicles leaving type I, II, and V as follows:

- Type I – Staffed with at least two attendants during patient transport, including at least one currently certified mobile intensive care technician. The second attendant may be either a currently certified emergency medical technician, emergency medical technician-intermediate, emergency medical technician-defibrillator, or mobile intensive care technician.
- Type II – Staffed with at least one currently certified emergency medical technician and one other person trained in cardiopulmonary resuscitation and first aid care approved by the board. An emergency medical technician, emergency medical technician-intermediate, or emergency medical technician-defibrillator shall be in the patient compartment during patient transport.
- Type V – Staffed with a driver or pilot and at least two attendants, one of whom shall be a licensed physician, a registered nurse, or a certified mobile intensive care technician. The second attendant shall be a licensed physician, a registered nurse, a certified mobile intensive care technician, or a registered respiratory therapist. All attendants shall be certified in advanced cardiac life support.

August 27, 1990 – K.A.R. 109-2-7 was amended. This amendment changed staffing for the type II class and added an alternative for advanced cardiac life support in the type V class as follows:

- Type II – Staffed with at least one currently certified emergency medical technician and one other person certified by the American Heart Association in "Course C," or the American Red Cross in "Professional Rescuer" and certified in basic first aid care by the American red cross on and after January 1, 1991. On and after January 1, 1992, the second person shall be a currently certified first responder or

a currently certified attendant. An emergency medical technician, emergency medical technician-intermediate, or emergency medical technician-defibrillator shall be in the patient compartment during patient transport.

- Type V – Staffed with a driver or pilot and at least two attendants, one of whom shall be a licensed physician, a registered nurse, or a certified mobile intensive care technician. The second attendant shall be a licensed physician, a registered nurse, a certified mobile intensive care technician, or a registered respiratory therapist. All attendants shall be certified in advanced cardiac life support or the equivalent approved by the board.

February 3, 1992 – K.A.R. 109-2-7 was amended. This allowed for an extension of the second person for the Type II from January 1, 1992 to September 1, 1992 as follows:

- Type II – Staffed with at least one currently certified emergency medical technician and one other person certified by the American Heart Association in "Course C," or the American Red Cross in "Professional Rescuer" and certified in basic first aid care by the American red cross on and after January 1, 1991. On and after September 1, 1992, the second person shall be a currently certified first responder or a currently certified attendant. An emergency medical technician, emergency medical technician-intermediate, or emergency medical technician-defibrillator shall be in the patient compartment during patient transport.

January 31, 1997 – K.A.R. 109-2-7 was amended. This changed all 3 types of ambulance classes as it pertains to staffing as follows:

- Type I – Staffed with at least two attendants during patient transport. At least one attendant shall be a mobile intensive care technician, a physician, a registered physician's assistant, or a licensed professional nurse. The second attendant may be any of the following: emergency medical technician, emergency medical technician-intermediate, emergency medical technician-defibrillator, mobile intensive care technician, a physician, a registered physician's assistant, or a licensed professional nurse.
- Type II – Staffed with at least two attendants during patient transport. At least one attendant shall be an emergency medical technician. One of the following shall be in the patient compartment during patient transport: emergency medical technician, emergency medical technician-intermediate, emergency medical technician-defibrillator, a physician, a registered physician's assistant, or a licensed professional nurse.
- Type V – Staffed with a driver or pilot and at least two medically trained persons, one of whom shall be a physician or a licensed professional nurse. Additional staffing shall be commensurate with the patient's care needs as determined by the service's medical advisor or as described in the service's medical protocols. The medical personnel shall remain in the patient compartment during patient transport.
    - *At least one of the medical personnel shall have completed and be current in ACLS as in effect on January 1, 1997 or the equivalent as approved by the board.*
    - *When performing pediatric or neonatal missions, at least one of the medical personnel shall have completed and be current in PALS or the equivalent as approved by the board.*
    - *When responding to the scene of an accident or medical emergency, not including medical transports between facilities, at least one of the medical personnel shall have completed and be current in one of the following programs: ATLS, FNATC, TNCC, PHTLS, or an equivalent course as approved by the board.*

April 23, 1998 – K.S.A. 65-6135 was amended by SB 535 of the 1998 Kansas Legislature (L. 1998, ch. 133, § 15) to amend paragraph (b) to change "a person licensed to practice medicine and surgery" to "physician"; and to remove "registered" from "registered professional nurse" as follows:

"(b) Whenever an operator is required to have a permit, at least one person on each vehicle providing emergency medical service shall be an attendant certified as an emergency medical technician, emergency medical technician-intermediate, emergency medical technician-defibrillator, a mobile intensive care technician, a physician, a registered physician's assistant or a professional nurse."

May 16, 2000 (effective February 1, 2011) – K.S.A. 65-6135 was amended by Sub SB 599 of the 2000 Kansas Legislature (L. 2000, ch. 162, § 24) to amend paragraph (b) to reflect the change in physician assistants being licensed instead of registered as follows:

"(b) Whenever an operator is required to have a permit, at least one person on each vehicle providing emergency medical service shall be an attendant certified as an emergency medical technician, emergency medical technician-intermediate, emergency medical technician-defibrillator, a mobile intensive care technician, a physician, a licensed physician assistant or a professional nurse."

April 19, 2010 (effective January 15, 2011) – K.S.A. 65-6135 was amended by House Sub SB 262 of the 2010 Kansas Legislature (L. 2010, ch. 119, § 10) to amend paragraph (b) to add emergency medical technician-intermediate/defibrillator, advanced emergency medical technician, paramedic, and an advanced registered nurse practitioner as follows:

"(b) Whenever an operator is required to have a permit, at least one person on each vehicle providing emergency medical service shall be an attendant certified as an emergency medical technician, emergency medical technician-intermediate, emergency medical technician-defibrillator, a mobile intensive care technician, emergency medical technician-intermediate/defibrillator, advanced emergency medical technician, a paramedic, a physician, a licensed physician assistant, an advanced registered nurse practitioner or a professional nurse."

June 9, 2011 (effective January 1, 2012) – K.S.A. 65-6135 was amended by HB 2182 of the 2011 Kansas Legislature (L. 2011, ch. 114, § 66) to amend paragraph (b) to reflect a terminology change in the advanced registered nurse practitioner as follows:

"(b) Whenever an operator is required to have a permit, at least one person on each vehicle providing emergency medical service shall be an attendant certified as an emergency medical technician, emergency medical technician-intermediate, emergency medical technician-defibrillator, a mobile intensive care technician, emergency medical technician-intermediate/defibrillator, advanced emergency medical technician, a paramedic, a physician, a licensed physician assistant, a licensed advanced practice registered nurse or a professional nurse."

July 7, 2014 – K.A.R. 109-2-7 was amended. This added back a 4th ambulance class and changed all types of ambulance classes as it pertains to staffing as follows:

- Type I – Staffed with at least two attendants during patient transport. At least one attendant shall be a paramedic, a physician, a licensed physician assistant, a professional nurse, or an advanced practice

registered nurse. The second attendant may be any of the following: emergency medical technician, emergency medical technician-intermediate, emergency medical technician-defibrillator, emergency medical technician-intermediate/defibrillator, advanced emergency medical technician, a physician assistant, a physician or a licensed professional nurse.

- Type II – Staffed with at least two attendants. During patient transport, one of the following shall be in the patient compartment providing care to the patient: emergency medical technician, emergency medical technician-intermediate, emergency medical technician-defibrillator, an advanced emergency medical technician, a paramedic, a physician, a physician assistant, a professional nurse or an advanced practice registered nurse.
- Type IIA – Staffed with at least two attendants. One of the following shall provide patient care appropriate to the patient's condition in the patient compartment during transport: For BLS transports, a care provider who is at or above the level of an emergency medical technician; For ALS transports, a care provider who is at or above the level of an emergency medical technician-intermediate, emergency medical technician-defibrillator, emergency medical technician-intermediate/defibrillator, or advanced emergency medical technician. In addition a paramedic, physician, physician assistant, professional nurse or an advanced practice registered nurse may also staff these ambulances.
- Type V – Staffed with a driver and at least a professional nurse or a physician and any of the following: paramedic, physician, physician assistant, professional nurse, advanced practice registered nurse or a licensed respiratory therapist. Additional staffing shall be commensurate with the patient's care needs as determined by the service's medical advisor or as described in the service's medical protocols. The medical personnel shall remain in the patient compartment during patient transport.
    - *At least one of the medical personnel shall have completed and be current in advanced cardiac life support by a certifying entity approved by the board.*
    - *When performing pediatric or neonatal missions, at least one of the medical personnel shall have completed and be current in advanced life support for neonatal and pediatric patients by a certifying entity approved by the board.*
    - *When responding to the scene of an accident or medical emergency, not including transports between medical facilities, at least one of the medical personnel shall be certified in one of the following programs: ATLS, TPATC, TNCC, CCEMTP, PHTLS, or ACTT.*

Future Legislative Revisions

Statutory Revisions

K.S.A. 65-6135 is currently in the legislative process for amendment listed within HB 2387 (Passed the House 115-0 without amendment and has been referred to the Senate Committee on Federal and State Affairs). The proposed language is as follows:

"(a) All ambulance services providing emergency care as defined by the rules and regulations adopted by the board shall offer service 24 hours per day every day of the year.

(b) Whenever an operator is required to have a permit, at least one person on each vehicle providing emergency medical service shall be an attendant certified pursuant to K.S.A. 65-6119, 65-6120 or 65-6121, and amendments thereto, a physician, a physician assistant, an advanced practice registered nurse or a professional nurse."

Regulatory Revisions

K.A.R. 109-2-7 is currently within the Regulatory revision process to be revoked due to a change in classes of ambulance services to ground and air and placing ground staffing within K.A.R. 109-2-6 and air ambulance staffing within K.A.R. 109-2-11. The current proposal for ground staffing is, at a minimum, either two attendants or one attendant and a health care provider as defined in 109-1-1. Further language within the ground ambulance regulations require that the attendant (EMT or higher) or health care provider is in the patient compartment during patient transport. There are no proposed changes in current staffing requirements for air ambulances (same as Type V above).

Ambulance Service Survey

Overview

As mentioned earlier, a survey of 25 questions was sent out to all 169 ambulance services licensed as of August 1, 2015. This survey was designed to determine whether or not there were local laws in addition to state laws that governed ambulance services, to determine the current utilization of other healthcare professionals in the provision of EMS, to gauge the ability for future utilization of other healthcare professionals in the provision of EMS, and to determine compensation for individuals holding different levels of EMS certification.

The survey was distributed via email to each of the ambulance service directors as well as a link provided to complete the survey online via Survey Monkey. Surveys could be completed online or completed on paper and submitted back to the agency for compilation. Surveys completed on paper were entered into Survey Monkey by staff members of the Kansas Board of EMS and verified for completeness and accuracy. 103 surveys were completed online and 13 were submitted by other means.

The statewide survey return rate was 68.6%. Regional return rate was in excess of 65% for each region except Region 5 (NE Kansas). There were 5 surveys returned anonymously.

There was a slight concern expressed by a "for-profit" ambulance service that responding to this survey may provide information that could jeopardize their ability to remain competitive with other "for-profit" ambulance service entities or would provide another service with information that they consider to be proprietary. All steps were taken and will continue to be taken to prevent a release of specific responses from a specific service or respondent to this survey in an effort to minimize any potential conflict or concern.

Summary of Survey Results

Current city and county codes, ordinances, rules, etc. within the state do not further define staffing of an ambulance and they do not conflict with any current state statute or administrative regulation. There does not appear to be any conflict with any current city or county code, ordinance, etc. that would impact the future utilization of other licensed health care providers in the provision of emergency medical services.

Ambulance services currently utilize other licensed health care providers in assisting with the provision of emergency medical services. This utilization is not common practice for 911 responses, and although more prevalent in interfacility transports, still not common practice.

Compensation was obtained and averaged for the levels of EMS certification. Ambulance services do not have a consistent method of compensation for their workforce. This is due, in part, to the wide variance of full-time employees, part-time employees, and a volunteer workforce. Calculated compensation for EMS providers ranges from approximately $8.00/hr to $15.19/hr, dependent upon level of certification.

This survey yielded that any plan to utilize other licensed health care providers for the provision of EMS must address the following:

- Similar compensation to the current EMS workforce
- Additional training specific towards ambulance operations, orientation, etc; and
- Education upon the limitations of standing orders/protocols and internal policies/guidelines.

Local Codes/Ordinances governing ambulance services

35 services (30.17%) responding to the survey stated that they had city or county laws, rules, regulations, ordinances, codes, etc. specific to ambulance service operation and staffing. These codes consisted of the following topics not pertaining to specifically staffing of an ambulance: residency requirements of employees, jurisdictional boundaries, fees charged by an ambulance service, state requirements (other than Kansas), mill levy establishment/maintenance, and establishing exclusivity of ambulance service provision. Only 2 of the codes reviewed detailed the requirements of ambulance services within their jurisdiction and specifically addressed staffing: the Code of Ordinances for the Unified Government of Wyandotte County and the Code of Ordinances for the City of Wichita.

Code of Ordinances for the Unified Government of Wyandotte County

Chapter 5 of this code is titled Ambulances. This chapter references Kansas Statute and Kansas Administrative Regulations. Most of this chapter pertains to the establishment of jurisdictional boundaries and determining the entity that will be responsible for the provision of ambulance services within the Unified Government. Section 5-3(b) states "All ambulance services provided shall be provided in vehicles staffed and equipped pursuant to K.A.R. 109-2-8, as amended, and in accordance with city ordinance and/or regulations adopted pursuant thereto." K.A.R. 109-2-8 does not reference staffing of an ambulance, only the equipment upon an ambulance. There was nothing found within this code that would further limit an ambulance service within this jurisdiction on staffing of an ambulance.

Code of Ordinances for the City of Wichita

Chapter 3.80 of this code is titled Ambulances. Section 3.80.150 establishes three classifications of licenses for ambulance personnel: (1) Ambulance driver; (2) Emergency medical technician basic (EMT basic); and (3) Emergency medical technician advanced (EMT advanced). It further establishes that the ambulance must be staffed with a minimum of two people, one of whom must be an EMT (*Sec. 3.80.150 (b)*). It is important to note that there are two codes (Sec. 3.80.145 and Sec. 3.80.147) that grant an exemption of Section 3.80.150 to the currently contracted ambulance service.

Conclusions

Current city and county laws, rules, regulations, ordinances, codes, etc. (local laws) within the state of Kansas do not appear to conflict with current Kansas Statute or Kansas Administrative Regulation pertaining to the staffing of an ambulance. There does not appear to be any conflict with these local laws that would prohibit or restrict future utilization of other licensed health care providers in the provision of emergency medical services.

Current Utilization of Other Licensed Health Care Providers

As mentioned earlier, there is a significant difference between the transport of a patient resulting from a 911 call (initiating primary care) and the interfacility transport of a patient needing to be moved from one health care facility to a more appropriate health care facility (continuation of care determined by a physician). It is because of this difference that we chose to address them separately within this report.

911 Transports

20 services (17.24%) reported that they currently utilize other licensed health care providers to staff ambulances on 911 transports. 17 of these 20 services reported that it had occurred within the past 12 months. The frequency within the past 12 months ranged from "over several hundred times" to "1". When gauging the frequency, the responses yielded a median of "8" and a mode of "1". One service stated that it was unknown on the frequency. When asked how often the other licensed health care provider was in addition to the 2 EMS providers on the unit, the responses ranged from every time to never. 8 services reported that the other licensed health care provider was in addition to the 2 EMS providers every time. 6 services reported that the other licensed health care provider was considered part of the 2 EMS providers. 1 service reported that the other licensed health care provider was in addition to 2 EMS providers 50-67% of the time (4-5 transports); 1 service reported 50% of the time (3 transports); and 1 service reported 75% of the time (9 transports). When asked what level of provider was utilized within the past 12 months, all 18 services responding indicated a registered nurse. 3 of the services indicated usage of a physician assistant; 2 services indicated usage of a respiratory therapist; and 1 service indicated usage of a physician (MD or DO).

Interfacility Transports

28 services (24.35%) reported that they currently utilize other licensed health care providers to staff ambulances on interfacility transports. 31 services reported that it had occurred within the past 12 months (3 services reported that it was no longer a current utilization). The frequency within the past 12 months ranged from "over several thousand" to "0". When gauging the frequency, the responses yielded a median of "6" and a mode of "0". One service stated that it was unknown on the frequency. When asked how often the other licensed health care provider was in addition to the 2 EMS providers on the unit, the responses ranged from every time to never. 18 services reported that the other licensed health care provider was in addition to the 2 EMS providers every time. 6 services reported that the other licensed health care provider was considered part of the 2 EMS providers. 1 service reported that the other licensed health care provider was in addition to 2 EMS providers 83% of the time (45 transports); 1 service reported 70% of the time (7 transports); 1 service reported 67% of the time (2 transports); 1 service reported 50% of the time (3 transports); 1 service reported 33-40% of the time (2 transports); 1 service reported 17% of the time (1 transport); 1 service reported 16% of the time (1 transport); and 1 service reported 7% of the time (1 transport). When asked what level of provider was utilized within the past 12 months, 30 services (94%) indicated usage of a registered nurse. 8 services indicated usage of a respiratory therapist; 4 services indicated usage of a physician assistant; 4 services indicated usage of a physician (MD or DO); 2 services indicated usage of an advanced practice registered nurse; and 1 service indicated usage of a licensed practical nurse (LPN).

Conclusions

The current utilization of other licensed health care providers in the provision of EMS is minimal – occurring in less than 25% of Kansas services and in less than 5% of ground transports. The current utilization of other licensed health care providers occurs more frequently on interfacility transports than 911 transports. Registered Nurses are the most common other licensed health care provider utilized by Kansas ambulance services. Utilization of other licensed health care providers for interfacility ground transport has a higher rate of occurrence in rural areas of the state. Utilization of other licensed health care providers for transport has a higher rate of occurrence in those services not subject to public call.

Future Utilization of Other Licensed Health Care Providers

As mentioned earlier, there is a significant difference between the transport of a patient resulting from a 911 call (initiating primary care) and the interfacility transport of a patient needing to be moved from one health care facility to a more appropriate health care facility (continuation of care determined by a physician). It is because of this difference that we chose to address them separately within this report.

Survey questions were focused upon budgetary support, 911 transport benefit, interfacility transport benefit, and service willingness. Since this involves future planning, answers to these questions were in the opinion of the service director filling out the survey without a request for data supporting the opinion.

Budget

60 services (51.72%) reported that they may have the budgetary support to utilize other disciplines of health care providers. 40 additional comments were received on this question. Comments varied in topic but contained the following recurring topics: concerns that current amounts budgeted for EMS providers are inadequate; utilization of nurses may help with staffing on interfacility transfers; compensation must be similar to current staff and EMS levels; and that EMS is a portion of healthcare, not just transportation.

911 Transport Benefit

63 services (54.31%) reported that they felt it would benefit the ambulance service to have the ability to utilize another discipline of health care provider in lieu of an EMS provider for 911 transports. 33 additional comments were received on this question. The following recurring topics were noted: additional training would be necessary specific to ambulance operations, orientation, etc.; any additional health care providers would be beneficial to the current demands on staff; and ability to utilize a RN as an ALS provider.

Interfacility Transport Benefit

70 services (60.87%) reported that they felt it would benefit the ambulance service to have the ability to utilize another discipline of health care provider in lieu of an EMS provider for interfacility transports. 28 additional comments were received on this question. The following recurring topics were noted: additional training would be necessary specific to ambulance operations, orientation, etc.; utilization in staffing shortages; other health care provider may be appropriate for the patient condition; and ability to utilize a RN as an ALS provider.

Willingness if Similarly Compensated

89 services (76.72%) reported that they would be willing to have other disciplines of health care providers if they would work for similar compensation as EMS providers. 25 additional comments were received on this question. The following recurring topics were noted: protocols may need to be adjusted, reimbursement would need to be similar, and additional training of the other health care provider would be necessary specific to ambulance operations, orientation, etc.

Conclusions

The future utilization of other licensed health care providers in the provision of EMS could be possible and a significant number of ambulance services have a willingness to see this occur. Any plan for future utilization of these other licensed health care providers would need to address the following areas: 1) Similar compensation

to the current EMS workforce; 2) Additional training specific towards ambulance operations, orientation, etc; and 3) Education upon the limitations of standing orders/protocols and internal policies/guidelines. The utilization of other licensed health care providers for the provision of care during interfacility transports may be a more appropriate staffing model dependent upon patient condition and having a physician care plan already established, but interfacility transports requiring this level of care are minimal*.

*Kansas EMS Information System (KEMSIS) data showed 8701 interfacility transports by Advanced Life Support Personnel from January 1, 2015 through December 2, 2015. This accounts for 41.5% of all interfacility transports (5.6% of total prehospital responses) during this timeframe reported by KEMSIS participating services. All interfacility transports account for approximately 13.4% of all prehospital responses during this timeframe.

Compensation

This survey asked the service directors to provide compensation figures for each of their EMS levels of certification. It is important to note that although most compensation was reported on an hourly basis, compensation does not necessarily denote a "wage" or "pay". Some services offer a stipend to offset costs incurred (whether real or perceived) and this seems to be correctly reported as compensation for the purposes of this survey.

It is also important to note that some services responding to this survey do not provide compensation for any of those providing prehospital care. Only 3 services responded that they do not provide compensation and that their workforce volunteers with no expectation of compensation.

For the purposes of determining an average compensation and for consistency purposes only, if an hourly figure was able to be obtained, it was utilized.

Emergency Medical Responder (EMR)

44 of 106 services reported utilizing the EMR level of certification. Values for compensation range from no compensation to $13.00/hour and from $10/call to $135/call. Values also were provided for "on-call" status ranging from $.50/hr to $5.00/hr.

NOTE: Only for the purposes of this report and for similar comparison have the reported values below been adjusted to reflect an hourly rate (or a per-call rate) for each subsection of compensation.

Average approximate compensation for the EMR is:

- $8.00/hr ($16,640 annually)
- $30/call
- $1.59/hr "on-call" weekday
- $1.91/hr "on-call" weekend

Emergency Medical Technician (EMT)

102 of 106 services reported utilizing the EMT level of certification. Values for compensation range from no compensation to $23.06/hour and from $10/call to $150/call. Values also were provided for "on-call" status ranging from $.50/hr to $4.58/hr.

NOTE: Only for the purposes of this report and for similar comparison have the reported values below been adjusted to reflect an hourly rate (or a per-call rate) for each subsection of compensation.

Average approximate compensation for the EMT is:

- $10.82/hr ($22,505 annually)
- $34.35/call
- $1.68/hr "on-call" weekday
- $1.91/hr "on-call" weekend

Emergency Medical Technician - Intermediate (EMT-I)

22 of 106 services reported utilizing the EMT-I level of certification. Values for compensation range from no compensation to $15.85/hour and from $20/call to $35/call. Values also were provided for "on-call" status ranging from $.96/hr to $2.43/hr.

NOTE: Only for the purposes of this report and for similar comparison have the reported values below been adjusted to reflect an hourly rate (or a per-call rate) for each subsection of compensation.

Average approximate compensation for the EMT-I is:

- $10.10/hr ($21,010 annually)
- $28.33/call
- $1.72/hr "on-call" weekday
- $1.83/hr "on-call" weekend

Emergency Medical Technician - Defibrillator (EMT-D)

11 of 106 services reported utilizing the EMT-D level of certification. Values for compensation range from no compensation to $13.46/hour and $35/call. Values also were provided for "on-call" status at $1.33/hr. It is important to note that there are only 5 individuals in the state certified at this level.

NOTE: Only for the purposes of this report and for similar comparison have the reported values below been adjusted to reflect an hourly rate (or a per-call rate) for each subsection of compensation.

Average approximate compensation for the EMT-D is:

- $11.25/hr
- $35/call
- $1.33/hr "on-call" weekday
- $1.33/hr "on-call" weekend

Emergency Medical Technician – Intermediate/Defibrillator (EMT-I/D)

11 of 106 services reported utilizing the EMT-I/D level of certification. Values for compensation range from no compensation to $13.95/hour and $35/call. Values also were provided for "on-call" status at $1.33/hr.

NOTE: Only for the purposes of this report and for similar comparison have the reported values below been adjusted to reflect an hourly rate (or a per-call rate) for each subsection of compensation.

Average approximate compensation for the EMT-I/D is:

- $11.43/hr
- $35/call
- $1.33/hr "on-call" weekday
- $1.33/hr "on-call" weekend

Advanced Emergency Medical Technician (AEMT)

60 of 106 services reported utilizing the AEMT level of certification. Values for compensation range from no compensation to $23.06/hour and from $10/call to $250/call. Values also were provided for "on-call" status ranging from $.50/hr to $5.00/hr.

NOTE: Only for the purposes of this report and for similar comparison have the reported values below been adjusted to reflect an hourly rate (or a per-call rate) for each subsection of compensation.

Average approximate compensation for the AEMT is:

- $12.35/hr
- $41.80/call
- $1.88/hr "on-call" weekday
- $2.12/hr "on-call" weekend

Paramedic

85 of 106 services reported utilizing the Paramedic level of certification. Values for compensation range from no compensation to $31.13/hour and from $10/call to $250/call. Values also were provided for "on-call" status ranging from $.50/hr to $5.00/hr.

NOTE: Only for the purposes of this report and for similar comparison have the reported values below been adjusted to reflect an hourly rate (or a per-call rate) for each subsection of compensation.

Average approximate compensation for the Paramedic is:

- $15.19/hr
- $42.81/call
- $1.93/hr "on-call" weekday
- $2.19/hr "on-call" weekend

Conclusions

Ambulance services have demonstrated a variety of methods utilized to compensate their workforce whether full-time paid, part-time paid, or volunteer. Compensation typically increases with higher levels of certification in most services although some services compensate a flat rate for each member of their workforce.

Additional Survey Comments

Those individuals that completed the survey were also given an opportunity to provide any additional comments. 32 individuals chose the opportunity to comment. 26 comments were applicable to the scope of this survey and are as follows. These are comments directly from ambulance service directors:

1) "Interfacility transports are being delayed due to the lack of staffing requirements within rural and frontier counties of volunteer and mixed services. EMS has a great resource we are unable to utilize, truck drivers. A qualified driver to get the patient to definitive care safely will save lives. One tech in patient compartment and a trained driver, not another tech on interfacility transfers. EMS most valuable resource are EMTs, AEMTs, and Medics. They need to be available for 911 calls, not driving the interfacility transport. STEMI, Stroke, Sepsis need diesel or jet fuel to arrive in time from the rural or frontier communities, but we cannot take the transfer if we don't have a team for 911 to cover the county."
2) "If we are worried about having enough staff to cover these types of situations, why do we not take a look at only requiring 1 certified technician in certain situations?"
3) "I believe the use of RNs could help small services. If there are areas of concern about lacking some skill training, I believe training officers can teach those skills much like the recent transition classes to the new EMT and the EMT-I to AEMT before they are allowed to staff an ambulance. I am not sure this would solve my ability to hire one, but it would give me more options to provide ALS service."
4) "I do hope that our leaders find the seriousness and the simple necessity of preserving our rural emergency response mechanisms. Too far away is never acceptable in our case as I see it."
5) "We have a very limited pool of volunteers in such a small community. The EMT class is a very demanding course for someone who will only be a compensated volunteer! If we could utilize other healthcare providers, it would greatly relieve the pressure of trying to keep EMS coverage!"
6) "We offer a stipend for volunteering which generally covers expenses a volunteer might have as a result of volunteering. It is not an hourly wage. We also provide education at no expense to our volunteers."
7) "We have been faced with our hospital closing for the last 18 months. So, we purposely made ourselves self-sufficient plus (*name intentionally omitted)* refused to assist in any way."
8) "RNs will be compensated as AEMTs pay scale due to this being the scope of practice they are allowed to follow."
9) "We have hired RNs before, but have required them to complete an EMT class within the first year of employment."
10) "Full-time personnel have to also take call. Compensation is then at time and a half over 40 hrs/wk if the crew is called out."
11) "This service is volunteer."
12) "I am not against having other health care professionals on the service. However, I believe they need EMS training and they need to become familiar with our trucks. I have noticed that there is a misconception that Hospital and EMS are the same. I have worked for both and they are two different worlds in more ways than not. The RNs that have worked EMS realize this now."
13) "We pay per run and it depends on where the run is and level of certification."
14) "RNs for transfers would help our service a great deal."
15) "Our protocols provide that when a hospital sends a patient on an interfacility transfer to another hospital and the care needed exceeds what our paramedics are authorized to provide, the sending hospital must send a health care provider as an addition to our 2 paramedic crew."

16) “After 5 years on the job, FF/EMTs and FF/Paramedics make the same monthly salary.”
17) “Would be willing to use RN after field training. Would not consider use of LPN or CAN without EMS certification.”
18) “I think EMS needs to strive to take care of our services with bonafide EMS personnel and not utilize other disciplines. It is my staunch opinion that this will undermine the professional image we are trying to earn for EMS. Regardless of what regulation allows, my ambulance will always be staffed with someone holding an EMS certification.”
19) “I truly believe that it will reduce insurance cost and increase patient benefit from being able to utilize qualified healthcare providers. I utilize other healthcare providers but strongly recommend that they attend EMT class or previously were certified. I also require them to be ACLS certified, PALS certified, TNCC or ENPC. I do not utilize other healthcare providers with less than 2 years experience and complete ambulance orientation.”
20) “Utilizing medical staff from our local hospital for interfacility transfers would be a great asset for us. We have discussed how to do this, but are limited by statute.”
21) “We are in the starting process of using RNs for interfacility transports.”
22) “I’m 100% for this. We are very fortunate to work so closely with our hospital/clinic. We simply don’t have the turf wars here.”
23) “We are not in favor of staffing any individual without an EMT license.”
24) “We also provide a 5% 401k match to all employees if they choose to participate.”
25) “The questions on transport and transfer are the same question to me.”
26) “Thank you for using the term EMS Healthcare Professional.”

Cost Analysis

Overview

Data for this section was obtained from the forementioned survey sent to ambulance service directors, from the occupational employment and wage rates obtained from the Kansas Department of Labor, and from the Kansas EMS Information System (KEMSIS). Although the term "wage" is utilized throughout this section, EMS providers in some jurisdictions are volunteers and do not receive a set "wage", but rather compensation for costs incurred by responding on calls. In order to make the best attempt at consistency across all occupations, data from the survey was extrapolated to produce an "annual wage" for EMS providers based upon only those responses that provided an hourly rate of compensation (those that provided a per call amount or "on-call" amount were excluded from these calculations and analysis).

Summary

Data demonstrates that EMS providers, as an occupation, are one of the least compensated occupational groupings of health care providers within the state of Kansas. The current model of minimum staffing allows for the most cost-effective method of providing patient care in the prehospital setting. The current model of minimum staffing may impact and cause an increased cost of providing patient care during an interfacility transport by requiring staffing that may not participate in the provision of patient care during transport. Utilization of other health care providers in lieu of EMS providers would cause an increase in overall cost expended by an ambulance service unless the ambulance service compensates the other health care provider similarly to their EMS certified providers. The current model of minimum staffing maintains compliance with the Center for Medicare and Medicaid Services requirements in order to receive reimbursement for care provided during transportation.

Prehospital staffing

Staffing requirements within a prehospital setting may be different than those required during an interfacility transport based upon patient safety and care as well as responder safety. In the prehospital setting, the EMS providers are faced with analyzing an unknown scene in typically adverse and changing conditions, analyzing the condition of the patient, initiating the appropriate care for the patient's condition, and continuing to provide high quality patient care while preparing the patient for transportation to the appropriate medical care facility. Because of the complexity of the prehospital setting and the numerous variables that EMS providers may encounter, they must work cohesively utilizing the highly specialized training that they have received to function in these types of situations to maintain the patient's safety as well as their own. It is very important that individuals in the prehospital setting have the highly specialized training that EMS providers receive in order to safely function and to safely provide quality patient care to the person in need. This type of training, in enough depth and breadth to be proficient in any environment, is not included within the core educational standards of other health care providers. Typically, the core educational standards for other health care providers assume a controlled environment for the delivery of patient care. Although this difference in practice environment may seem minimal, any mistake or inability to minimize distractions in the prehospital environment could result in irreparable harm to the patient.

Interfacility staffing

In the interfacility setting, the EMS providers are typically presented with a patient in a controlled environment with a diagnosed condition and a specific care plan designated by a physician. The provider's role is to continue

the physician's care plan during the movement and transportation of the patient from one controlled environment to another. It may occur that the physician's care plan involves care that is unable to be provided by all levels of EMS provider. In these situations, it may be in the best interest of the patient to have care provided by another health care provider, one that has advanced training specific to the patient's condition. Current regulation requires two EMS providers for ground ambulances and any other personnel necessary for the provision of appropriate care would be in addition to these two providers. This practice may not be the most cost effective manner of providing appropriate care. The most cost effective manner would involve having the personnel necessary for the provision of the appropriate level of care during transportation. In many instances, the EMS providers have the medical training and expertise necessary to maintain and continue the physician's care plan through transport to another facility. In those instances where the care falls outside of the training and expertise of an EMS provider, another health care provider would be a necessity.

The utilization of other licensed health care providers for the provision of care during interfacility transports may be a more appropriate staffing model, dependent upon patient condition and having a physician care plan already established. Even though this may be the more appropriate model, the frequency of the requirement for advanced life support capability on interfacility transfers was retrospectively demonstrated to have occurred in less than half of all interfacility transports.

Reimbursement

Another variable that enters into cost analysis is payment for services versus cost incurred. The Centers for Medicare and Medicaid Services (CMS) developed their benefit policy manual to detail out their requirements for appropriate reimbursement. Chapter 10 of this manual pertains solely to Ambulance Services and transportation and does detail a minimum staffing requirement allowed for reimbursement. Section 10.1.2 states that "Basic Life Support ambulances must be staffed by at least two people, at least one of whom must be certified as an EMT by the State or local authority…" and that "Advanced Life Support (ALS) vehicles must be staffed by at least two people, at least one of whom must be certified by the State or local authority as an EMT-Intermediate or an EMT-Paramedic." Ambulance services are on a fee schedule with Medicare and receive a flat fee reimbursement regardless of cost incurred. Private insurances are allowed to differ slightly in their reimbursement practices although ambulance services, as well as all other health occupations, are required to not alter their billing practice based upon payor. With CMS providing the most stringent of payor staffing requirements and the fact that cost is incurred for any response, the State must take into account that the allowance of the provision of ambulance service in a manner that may not be deemed reimbursable has a much higher associated liability that could have an increased impact upon local economy.

Wage/Compensation Data

From the service survey, Kansas EMS providers' annual average wage rates are as follows:

- Emergency Medical Responder (EMR) - $16,640
- Emergency Medical Technician (EMT) - $22,505
- Advanced Emergency Medical Technician (AEMT) - $25,690
- Paramedic - $31,595

From the Occupational Employment Statistics and Wages Program (2014 OES Statewide KS), the annual average wage rates for EMS providers and other health care providers are as follows:

- Ambulance Drivers and Attendants, Except EMT (533011) - $23,310
- EMT and Paramedics (292041) - $28,060
- Registered Nurses (291141) - $56,410
- Nurse Practitioners (291171) - $81,550
- Physician Assistants (291071) - $94,070
- Physicians and Surgeons, All Other (291069) – $208,840

Due to the comment that arose about using professional drivers and having 1 care provider in the ambulance, the annual average wage rates for "driver" occupations from the OES 2014 Statewide KS are as follows:

- Taxi Drivers and Chauffeurs (533041) - $23,250
- Ambulance Drivers and Attendants, Except EMT (533011) - $23,310
- Bus Drivers, School (533022) - $26,210
- Driver/Sales Workers (533031) - $29,190
- Bus Drivers, Transit and Intercity (533021) - $30,060
- Truck Drivers, Light or Delivery Services (533033) - $33,840
- Truck Drivers, Heavy and Tractor-Trailer (533032) - $40,300

Wage/Compensation Comparison

For this section, figures for EMS providers are based upon service survey results and the other health care occupations are based upon the OES 2014 Statewide KS data. Average staffing cost based upon annual average wages and no overtime costs for an ambulance to maintain compliance with CMS to provide basic life support care:

- EMT/EMT - $21.64/hour
- EMT/Paramedic - $26.01/hour
- Paramedic/Paramedic - $30.38/hour
- EMT/RN - $37.94/hour
- EMT/APRN - $50.03/hour
- EMT/PA - $56.05/hour
- EMT/Physician - $111.22/hour

Average staffing cost based upon annual average wages and no overtime costs for an ambulance to maintain compliance with CMS to provide advanced life support care:

- AEMT/AEMT - $24.70/hour
- AEMT/Paramedic - $27.54/hour
- Paramedic/Paramedic - $30.38/hour
- AEMT/RN - $39.47/hour
- AEMT/APRN - $51.56/hour
- AEMT/PA - $57.58/hour
- AEMT/Physician - $112.75/hour

The Ambulance Service Survey revealed that some ground ambulance services currently utilize other healthcare providers to provide medical care to their patients. In nearly all of these instances (exclusive to those services that provide 911 coverage), other healthcare providers are compensated at a rate that is similar to the EMS certified providers within the service.