



M O V I N G

EM S

F O R W A R D



ANNUAL REPORT | 2018



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Twenty-four hours a day, seven days a week, Emergency Medical Service Responders in our Commonwealth are delivering exceptional pre-hospital emergency medical care. What we do in Emergency Medical Services is important. EMS is a necessary service that is vital for our community and the nation.

EMTs and paramedics are the healthcare safety net for all of us.

We're there for everyone when they need us, on their terms, doing what's best for them. We come to them, meet them as they are, and give them the best that we have to offer.

EMS workers are usually the first to arrive on the scene of a car accident, a crime scene, a disaster, or a fire. They never know what they will face when they arrive, and often their own lives are in danger when they do. They kneel down to render life-saving aid along busy highways, outside burning buildings, and on crime-infested streets. While they are usually the first on the scene, they are often the last to seek recognition. EMS workers do their jobs because they want to save lives, pure and simple.

The Kentucky Board of Emergency Medical Services strives to maintain and improve a unified comprehensive and effective EMS system within the borders of Kentucky ensuring that the EMS system is recognized as a leader and a role model that other EMS systems attempts to equal. We do this by promoting excellence through regulations, promoting healthy communities and encouraging community support, providing value-added information for emergency preparedness, public health, EMS research and strategic governance, and developing and managing information, standards and guidelines for EMS providers.

As Executive Director, I can humbly say that our staff proudly accepts the challenge to move EMS forward in the Commonwealth of Kentucky. I am confident that through hard work and dedication, we will continue to strengthen what is in place and reach new heights in the years ahead.

Respectfully,

A handwritten signature in blue ink that reads "Mike Poynter". The signature is fluid and cursive.

Mike Poynter, EMT-P, CP-C, FACPE
Executive Director
Kentucky Board of Emergency Medical Services



The Kentucky Board of Emergency Medical Services' mission is to ensure availability of high quality emergency medical services for the Commonwealth of Kentucky through collaboration with EMS providers and agencies by:



HOW DO WE ACCOMPLISH OUR MISSION?

- » Credentialing of all EMS responders in the state.
- » Annual inspections of all EMS agencies and initial and annual inspections of ambulances licensed in Kentucky.
- » Administration of ambulance grant funding.
- » Processing of all EMS-related courses conducted by Kentucky EMS Training & Educational Institutions (TEIs).
- » Approves EMS TEIs as National Registry Educational programs.
- » Certification and licensure audits.
- » Investigation of complaints against any EMS responder or agency.
- » Due process for EMS responders and agencies under pending legal action.
- » Administration of discipline of EMS responders and agencies
- » Approval of EMS medical directors and protocols.
- » Participation in disaster preparedness and mass casualty planning.
- » Oversight and management of the EMS for Children (EMSC) program.

OUR VISION Through transparent practices, KBEMS will ensure and promote high quality emergency medical care across the Commonwealth of Kentucky.

OUR VALUES Integrity; High Quality Care; Quality of Education; Competent Staff; Being Proactive, Not Reactive; Accountability of Board, Agencies & Individuals; Highly Motivated & Progressive Board

EMS is a vital component of healthcare, on any given day, in almost every community in our nation, responding to calls for help, 24/7.

37 MILLION
5 BILLION

DID YOU KNOW?

According to the 2011 National EMS Assessment, EMS responds to 37 million calls per year in the United States with annual expenditures of approximately \$5 billion!



EMS PROVIDER LEVELS

EMERGENCY MEDICAL RESPONDER

INITIAL TRAINING HOURS = 50 | RECERTIFICATION HOURS = 17

Possess knowledge and skills necessary to provide immediate lifesaving interventions while awaiting additional EMS resources to arrive; provide assistance to higher-level personnel at the scene of emergencies.

EMERGENCY MEDICAL TECHNICIAN

INITIAL TRAINING HOURS = 150 | RECERTIFICATION HOURS = 24

Possess knowledge and skills necessary to stabilize and safely transport patients ranging from non-emergency and routine medical transports to life threatening emergencies.

ADVANCED EMERGENCY MEDICAL TECHNICIAN

INITIAL TRAINING HOURS = 400 | RECERTIFICATION HOURS = 48

Performs interventions with basic and advanced equipment typically found on an ambulance, and is an important link for administering ALS care from the scene to the emergency health care system.

PARAMEDIC

INITIAL TRAINING HOURS = 2,000 | RECERTIFICATION HOURS = 60

An allied health professional whose primary focus is to provide advanced emergency medical care for critical and emergent patients, and who possesses the complex knowledge and skills necessary to provide patient care and transportation.

KENTUCKY FACTS

4,436,974

Total Population
2016 US Census Bureau

\$24,063

Per Capita Income
2011-15 US Census Bureau

40,408

Square Miles
2016 US Census Bureau

84%

High School Graduation Rate
2011-15 US Census Bureau

MEET OUR TEAM



Robert Andrew
Director of Education
& Training



Drew Chandler
Data Administrator



Ray Chesney
Inspector/Liaison



Paula Coyle
Inspector/Liaison



Calynn Fields
Resource Management
Specialist



Brooke French
Certification Specialist



Greg Hiles
Marketing Manager



Sam Lowe
Investigator



Dr. Julia Martin
State Medical Advisor



Chuck O'Neal
Deputy Executive
Director



Paul Phillips
Director of Field
Operations



Michael Poynter
Executive Director



Monica Robertson
Data Analyst



Courtney Robinson
Certification Specialist



Morgan Scaggs
EMS-C Project
Director



Eddie Slone
Inspector/Liaison



Janet Sweeney
Financial Analyst

DID YOU KNOW?

76% of KBEMS employees are currently or were previously certified/licensed EMS providers.



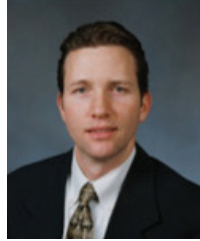
Jim Duke, Chairman
Representing: Advanced Life Support, government-operated Ambulance Service Administrator who is a certified Emergency Medical Technician or a Licensed Paramedic.



Joe Prewitt, Vice-Chairman
Representing: Volunteer-staffed, licensed Class I Ground Ambulance Service Administrator who is a certified Emergency Medical Technician or licensed Paramedic.



David E. Bentley, M.D.
Representing: Physician licensed in Kentucky serving as medical director of an Advanced Life Support Ambulance Service.



Andrew Bernard, M.D.
Representing: Trauma Surgeon licensed in Kentucky.



Joe Bradshaw
Representing: Licensed Air Ambulance Service Administrator or Paramedic for a licensed Air Ambulance Service headquartered in Kentucky.



Carlos Coyle
Representing: Paramedic who works for a government agency but is not serving in an educational, management, or supervisory capacity.



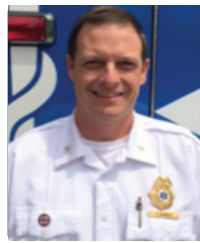
Nancye Davis
Representing: Emergency Medical Services Educator from a Kentucky College that provides an EMS Educational Program.



Phil Dietz
Representing: Fire Service Based, licensed Class I Ground Ambulance Service Administrator who is a certified Emergency Medical Technician or licensed Paramedic.



Timothy Dukes
Representing: Hospital Administrators.



Todd Early
Representing: Private licensed Class I Ground Ambulance Service Administrator who is a certified Emergency Medical Technician or a licensed Paramedic who is a resident of Kentucky.



Joseph Iocono, M.D.
Representing: Physician licensed in Kentucky who routinely is involved in the emergency care of ill and injured children.



James Locke
Representing: Citizen having no involvement in the delivery of medical or emergency services.



Walter Lubbers, M.D.
Representing: Physician Licensed in Kentucky having a primary practice in the delivery of emergency medical care.



James Nickell, Judge Executive
Representing: County Judge/Executive from a county that operates, whether directly or through contract services, a licensed Class I Ground Ambulance Service.



Aaron Stamper
Representing: Basic Life Support, Licensed Class I government-operated Ground Ambulance Service administrator who is a certified Emergency Medical Technician or a Licensed Paramedic



Lloyd Leslie Stapleton
Representing: Mayor of a city that operates, either directly or through contract services, a li-censed Class I Ground Ambulance Service.



Michael Sutt
Representing: Emergency Medical Technician - Basic, who works for a government agency but is not serving in a educational, management, or supervisory capacity.



Jimmy Vanclave
Representing: First Responder who is not serving in an educational, management, or supervisory capacity.

THANK YOU

Thank you to our board members for your commitment, leadership, expertise and support of KBEMS.

BOARD ACCOMPLISHMENTS

- » Walther, Gay, and Mack brought on as legal counsel under contract.
- » Ratified credentialing of twenty (20) new EMS Medical Directors reviewed by the KBEMS Director of Field Operations.
- » Ratified seventy-eight (78) initial or modifications of EMS Protocols by Ground and Air Ambulance agencies licensed in Kentucky and reviewed by the KBEMS State Medical Advisor.
- » Approved 2018-19 KBEMS Annual Budget as submitted.
- » Board Approved to adopt and participate in a statewide CARES Registry once funding has been established.
- » Approved modifications of Yellow Ambulance and Louisville Metro EMS Community Paramedicine Pilot Programs.
- » Approved Boyd County EMS Community Paramedicine Pilot Program.
- » Approved Line of Duty Death Benefit authorization for Paramedic John Mackey; killed in the Line of Duty.
- » Supported legislation requiring all telecommunicators receive training in Telephone-CPR.
- » Formally requested an updated Advisory Opinion on Paramedic-allowable activities when employed by a hospital.
- » Voted to table further discussion on the REPLICA EMS Compact and revisit no earlier than Jan. 1, 2019.
- » Approved Advisory Opinion 2018-001- Mutual Aid Services Provided by Class I Ambulance Providers.
- » Approved response to Request for Reconsideration of Advisory Opinion 2018-001-Mutual Aid Services Provided by Class I Ambulance Providers.
- » Charged KBEMS staff to work with the Office of the Inspector General (Office of Certificate of Need) to request that vague language regarding Ambulance Geographic Service Area such as “30 minute response time for 95% of the population” be denied upon submission of a Certificate of Need application, and more specific; geographic boundaries be utilized.
- » Approved removal of time period on Severity-Based Stroke Triage Algorithm/Stroke Destination Policy in regard to transport to a Primary vs. Comprehensive Stroke Center when positive for LVO.
- » Ratified 2018-19 Ambulance Block Grant Awards of \$1,080,000 to counties and agencies across the state.
- » Approved filing of 202 KAR 7:XXX- Posting of fee schedules for licensed ambulance providers.
- » Mr. Philip Dietz of Independence Fire District was elected as KBEMS Board Chairman for 2018-19.
- » Opposed Statewide Communication Interoperability Plan as the language at the time did not suit public safety radio communications in Kentucky in the future.
- » Tabled Education Committee recommendations to require an Associate’s Degree for newly licensed Paramedics with any future revision of 202 KAR 7:601.

RECOGNIZED AMERICAN HEART ASSOCIATION MISSION LIFELINE EMS AWARD RECIPIENTS

Boyle County EMS, Danville; Independence Fire District, Independence; Jessamine County EMS, Nicholasville; Louisville Metro EMS, Louisville; Madison County EMS, Richmond; Mercy Regional EMS, Paducah; The Medical Center EMS, Bowling Green; Shelby County EMS, Shelbyville; Woodford County EMS, Versailles; Central Campbell County Fire District, Cold Springs/ Highland Heights; Air Methods Kentucky, Georgetown; Estill County EMS, Irvine; Georgetown-Scott County EMS, Georgetown; Powell County Ambulance Service, Stanton

NEW OR AMENDED ADMINISTRATIVE REGULATIONS EFFECTIVE MAY 14, 2018

- 202 KAR 7: 501- Ambulance Agency Licensure
- 202 KAR 7: 545- License Classifications
- 202 KAR 7: 550- Required Equipment and Vehicle Standards
- 202 KAR 7: 555- Ground Agencies
- 202 KAR 7: 560- Ground Vehicle Staff
- 202 KAR 7: 565- Clinical Pilot Programs

MEET OUR COMMITTEES

The Kentucky Board of Emergency Medical Services has multiple committees and subcommittees, made up of both members on non-members of the board, that meet throughout the year to focus on specific topics and initiatives.

Subcommittees serve in an advisory role to their respective standing committee and the Board by providing guidance in terms of strategic planning, policy development and organization.

Members shall have a term that expires September 30 of each calendar year. Reappointments for subsequent terms may be made by the Board Chair anytime after September 1 and before September 30.

Meeting dates and minutes are available at kyems.com.



COMMITTEES OF THE BOARD

EXECUTIVE COMMITTEE

EDUCATION COMMITTEE

EMS-C COMMITTEE

DATA COLLECTION COMMITTEE

MEDICAL OVERSIGHT COMMITTEE

SUBCOMMITTEES OF THE BOARD

CARDIAC & STROKE CARE

DISASTER PREPAREDNESS &

MASS CASUALTY INCIDENTS

MOBILE INTEGRATED HEALTHCARE &

COMMUNITY PARAMEDICINE



EXECUTIVE COMMITTEE

The executive committee shall address legislative issues and proposals and review administrative regulations for submission to the board including:



(a) Recommending to the board promulgation of administrative regulations, amendment of administrative regulations, or repeal of administrative regulations relating to:

1. All levels of personnel licensed or certified by the board and ambulance services licensed or certified by the board;
2. Rules and operating procedures for the board and each of its standing committees and task forces;
3. EMS Grant Program; and
4. EMS for Children Program;

(b) Serving as a resource for board staff:

1. In reviewing applications regarding requests for funding under programs administered by or overseen by the board;
 2. With the development of funding programs or applications, including state and federal grants pertaining to EMS and monitoring and reviewing the grants once received by the Board;
 3. With creating and recommending to the board a biennial budget for the board prior to submission to appropriate state agencies;
 4. With identifying, developing and recommending to the board sources of funding for its programs; and
 5. In developing reimbursement programs and providing consult for emergency medical service providers.
- (c) Making recommendations to the board regarding fees to be charged by the board.

MEMBERS

JOE BRADSHAW, CHAIR

JOE PREWITT, VICE CHAIR

CARLOS COYLE

PHIL DIETZ

MIKE SUTT

EX OFFICIO

MICHAEL POYNTER

KBEMS EXECUTIVE DIRECTOR

CHUCK O'NEAL

KBEMS DEPUTY EXECUTIVE DIRECTOR

EDUCATION COMMITTEE

The Education Committee shall consist of seven (7) voting members representative of EMS Educators in the state of Kentucky. At least one (1) voting member of the Education Committee shall also be a member of the Kentucky Board of Emergency Medical Services. The Committee shall meet at least six (6) times annually. The purpose and charge of the Education Committee shall be to:

- (a) Assist the board in developing a strategic plan for EMS education in the state of Kentucky;
- (b) Act as a resource for EMS educators and EMS-TEIs in the Commonwealth; and
- (c) Assume the lead role in formulating, drafting, and sending to the board for approval and subsequent promulgation of all administrative regulations that set the standards and requirements for EMS education in Kentucky.



MEMBERS

| | |
|-----------------------|------------------|
| JIMMY VANCLEVE, CHAIR | PHILLIP FERGUSON |
| TERRI BAILEY | JAMIE GOODPASTER |
| DEBBIE BERRY | DIANE VOGAL |
| NANCYE DAVIS | |

EX OFFICIO

ROBERT ANDREW
KBEMS DIRECTOR OF EDUCATION & TRAINING

MEDICAL OVERSIGHT COMMITTEE

The medical oversight committee shall address issues pertaining to quality assurance, medical control, scope of practice, medical standards of curricula or other related issues as may be assigned by the board.



MEMBERS

| | |
|-----------------------------|-------------|
| ERIC BENTLEY, MD, CHAIR | LEE TURPIN |
| IRVIN SMITH, MD, VICE CHAIR | BEN WOFFORD |
| TODD EARLY | |

EX OFFICIO

DR. JULIA MARTIN
KBEMS STATE MEDICAL ADVISOR
CHUCK O'NEAL
KBEMS DEPUTY EXECUTIVE DIRECTOR

EMSC COMMITTEE

The Emergency Medical Services for Children Program may include but not be limited to the establishment of the following:

(a) Guidelines for necessary out-of-hospital medical service equipment;

(b) Guidelines and protocols for out-of-hospital pediatric emergency medical services;

(c) Assistance in the development and provision of professional education programs for emergency medical services personnel for the provision of emergency care of infants and children;

(d) Coordination and cooperation between the Emergency Medical Services for Children Program and other public and private organizations interested or involved in emergency care for children;

(e) Assistance with the purchase of equipment for the provision of medical services for children only; and

(f) The scope of activities carried out by and the provision of staff for the Emergency Medical Services for Children Program shall be commensurate with the availability of funds.



MEMBERS

MARY FALLAT, CHAIR & EMSC PRINCIPLE INVESTIGATOR

LANDON JONES

MORGAN SCAGGS, EMSC PROGRAM DIRECTOR

MARK MCDONALD

SUSAN DAY

SUSAN POLLACK

MARGARET GUPTON

MELANIE TYNER-WILSON

ERIKA JANES

CAROL WRIGHT

EX OFFICIO

SCOTTIE DAY

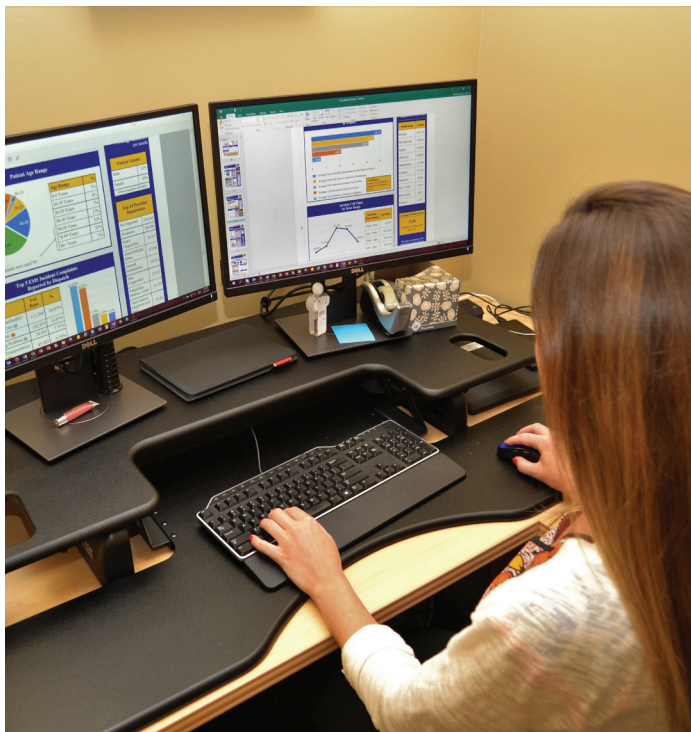
SANDRA HERR

DAVID FOLEY

BARI LEE MATTINGLY

DATA COMMITTEE

The Data Collection Committee shall consist of seven (7) members appointed by the board chair in the manner established in 202 KAR 7:020.



(a) Any office of the board staff member specifically employed through or designated by the Kentucky Community and Technical College System (KCTCS) for the purpose of EMS data collection and analysis shall serve as the staff liaison for the Data Collection Committee.

(b) The Data Collection Committee shall be responsible for the following:

1. The development of a statewide plan for data collection and compliance;
2. Identification of information initiatives for EMS in Kentucky;
3. Identification and research of funding sources tied to EMS data collection;
4. Assistance to licensed services with questions or other needs associated with this administrative regulation, KRS Chapter 311A, and other issues associated with the board's statutory authority to require data collection and submission; and
5. Matters identified by board members, the chair, or the executive director that involve data collection, data submission, or information use.

(c) The Data Collection Committee shall schedule on an annual basis at least six (6) regular meetings.



MEMBERS

JOHN HULTGREN, CHAIR

SARA ROBESON

JEREMY JEFFREY

MIKE ROGERS

JACOB PASLEY

MICHAEL SCHWENDAU

JOE PREWITT

EX OFFICIO

DREW CHANDLER

KBEMS DATA ADMINISTRATOR

MONICA ROBERTSON

KBEMS DATA ANALYST

LEGAL

- » Conducted investigations of 56 complaints lodged against individuals, agencies and TEIs.
- » Performed 2 Immediate Temporary Suspension Hearings.
- » Received and filled 202 Open Records Requests during the calendar year.
- » Issued 91 Agency Data Statements of Violation for late EMS data submission consistent with 202 KAR 7: 540.
- » Provided daily operational guidance to individuals, agencies and others in regard to EMS statutory and regulatory interpretation.
- » Provided numerous lectures at Regional, State and National conferences.
- » Reviewed 7,277 criminal background checks for applicants for certification/licensure renewal.
- » Scheduled and provided staff facilitation and resources for Board, Standing Committee, Subcommittee, Task Force and Preliminary Inquiry Board meetings.
- » Submitted the following administrative regulations for approval to the Legislative Research Commission:
 - 202 KAR 7: 501- Ambulance Agency Licensure
 - 202 KAR 7: 545- License Classifications
 - 202 KAR 7: 550- Required Equipment and Vehicle Standards
 - 202 KAR 7: 555- Ground Agencies
 - 202 KAR 7: 560- Ground Vehicle Staff
 - 202 KAR 7: 565- Clinical Pilot Programs
- » Developed Administrative Regulation required by KRS 311A. 032 regarding the mandatory posting of ambulance fee schedules.
- » Coordinated requests for Advisory Opinions.

FIELD OPERATIONS

- » Continued participation with KBEMS Ground Ambulance Regulations Task Force.
- » Created guidance surrounding new Ground Ambulance Kentucky Administrative Regulations.
- » Created and communicated the Agency License & Vehicle Inspection Manual V2.0 to Kentucky EMS agencies.
- » Held a webinar, which was attended by over 100 participants, on new Ground Ambulance Regulations, including ambulance and agency inspection processes on December 19, 2018.
- » Presented on new CAAS Ground Vehicle Standards and proposed Remount Standards at the NASEMSO South Region meeting.
- » Participated with CAAS GVS workgroup to create GVS Remount Standards.
- » Created a new inspection/agency license renewal process for 2019.
- » Hired Eddie Slone as a KBEMS Inspector/Liaison.
- » Director of Field Operations Paul Phillips participated with National Association of State EMS Officials Agency and Vehicle Licensure Committee.



EMSC

KENTUCKY EMSC PERFORMANCE MEASURES

By 2026, 90 percent of EMS agencies in the state or territory have a designated individual who coordinates pediatric emergency care.

1. Performance Measure EMSC 02: Pediatric Emergency Care Coordinator

- (a) EMSC 02 Numerator: 35
- (b) EMSC 02 Denominator: 165
- (c) EMSC 02 Percentage: 21.2%

By 2026, 90 percent of EMS agencies will have a process that requires EMS providers to physically demonstrate the correct use of pediatric-specific equipment.

2. Performance Measure EMSC 03: Use of Pediatric-Specific Equipment

- (a) EMSC 03 Numerator: 36
- (b) EMSC 03 Denominator: 165
- (c) EMSC 03 Percentage: 21.8%

- » Awarded new 4-year EMSC State Partnership Grant (\$520,000.00).
- » Successful application for a Supplemental EMSC Grant of \$100,000.00 for the Pediatric Emergency Care Coordinator Learning Collaborative.
- » Provided and supported pediatric education for EMS providers throughout the state.
- » Represented KBEMS and EMS on multiple state and national boards and committees focused on pediatric issues.
- » Morgan Scaggs serves as Chair of the Pediatric Emergency Care Council of the National Association of State EMS Officials.
- » Distributed pediatric transport devices, length-based resuscitation tapes, and Safe Infant packets to EMS agencies.
- » Publication of the KIDSTUFF quarterly newsletter.
- » Recognized 3 hospital emergency departments as Pediatric Ready.
- » Recognized 7 EMS Agencies for Excellence in Pediatric Care.



DATA

- » Awarded a grant from the Kentucky Transportation Cabinet (KTC) for \$75,000 to continue work on the Kentucky State Ambulance Reporting System (KSTARS) data program.
- » Awarded a grant from the National Institute for Occupational Safety and Health (NIOSH) for \$11,334.53 to continue participating in a pilot project on use of state NEMSIS data for EMS industry occupational safety and surveillance.
- » Awarded 2nd place at the National Association of State EMS Officials annual meeting and 3rd place at the ImageTrend Connect user conference poster presentations for the NIOSH EMS industry occupational safety and surveillance pilot project.
- » Last outstanding service became compliant with reporting requirements of 202 KAR 7:540.
- » Participated with the Kentucky Highway Safety Traffic Records Advisory Council.
- » Participated with the National Association of State EMS Officials Data Manager Council.
- » Participated with the FEMA Regional Emergency Communication Coordinating Workgroup.
- » Built integration between National Registry and KEMSIS.

Surveillance of Occupational Fatalities, Injuries and Exposures among EMS Personnel Using State-Based NEMSIS Data
Matthew Greenwald, Daniel Lee, Drew Chandler, Monica Robinson, Linda Ford
Spring 2018 Meeting of the National Association of State EMS Officials, Providence, RI, May 24-26, 2018

Introduction

- The full extent and nature of occupational injuries and exposures among EMS workers is not known due to inadequate surveillance.
- Certain state data-level NEMSIS V3 data elements contain information on injuries and exposures to and from EMS.
- NIOSH is conducting a three-year pilot project to determine the feasibility of using state-based NEMSIS data for occupational health surveillance of EMS personnel with low state partners.

Objective

- To describe the initial quantity, quality, and completeness of NEMSIS data submitted to NIOSH by state partners.
- To report initial injury and exposure rates based on these data.

Methods

- NIOSH received, aggregated, and analyzed NEMSIS data for three pilot states between Oct 1, 2016 to Sep 30, 2017.
- Data completeness and quality were evaluated in terms of the proportion of reports with missing "the location" or "the reporting" data for each occupational health-related data element.
- Incidence rates were calculated for fatalities, injuries and exposures as the number of events occurring per 100,000 EMS responses.

Results

| | State A | State B |
|---|-------------|-----------|
| Submitted responses | 363,832 | 850,829 |
| Proportion of data missing (%) | | |
| - "the location" (N) | 25.6 | 80.2 |
| - "the reporting" (N) | 6.7 | 43.0 |
| - "the location" (E) | 30.3 | 50.7 |
| - "the reporting" (E) | 17.2 | 3.8 |
| Fatalities, injury, exposure events/100,000 responses | | |
| - Fatalities | 23 / 0.6 | 0 |
| - Injury | 262 / 7.2 | 140 / 3.3 |
| - Exposure | 205 / 5.9 | 0 |
| - Not specified | 1,798 | 0 |
| - Total | 2,327 / 6.7 | 140 / 3.3 |

Conclusions

- State-based NEMSIS data is a promising data source for occupational health surveillance of EMS personnel.
- Quality and completeness of initial data were poor.
- Data quality and completeness are likely to improve over time.
- Sustained effort required by state EMS authorities to improve data collection quality.
- Educational interventions promoting the complete and correct reporting and reporting of NEMSIS data elements were implemented by both pilot states in December 2017.
- Project will need to improve surveillance by encouraging the more complete collection and broader use of this data.

Type of Work-Related Injury, Death or Suspected Exposure

CONTACT INFO

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National Institute for Occupational Safety and Health
1400 Industrial Ave. SE, Division, OH 43214
Phone: 614-845-7224 | Fax: 614-845-7224
UIC SCHOOLS, EP
UNIVERSITY OF ILLINOIS
IDPH

National Institute for Occupational Safety and Health
Division of Occupational Safety and Health

KSTARS AND KEMSIS HIGHLIGHTS

888,494

Incident reports received in KSTARS

71

KEMSIS agency and personnel data exports fulfilled through Open Record Request procedure

67

67 KSTARS care report data exports fulfilled through Data Sharing Agreement procedure

43

KSTARS care report data exports fulfilled through Open Record Request procedure



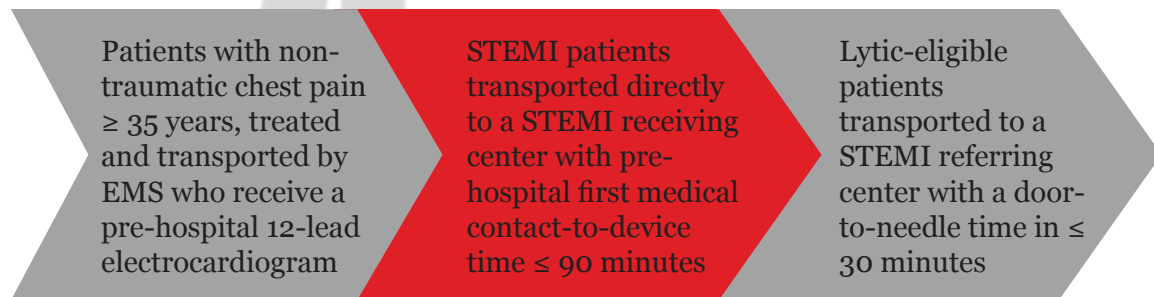
EDUCATION & TRAINING

- » Recommended revisions to 202 KAR 7:201, 7:301, 7:330, 7:401 and 7:601 to remove antiquated and adverse language from regulations to improve retention and speed up initial certification and licensure.
- » Completed the revision of all EMS provider applications and released for testing and implementation.
- » Completed over 12,000 digital conversions of certification and licensure files into the Kentucky Emergency Medical Services Information System (KEMSIS).
- » Created and implemented the online module for The "Telephone-Cardiopulmonary Resuscitation (T-CPR)" program for telecommunicators, which fulfills the requirements described in Senate Bill 142 (2018). This course is for telecommunicators (dispatchers) that need to comply with training requirements mandated by KRS 15.550, KRS 15.585 and KRS 15.530 to 15.590. To date over 500 telecommunicators and emergency managers have completed the training.
- » Approved U.S. Army Medical Department Center, Joint Base San Antonio, Texas Critical Care Flight Paramedic Program as an acceptable KBEMS Critical Care Course for Paramedic Critical Care endorsement
- » Participated with the Kentucky Public Protection Cabinet and Commission on Military Affairs in an EMS Military to Civilian Transition Project.
- » Participated with the National Association of State EMS Officials Personnel Licensure Council and Education Committee.
- » Participated with the Kentucky State Ebola Assessment Team to determine minimum compliance and readiness as an identified Ebola Assessment Hospital.
- » Participated with the Kentucky Medical Orders for Scope of Treatment Coalition.
- » Reduced processing of completed individual application for EMS certification/licensure from 2 weeks to 2 working days.
- » Issued 1,421 Initial, reinstatement, reciprocity and temporary certification/licenses.
- » Renewed 6,286 Emergency Medical Responders, Emergency Medical Technicians, Advanced Emergency Medical Technicians, and Paramedics
- » Issued 163 EMR, EMT, AEMT and Paramedic initial certification course numbers for KBEMS certified Emergency Medical Services – TEIs.
- » Implemented Automated External Defibrillation and Stop the Bleed Program at KBEMS / KFC offices
- » Conducted 110 EMS provider continuing education audits and 10 EMS TEI audits.
- » Issued 15 continuing education course approvals for Kentucky EMS/Healthcare symposias.
- » Issued 4 plans of corrections to Emergency Medical Services – Training and Educational Institutions for regulatory violations.
- » Conducted 22 EMS TEI inspections for initial certification and upgrades.
- » Provided daily regulatory and operational guidance to KBEMS certified educators, EMS TEIs, and other stakeholders in regards to EMS certification, licensure and education.
- » Developed Education Committee - Accreditation Work Group to identify best practices and develop resources to promote retention and success for future and existing Paramedic level EMS TEIs involved in the accreditation process through the Committee on Accreditation of Educational Programs for the Emergency Medical Professions.



The American Heart Association recognizes the critical life-saving role prehospital emergency services provide to the overall success of a STEMI system of care. The availability of 12-lead ECGs and well trained EMS providers allow for rapid identification of STEMIs, early activation of hospital emergency and cardiac teams and transportation to a STEMI Receiving or Referral center for immediate care.

The EMS agencies recognized here have achieved 75% or higher on the following criteria that are applicable to their systems:



2018 AHA MISSION: LIFELINE RECIPIENTS

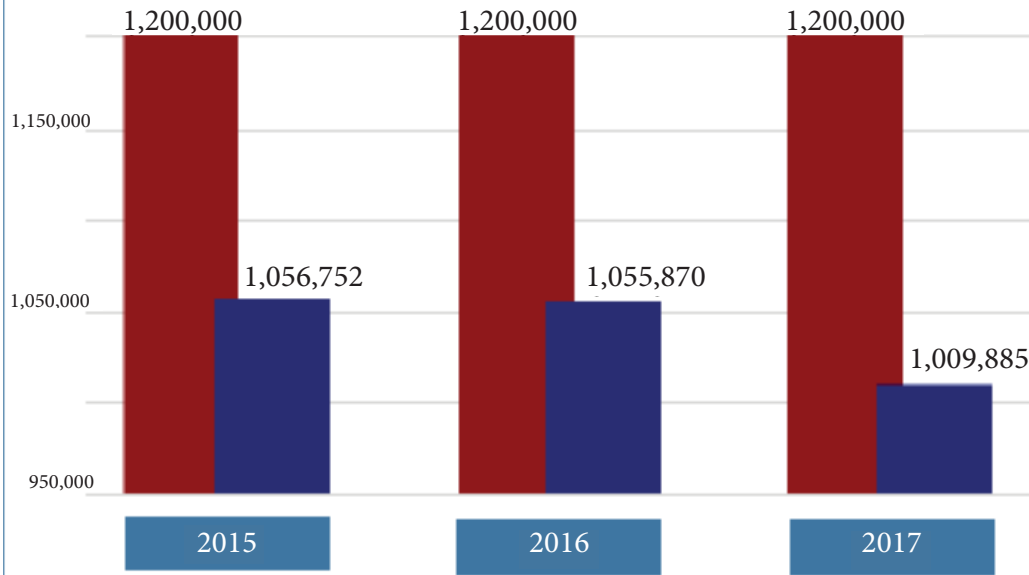
- | | |
|---|--|
| Air Methods Kentucky, Georgetown | Louisville Metro EMS, Louisville |
| Boyle County EMS, Danville | Madison County EMS, Richmond |
| Central Campbell County Fire District, Cold Springs/ Highland Heights | The Medical Center EMS, Bowling Green |
| Estill County EMS, Irvine | Mercy Regional EMS, Paducah |
| Georgetown-Scott County EMS, Georgetown | Powell County Ambulance Service, Stanton |
| Independence Fire District, Independence | Shelby County EMS, Shelbyville |
| Jessamine County EMS, Nicholasville | Woodford County EMS, Versailles |



AMBULANCE BLOCK GRANT

KRS 311A.155 Authorizes the Kentucky Board of Emergency Medical Services to maintain a block grant fund program for the purpose of assisting units of local government in the provision of emergency medical services. This administrative regulation establishes standards and criteria governing the allocation of emergency medical services funding assistance to eligible applicants. An annual grant allocation in the amount of \$10,000.00 is distributed to each applicant county that is in compliance.

Type of Service Requested



| Grant Money Awarded | |
|---------------------|-----|
| 2015 | 88% |
| 2016 | 88% |
| 2017 | 84% |

■ Fund ■ Awarded

MOST FREQUENTLY PURCHASED ITEMS

Ambulance, Chassis/Remount, Lease Payment

Power Stretcher

Video Laryngoscope

Training Equipment & Manikins

Mechanical Chest Compression Device

EZ IO Drills/bags

Mobile / Portable Radio

Stryker Stair Chair

Hazmat Equipment

Backboard

Monitor / Defibrillator

Traction Splint

Transport Ventilator

Laptop Computer

Kentucky was one of two states awarded a contract by the National Institute for Occupational Safety and Health (NIOSH) for a pilot study researching the viability of National EMS Information System (NEMSIS) data for surveillance of EMS personnel injuries and exposures. The contract came with a first year (2017) budget of \$11,033.52 with two additional year options. The contract provided for data accessibility from the Kentucky State Ambulance Reporting System (KSTARS) to NIOSH researchers for a specific time period as well as steps for providing education on the project topic with the state’s EMS community.

NIOSH Requested NEMSIS Data Elements:

**eOther.03
PERSONAL
PROTECTIVE
EQUIPMENT USED**

The personal protective equipment which was used by EMS personnel during an EMS patient contact: Eye protection, Helmet, Level A Suit, Level B Suit, Level C Suit, Level D Suit (Turn out gear), Gloves, Mask-N95, PAPR, Reflective Vest, Other.

**eOther.04
EMS PROFESSIONAL
(CREW MEMBER) ID**

The ID number of the EMS Crew Member associated with eOther.03, eOther.05, eOther.06.

**eOther.05
SUSPECTED EMS-
RELATED EXPOSURE,
INJURY OR DEATH**

Indication of an EMS work related exposure, injury, or death associated with this EMS event.

**eOther.06
TYPE OF WORK-RELATED
INJURY, DEATH OR
SUSPECTED EXPOSURE**

The type of EMS crew member work-related injury, death, or suspected exposure related to the EMS response: Death, Exposure, Injury, None, Other.

EMS Personnel Injury & Exposure Data Reported to KSTARS as of 12/31/2018.

| Year | # Incidents | % Using eOther.03 | % Using eOther.04 | % Using eOther.05 | % Using eOther.06 |
|------|-------------|-------------------|-------------------|-------------------|-------------------|
| 2018 | 888,478 | 13% | < 1% | 1% | 8% |

The Board voted to require the collection of eOther.03, eOther.04, eOther.05, and eOther.06.
<https://youtu.be/K5m2F6-q4ow>



TYPE I

A Type I is a Cab Chassis with modular body. The major feature of a Type I ambulance is that it is based on a truck style body with a separate driver compartment. Most heavy duty ambulances are of this type.



TYPE II

Type II ambulances are a long wheelbase van type with an Integral cab design. Many long-distance transport services use Type II ambulances because of their increased fuel efficiency. In general they do not make for practical emergency services because of their cramped spaces.



TYPE III

A Type III ambulance, much like a Type I ambulance, has a separate square patient compartment that is mounted onto an existing chassis. The difference between the two ambulances lies in what types of chassis are used. A Type 3 ambulance is mounted on the cut-a-way chassis of a van, whereas Type I ambulances utilize a truck chassis.



ROTOR WING

Rotary-wing refers to the rotating “wings” (or blades) used by helicopters. Helicopter ambulances are used in a variety of situations, primarily dealing with emergency response. Hospitals utilize them to carry specially trained air EMS teams out to a location where a patient has been injured, and then to escort the patient safely and quickly back to the hospital.



FIXED WING

Fixed-wing refers to wings that do not move, or are “fixed” in a specific location on the aircraft. Longer-distance air ambulances possess high-tech medical equipment to accommodate a patient and a medical crew. Fixed-wing ambulances are a necessity for quickly and comfortably transporting patients across countries, oceans and continents.

1,239
Licensed Ambulances
137
Vehicles Added

| Licensed Vehicles | |
|-------------------|-----|
| Type I | 316 |
| Type II | 210 |
| Type III | 513 |
| Air Rotor Wing | 70 |
| Air Fixed Wing | 4 |

*129 Vehicles with no ‘Vehicle Type’ listed.

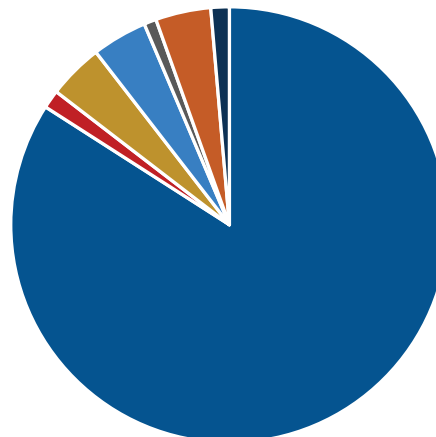


A CLOSER LOOK AT THE DATA

Kentucky Licensed Agencies

Agency Classifications

| | | |
|--------------|------------|----------------|
| Class I | 185 | 84.09% |
| Class II | 3 | 1.36% |
| Class III | 9 | 4.07% |
| Class IV | 9 | 4.07% |
| Class VI | 2 | .91% |
| Class VII | 9 | 4.07% |
| Class VIII | 3 | 1.36% |
| Total | 220 | 100.00% |



■ Class I ■ Class II ■ Class III ■ Class IV ■ Class VI ■ Class VII ■ Class VIII

197 Advanced Life Support (ALS) Agencies - 23 Basic Life Support (BLS) Agencies

Agency Organization Type

| | | | |
|------------------------|----|-----------------------|----|
| Community, Non-Profit | 47 | Hospital | 20 |
| Fire Department | 54 | Private, Non-Hospital | 61 |
| Governmental/ Non-Fire | 38 | | |

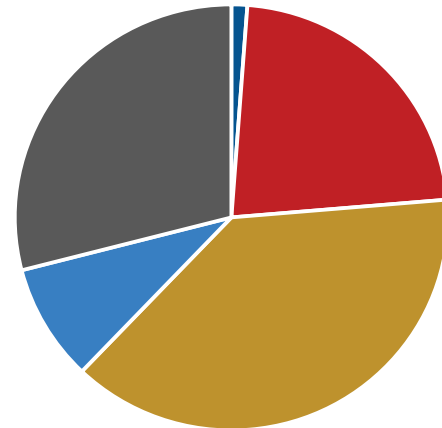
- CLASS I** → Class I ground ambulance services shall operate at the ALS or BLS level to provide emergency and nonemergency transportation.
- CLASS II** → Class II ground ambulance services shall operate at the BLS level only to provide nonemergency transportation.
- CLASS III** → Class III ground ambulance services shall operate at the ALS level only to provide critical care, emergency or nonemergency transportation between health care facilities.
- CLASS IV** → Class IV ground ambulance services shall operate at the ALS or BLS level to provide emergency and nonemergency transportation for restricted locations such as industrial sites and other sites that do not provide services outside a designated site.
- CLASS VI** → Class VI services provide ALS medical first response without patient transport.
- CLASS VII** → Class VII rotor wing air ambulance services may provide ALS emergency or nonemergency transportation. Fixed wing class VII services may provide ALS or BLS emergency or nonemergency transportation.
- CLASS VIII** → Class VIII services provide BLS or ALS pre-hospital care above the first-aid level at special events, sports events, concerts, or large social gatherings.

A TEI is an organization that is certified by KBEMS to teach present and future EMS providers. TEIs are certified by KBEMS to teach continuing education courses, or courses to certify/license individuals at the levels certified or licensed by KBEMS (Emergency Medical Responder, Emergency Medical Technician, Advanced Emergency Medical Technician, and Paramedic).

Kentucky Licensed Training & Educational Institutions

Training & Educational Institution Types

| | | |
|--------------|------------|-------------|
| EMS-TEI 1 | 2 | 1.18% |
| EMS-TEI 2 | 38 | 22.49% |
| EMS-TEI 3 | 65 | 38.46% |
| EMS-TEI 4 | 15 | 8.88% |
| EMS-TEI CE | 49 | 28.99% |
| Total | 169 | 100% |



■ TEI 1 ■ TEI 2 ■ TEI 3 ■ TEI 4 ■ TEI CE

163 Courses Issued for 2018

EMR Courses:
10

EMT Courses:
130

AEMT Courses:
13

Paramedic Courses:
10

EMS-TEI 1 → Certified to teach EMR.





EMS-TEI 2 → Certified to teach EMR and EMT.

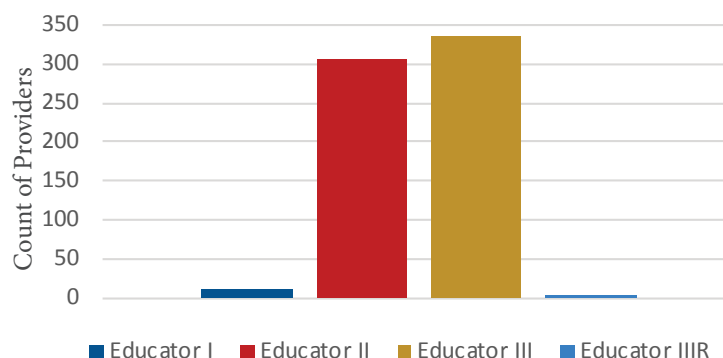
EMS-TEI 3 → Certified to teach EMR, EMT, and AEMT.

EMS-TEI 4 → Certified to teach EMR, EMT, AEMT, and Paramedic.

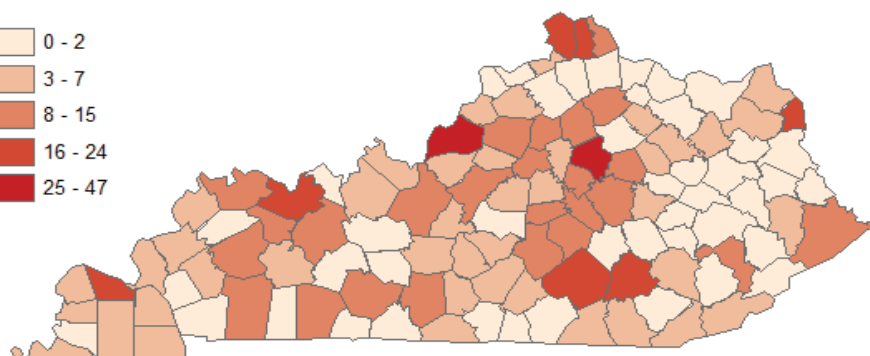
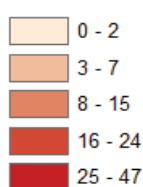
EMS-TEI CE → Certified to teach Continuing Education only.

Kentucky Licensed Educators

| Educator Levels | | | |
|---|----------------|------------|-------------|
|  | Educator I | 11 | 1.68% |
|  | Educator II | 305 | 46.56% |
|  | Educator III | 335 | 51.15% |
|  | Educator IIIIR | 4 | .61% |
| Total | | 655 | 100% |



KY Educator County of Residence



Top 5 Educator County of Residence

| |
|-----------|
| Jefferson |
| Fayette |
| Pulaski |
| Boone |
| McCracken |

Educator Licenses Issued in 2018

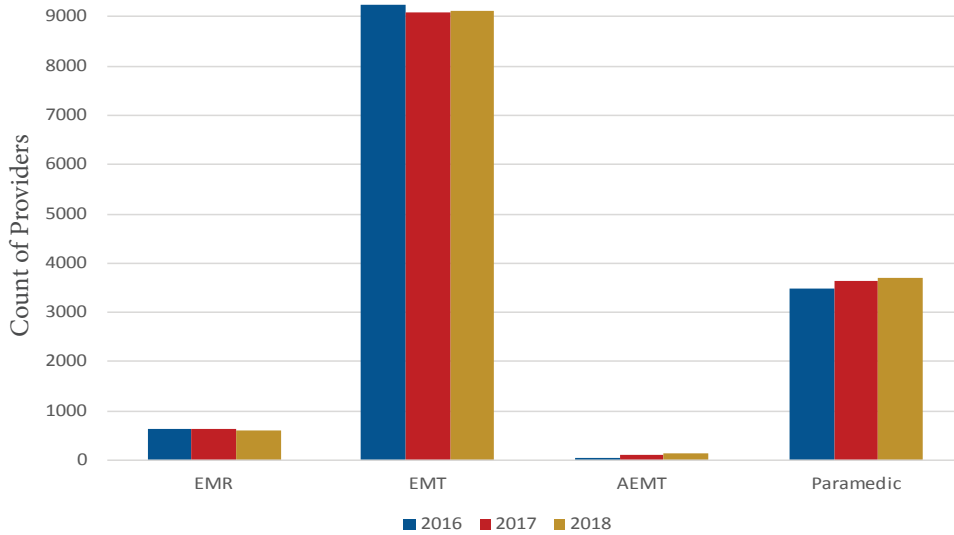
| | Educator I | Educator II | Educator III | Educator IIIIR |
|---------------|------------|-------------|--------------|----------------|
| Initial | 2 | 29 | 20 | 0 |
| Renewal | 8 | 196 | 196 | 3 |
| Reciprocity | 0 | 0 | 3 | 0 |
| Reinstatement | 0 | 0 | 1 | 0 |
| Total | 10 | 225 | 220 | 3 |

LEVEL

TEACHING ABILITY

| | |
|----------------|--|
| Educator I | EMR Initial or Continuing Education Courses |
| Educator II | EMR or EMT Initial or Continuing Education Courses |
| Educator III | EMR or EMT Initial or Continuing Education Courses; AEMT or Paramedic Initial or Continuing Education Courses |
| Educator IIIIR | AEMT or Paramedic Initial or Continuing Education Courses |

Kentucky Certified / Licensed Providers



| | 2016 | 2017 | 2018 |
|--------------|---------------|---------------|---------------|
| EMR | 639 | 632 | 599 |
| EMT | 9,257 | 9,081 | 9,136 |
| AEMT | 61 | 102 | 155 |
| Paramedic | 3,495 | 3,632 | 3,702 |
| Total | 13,452 | 13,447 | 13,592 |

2018 Issued Certifications / Licenses

Initial

| | |
|--------------|--------------|
| EMR | 50 |
| EMT | 834 |
| AEMT | 60 |
| Paramedic | 112 |
| Total | 1,056 |

Reinstatement

| | |
|--------------|-----------|
| EMR | 1 |
| EMT | 31 |
| AEMT | 1 |
| Paramedic | 9 |
| Total | 42 |

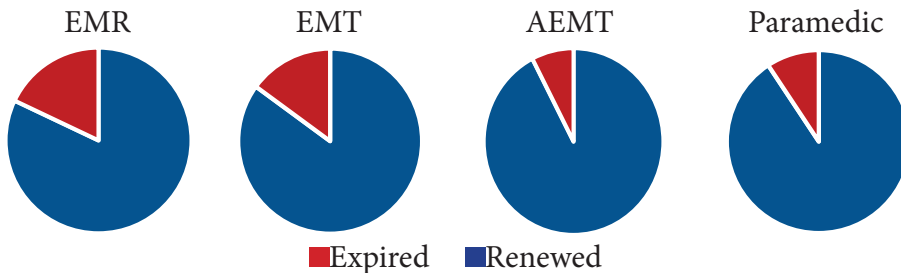
Reciprocity

| | |
|--------------|------------|
| EMR | 0 |
| EMT | 149 |
| AEMT | 18 |
| Paramedic | 146 |
| Total | 313 |

Temporary

| | |
|--------------|-----------|
| EMR | 0 |
| EMT | 6 |
| AEMT | 0 |
| Paramedic | 4 |
| Total | 10 |

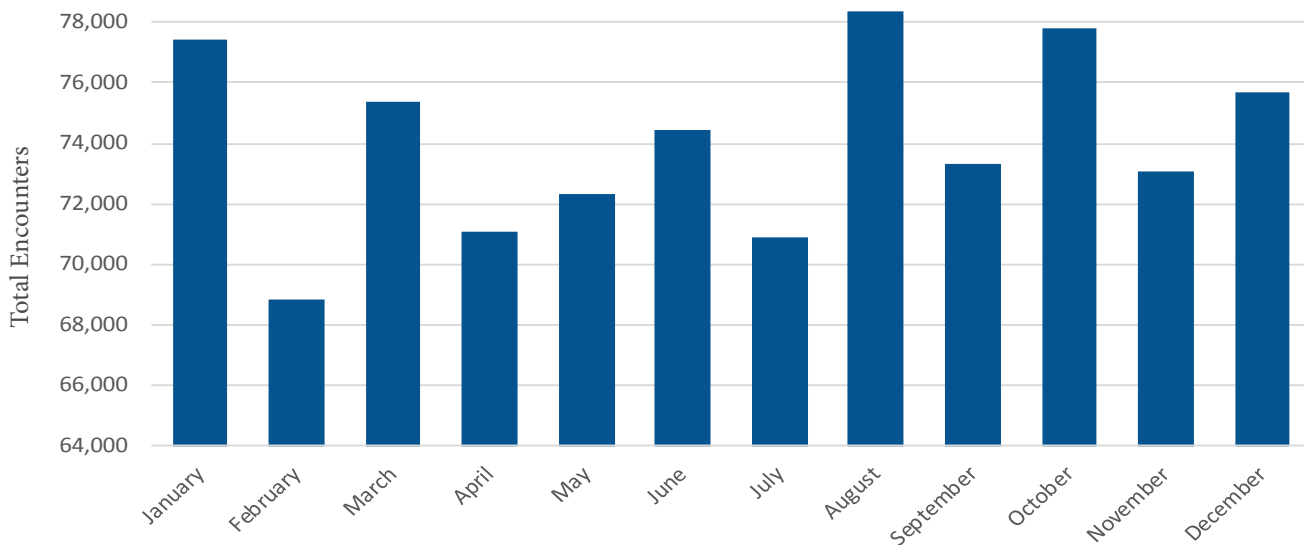
2018 Provider Recertification



| | Renewed | Expired | Attrition |
|--------------|--------------|------------|---------------|
| EMR | 247 | 54 | 21.86% |
| EMT | 4,058 | 714 | 17.59% |
| AEMT | 73 | 6 | 8.22% |
| Paramedic | 1,908 | 195 | 10.22% |
| Total | 6,286 | 969 | 14.47% |

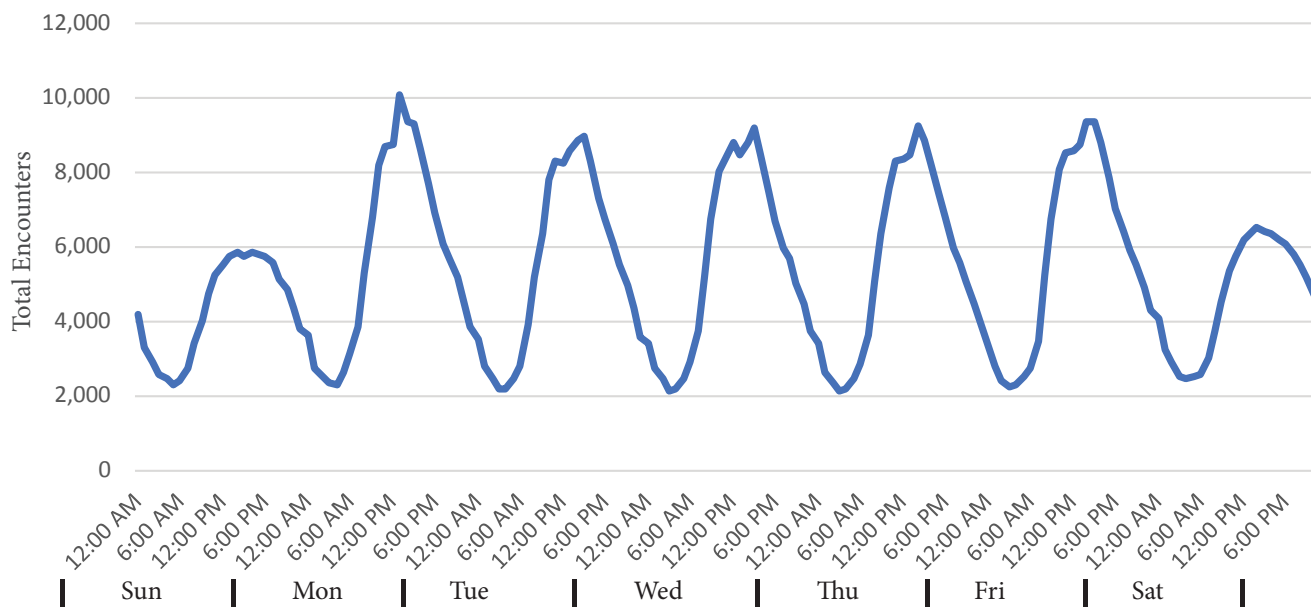
2018 EMS Run Encounters

888,478 Incidents Reported to KSTARS

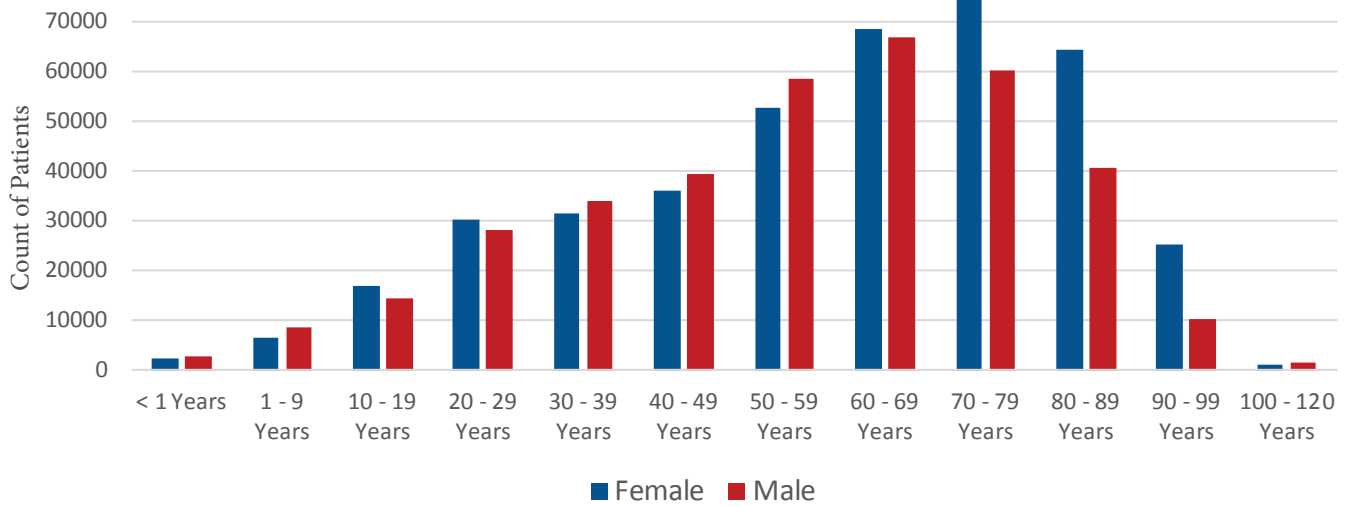


| | | | | | |
|----------|--------|--------|--------|-----------|--------|
| January | 77,406 | May | 72,307 | September | 73,303 |
| February | 68,817 | June | 74,437 | October | 77,772 |
| March | 75,356 | July | 70,892 | November | 73,063 |
| April | 71,055 | August | 78,360 | December | 75,714 |

Incident Peak Times



Patient Age Range by Gender



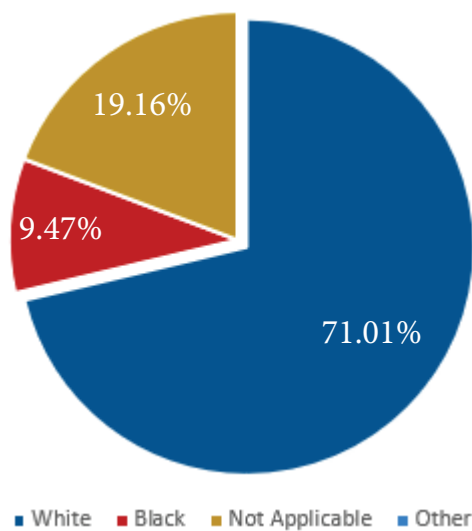
| Age Range | Female | Male | Age Range | Female | Male |
|----------------------|--------|--------|------------------------|--------|--------|
| <1 Years of Age | 2,530 | 2,993 | 50 - 59 Years of Age | 52,906 | 58,409 |
| 1 - 9 Years of Age | 6,631 | 8,563 | 60 - 69 Years of Age | 68,489 | 66,847 |
| 10 - 19 Years of Age | 17,033 | 14,618 | 70 - 79 Years of Age | 74,873 | 60,221 |
| 20 - 29 Years of Age | 30,098 | 28,271 | 80 - 89 Years of Age | 64,561 | 40,902 |
| 30 - 39 Years of Age | 31,709 | 34,124 | 90 - 99 Years of Age | 25,397 | 10,165 |
| 40 - 49 Years of Age | 36,034 | 39,622 | 100 - 120 Years of Age | 1,037 | 1,379 |

*108,338 incidents with missing patient age and/or patient gender.

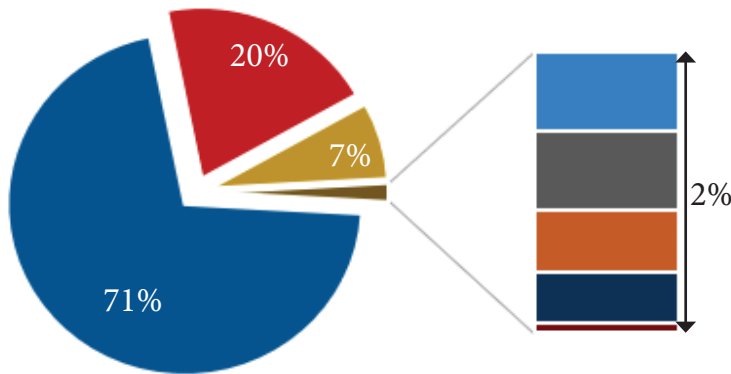
Top 10 Patient Residence by State

| | |
|---------------|---------|
| Kentucky | 696,812 |
| Indiana | 23,286 |
| Ohio | 8,548 |
| Tennessee | 2,913 |
| Illinois | 1,265 |
| West Virginia | 1,192 |
| Florida | 769 |
| Georgia | 537 |
| Michigan | 514 |
| Arizona | 424 |

Patient Race

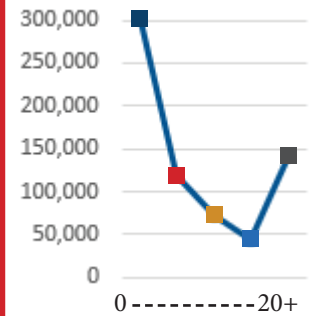


Type of Service Requested



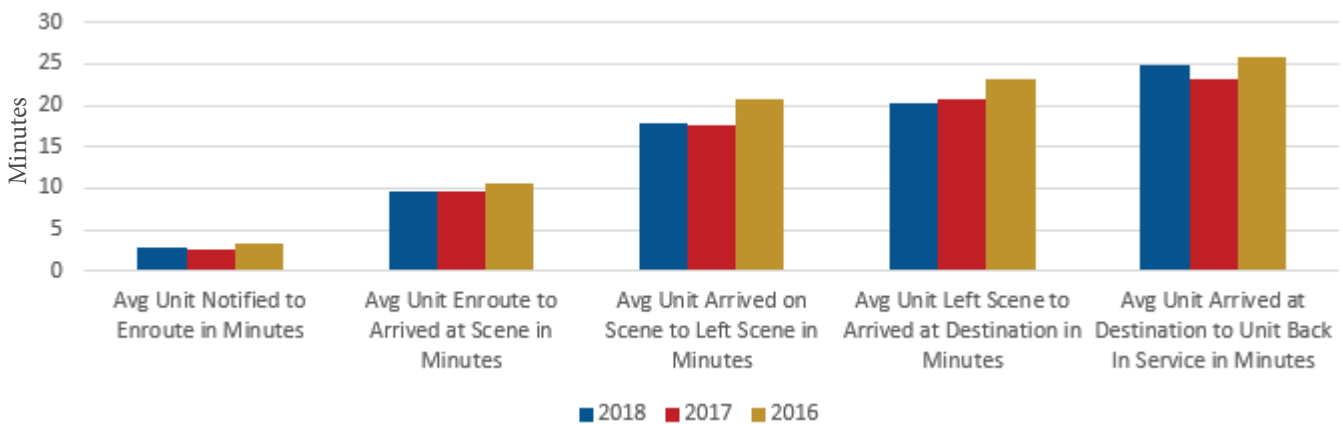
| | | | |
|--------------------------|---------|--------------|-------|
| 911 Response | 630,509 | Standby | 4,389 |
| Medical Transport | 177,781 | Not Recorded | 3,444 |
| Interfacility Transport | 64,622 | Mutual Aid | 2,870 |
| Public Assistance/ Other | 4,399 | Intercept | 495 |

Mileage to Scene



| | |
|------------|---------|
| 0 to < 5 | 300,543 |
| 5 to < 10 | 119,958 |
| 10 to < 15 | 73,094 |
| 15 to < 20 | 42,898 |
| > 20 | 142,479 |

Average Run Times in Minutes



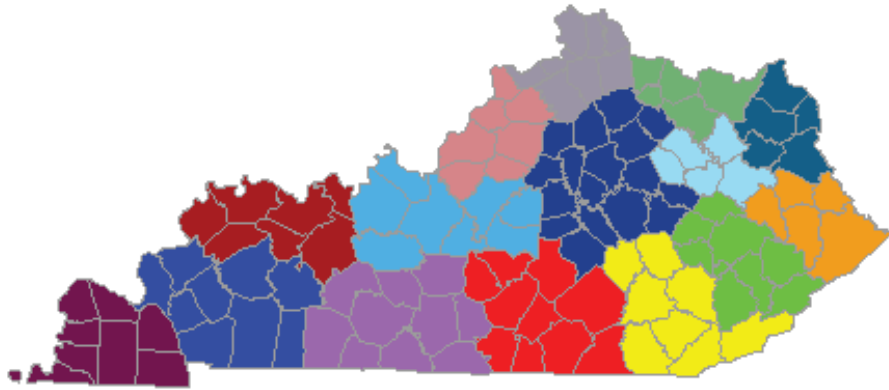
| Average Service Response Times | 2016 | 2017 | 2018 |
|---|------------|--------------|--------------|
| Unit Notified to Enroute | 3 Minutes | 3 Minutes | 3 Minutes |
| Unit Enroute to Arrived at Scene | 11 Minutes | 10 Minutes | 10 Minutes |
| Unit Arrived on Scene to Left Scene | 21 Minutes | 18 Minutes | 18 Minutes |
| Unit Left Scene to Arrived at Destination | 23 Minutes | 21 Minutes | 20 Minutes |
| Unit Arrived at Destination to Unit Back in Service | 26 Minutes | 23 Minutes | 25 Minutes |
| Average Unit Notified by Dispatch to Unit Back in Service | 1.23 Hours | 1.14 Minutes | 1.15 Minutes |



Top 10 Complaints Reported by Dispatch & Top Corresponding Provider Impressions

| Incident Complaint Reported by Dispatch | Provider Primary Impression | Count of Incidents |
|---|---|--------------------|
| 1. Transfer/ Interfacility/ Palliative Care (149,723 Incidents) | 1. Weakness | 24,047 |
| | 2. Other Reduced Mobility | 18,589 |
| | 3. Not Recorded | 8,137 |
| 2. Sick Person (135,804 Incidents) | 1. Weakness | 24,102 |
| | 2. Not Recorded | 10,795 |
| | 3. Pain, Unspecified | 8,197 |
| 3. No Other Appropriate Choice (108,844 Incidents) | 1. Weakness | 27,368 |
| | 2. Not Recorded | 10,700 |
| | 3. Altered Mental Status | 6,748 |
| 4. Breathing Problem (71,939 Incidents) | 1. Respiratory Distress, Acute | 21,448 |
| | 2. Shortness of Breath | 5,957 |
| | 3. Not Recorded | 4,797 |
| 5. Falls (66,707 Incidents) | 1. Injury, Unspecified | 12,348 |
| | 2. Weakness | 7,670 |
| | 3. Not Recorded | 7,129 |
| 6. Traffic/ Transportation Incident (58,628 Incidents) | 1. Injury, Unspecified | 12,820 |
| | 2. Not Recorded | 10,801 |
| | 3. Encounter for General Examination without Complaint, Suspected or Reported Diagnosis | 9,381 |
| 7. Chest Pain (Non-Traumatic) (50,481 Incidents) | 1. Chest Pain, Unspecified | 19,992 |
| | 2. Chest Pain, Other [non-cardiac] | 5,868 |
| | 3. Not Recorded | 3,078 |
| 8. Unknown Problem / Person Down (27,810 Incidents) | 1. Not Recorded | 11,824 |
| | 2. Altered Mental Status | 1,565 |
| | 3. Encounter for general Examination without Complaint, Suspected or Reported | 1,389 |
| 9. Unconscious / Fainting / Near-Fainting (22,742 Incidents) | 1. Syncope and Collapse | 4,903 |
| | 2. Not Recorded | 2,591 |
| | 3. Altered Mental Status | 2,380 |
| 10. Abdominal Pain / Problems (21,819 Incidents) | 1. Generalized Abdominal Pain | 5,506 |
| | 2. Unspecified Abdominal Pain | 4,311 |
| | 3. Acute Abdomen | 2,573 |

Total Call Volume by Region



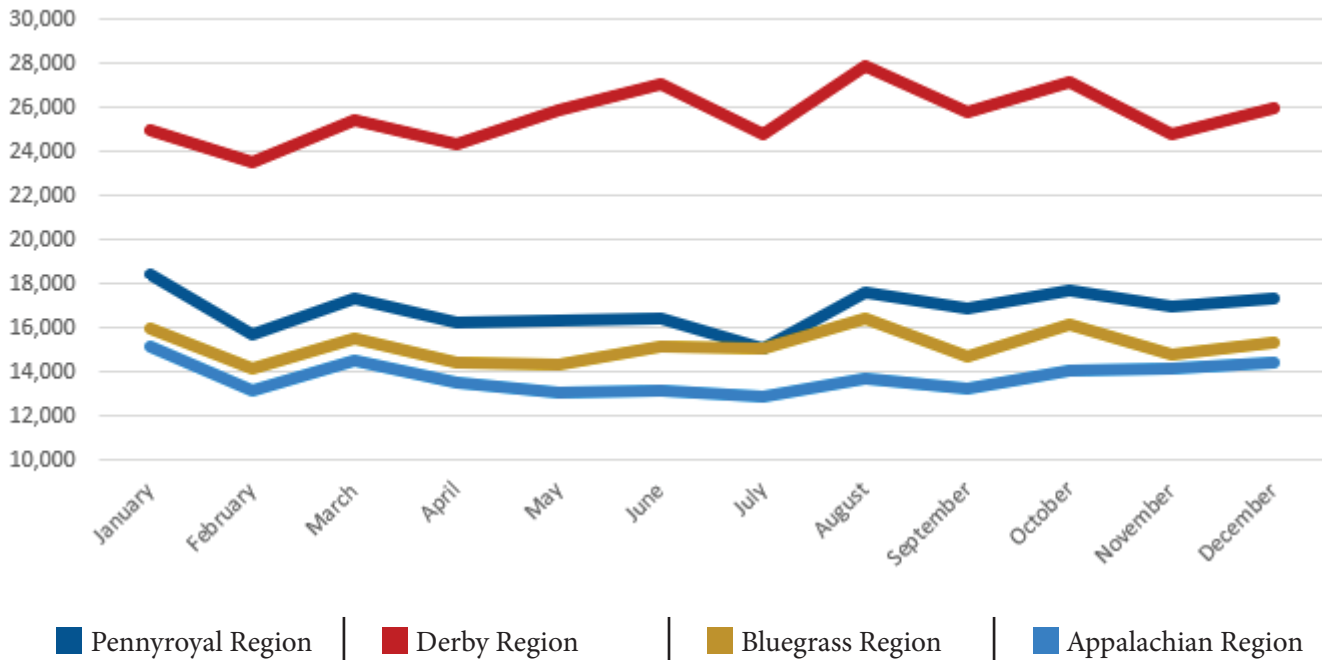
| Pennyroyal Region | |
|-------------------|----------------|
| District 1 | 33,851 |
| District 2 | 34,516 |
| District 3 | 39,412 |
| District 4 | 50,699 |
| District 14 | 37,734 |
| Total | 196,212 |

| Derby Region | |
|--------------|----------------|
| District 5 | 40,637 |
| District 6 | 196,315 |
| District 7 | 70,386 |
| Total | 307,338 |

| Bluegrass Region | |
|------------------|----------------|
| District 8 | 9,270 |
| District 15 | 158,550 |
| Total | 167,820 |

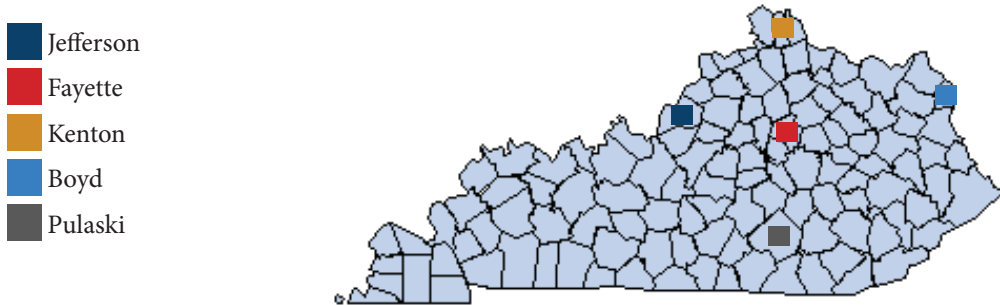
| Appalachian Region | |
|--------------------|----------------|
| District 9 | 10,008 |
| District 10 | 33,977 |
| District 11 | 36,990 |
| District 12 | 26,544 |
| District 13 | 50,874 |
| Total | 158,393 |

Monthly Call Volume by Region



683,350 Patients Transported by EMS

Top 10 Facility Destinations



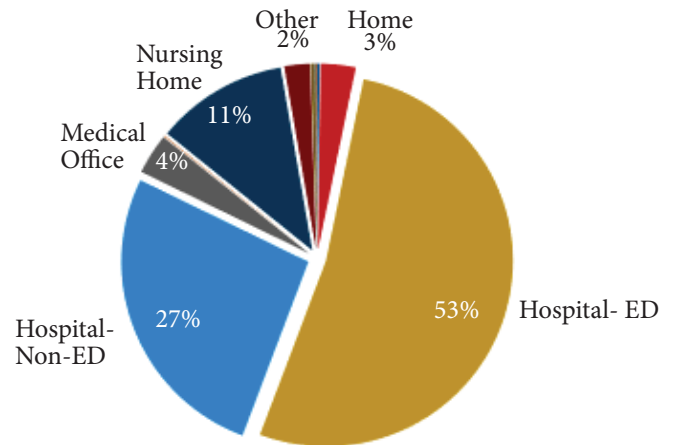
| | | | |
|---|--------|---|-------|
| 1. University of Louisville Hospital | 17,816 | 6. Jewish Hospital & St. mary's Health-care | 9,945 |
| 2. Norton HSP/ Norton CHDRN HSP/ Norton Healthcare Pavilion | 15,551 | 7. Saints Mary & Elizabeth HSP | 9,589 |
| 3. Norton Audubon Hospital | 13,462 | 8. St. Elizabeth Edgewood | 9,002 |
| 4. Baptist Health Louisville | 12,798 | 9. Kings Daughters Medical Clinic | 6,905 |
| 5. University of KY HSP | 10,248 | 10. Lake Cumberland Regional HSP | |

*Based on Incident Reports Submitted to KSTARS Using the CORRECT Facility ID Code. Approximately 317,000 Patient Transports with INCORRECT or NO Facility ID Code Submitted to KSTARS for CY 2018.

Transport Mode From Scene

| Reason for Choosing Destination | Emergent | |
|---|----------------|----------------|
| Closest Facility | 40% | 34% |
| Diversion | <1% | <1% |
| Family Choice | 4% | 3% |
| Insurance Requirement | <1% | 1% |
| Law Enforcement Choice | <1% | <1% |
| On-Line / On-Scene Medication Direction | <1% | <1% |
| Other | 2% | 7% |
| Patient's Choice | 28% | 29% |
| Physician's Choice | 6% | 16% |
| Protocol | 12% | 8% |
| Regional Specialty Center | 8% | 1% |
| Total Incidents | 136,832 | 504,942 |

Destination Type



Destination Type: Free Standing ED (<1%), Home (3%), Hospital- ED (53%), Hospital- Non-ED (27%), Medical Office (4%), Morgue (<1%), Nursing Home, Other (2%), EMS Responder- Air (<1%), EMS Responder- Ground (<1%), Police/ Jail (0%), Urgent Care (<1%).

GROUND VS. AIR MED TRANSPORTS

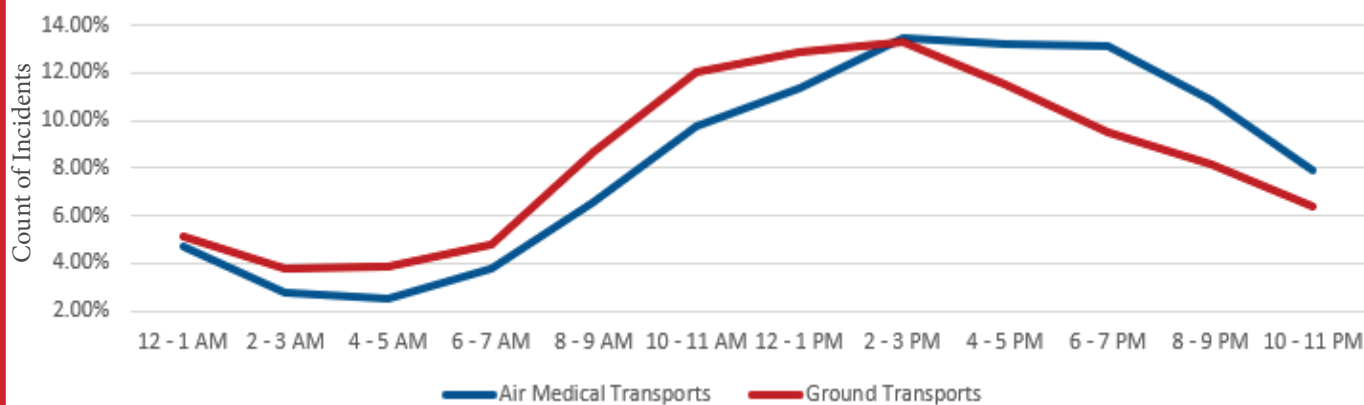
653,734 Ground Transports

8,886 Air Transports

Provider Primary Impression

| Ground Transports | | Air Transports | |
|-----------------------------|-------|-------------------------------|--------|
| Top 5 Primary Impressions | # | Top 5 Primary Impressions | # |
| Weakness | 13.26 | Injury, Unspecified | 10.93% |
| Altered Mental Status | 4.75% | Stroke | 7.27% |
| Injury, Unspecified | 4.64% | Altered Mental Status | 5.98% |
| Respiratory Distress, Acute | 3.90% | Chest Pain, Unspecified | 2.44% |
| Chest Pain, Unspecified | 3.74% | Unspecified Multiple Injuries | 2.31% |

Incident Peak Times



Type of Service Requested

| Air Transports | | | Ground Transports |
|----------------|--------|-------------------------|-------------------|
| | 38.24% | 911 Response | 66.91% |
| | .03% | Intercept | .05% |
| | 60.24% | Interfacility Transport | 7.63% |
| | 1.21% | Medical Transport | 24.69% |
| | .08% | Mutual Aid | .30% |
| | .02% | Public Assistance | .13% |
| | 0% | Standby | .09% |
| | .18% | Not Recorded | .20% |

Air Medical - Rotor Wing Transports

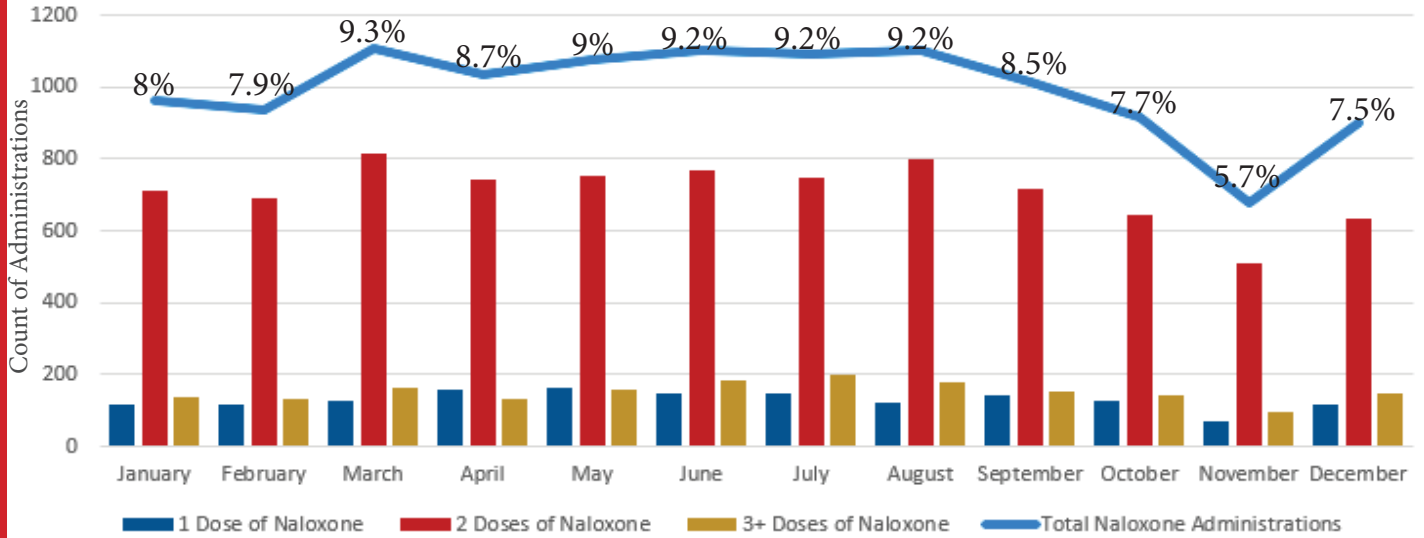
8,714

Air Medical - Fixed Wing Transports

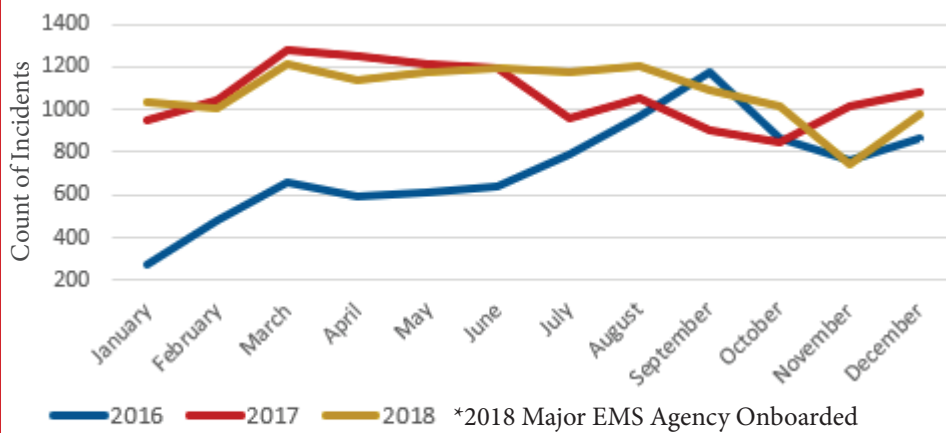
172

12,968 Naloxone Administrations in CY 2018

Monthly Naloxone Administrations by Dosage



Yearly Administrations by Month



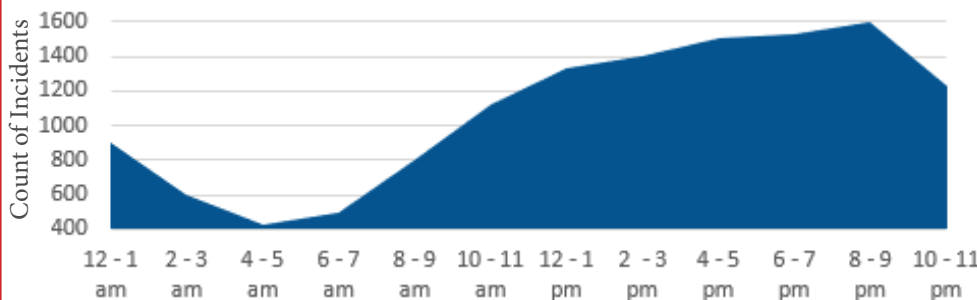
Patient Condition After Receiving Naloxone

| | |
|--|-------|
| Patient Improved | 60.4% |
| Patient Unchanged | 39.4% |
| Patient Worse | <1% |
| 524 Naloxone Incidents with No Patient Condition Recorded. | |

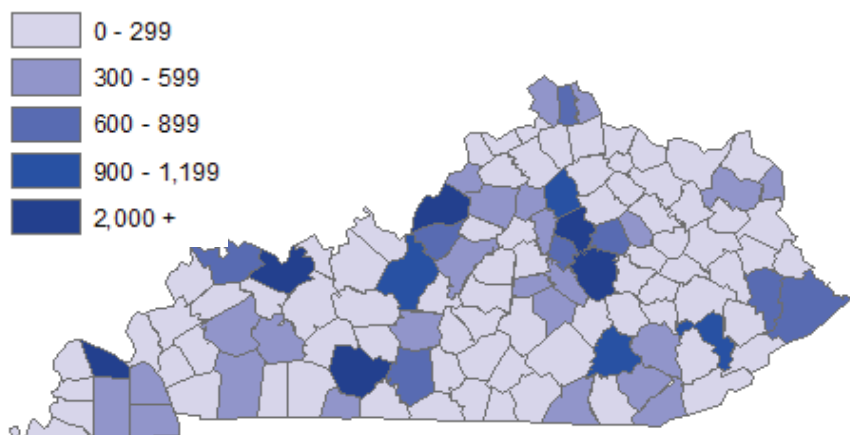
Top 10 Provider Primary Impressions

| | |
|--|-------|
| Poisoning by Heroin, Undetermined | 2,695 |
| Altered Mental Status | 2,358 |
| Opioid Related Disorders | 1,724 |
| Cardiac Arrest | 1,217 |
| Poisoning by Unspecified Drugs | 1,028 |
| Poisoning by Other Opioids | 811 |
| Poisoning by Other Drugs | 294 |
| Respiratory Distress, Acute | 171 |
| Not Recorded | 157 |
| Psychoactive Substance Related Disorders | 156 |

Peak Times



Traffic / Transportation Incidents



Top 10 Counties
Where Traffic / Transportation Incidents Occurred

| | | | |
|--------------|-------|-----------|-------|
| 1. Jefferson | 9,785 | 6. Warren | 1,215 |
| 2. Fayette | 3,516 | 7. Hardin | 1,164 |
| 3. Daviess | 1,857 | 8. Laurel | 1,013 |
| 4. McCracken | 1,414 | 9. Perry | 950 |
| 5. Madison | 1,263 | 10. Scott | 900 |

58,633
Traffic/Transportation Incidents Reported by Dispatch.

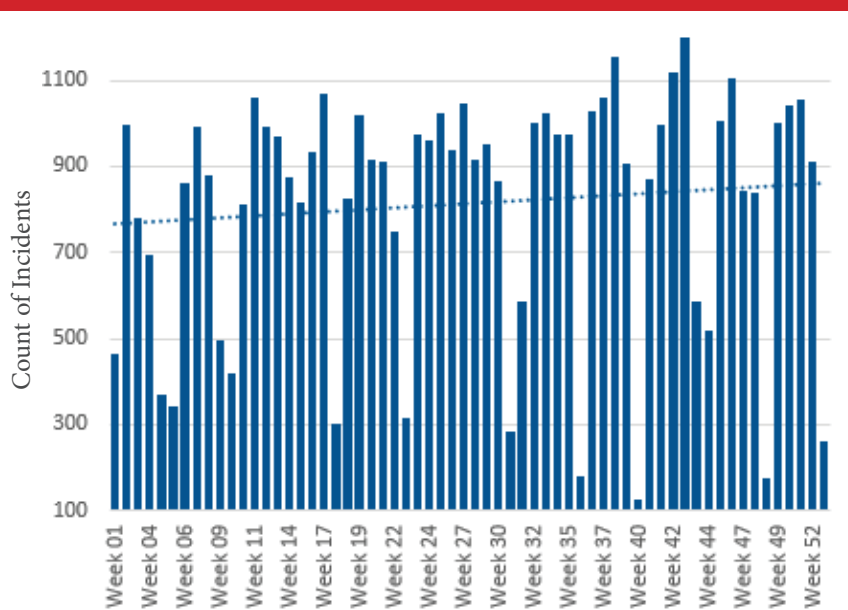
87,326
Incidents with Scene Location of Highway/ Roadway/ Street

1,099
Mass Casualty Traffic/Transportation Incidents

11,436
Traffic Incidents with No Airbag Deployed or No Airbag

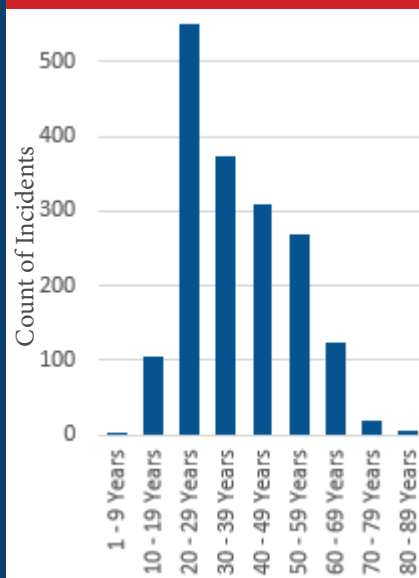
1,767
Traffic Incidents with Positive Alcohol / Drug Use Indicators

Peak Times by Week & Month



Jan Feb Mar Apr May June July Aug Sep Oct Nov Dec

Drug Use Indicators & Patient Age Range



Highway Safety Incidents are defined as incidents where the complaint reported by Dispatch is equal to "Traffic/Transportation" and Incident Location Type contains any "Highway, Roadway, or Street."

Cardiac Arrest Incidents

Incident Complaint Reported by Dispatch

| | |
|-------------------------------|--------|
| “Cardiac Arrest / Chest Pain” | 56,772 |
|-------------------------------|--------|

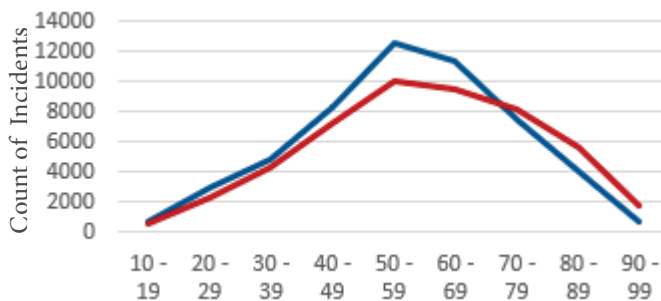
Provider Primary Impression

| | |
|---|--------|
| Contains Any “Cardiac Arrest, Chest Pain, Cardiac Arrhythmia” | 51,179 |
|---|--------|

Cardiac Arrest During EMS Event

| | |
|---------------------------|-------|
| Contains “Yes” | 6,454 |
| Yes, After EMS Arrival | 783 |
| Yes, Prior to EMS Arrival | 5,671 |

Patient Age & Gender

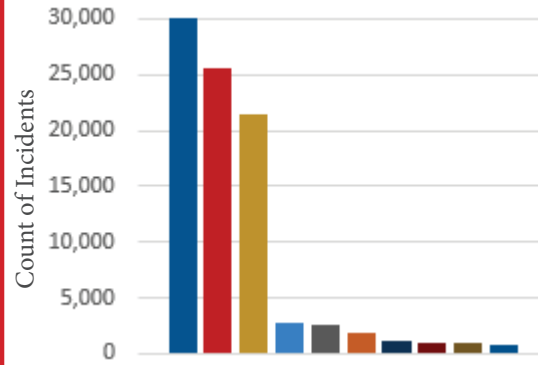


| | | | |
|------|-----|--------|-----|
| Male | 52% | Female | 48% |
|------|-----|--------|-----|

Patient Age Range

| Age Range | Percentage | Age Range | Percentage |
|---------------|------------|-----------------|------------|
| <1 Year | <1% | 50 - 59 Years | 22% |
| 1 - 9 Years | <1% | 60 - 69 Years | 20% |
| 10 - 19 Years | 1% | 70 - 79 Years | 15% |
| 20 - 29 Years | 5% | 80 - 89 Years | 9% |
| 30 - 39 Years | 9% | 90 - 99 Years | 3% |
| 40 - 49 Years | 15% | 100 - 120 Years | <1% |

Medications Administered to 12 Lead ECG Patients



Medications Administered

| | |
|-----------------|--------|
| Nitroglycerin | 30,095 |
| Aspirin | 25,635 |
| Oxygen | 21,378 |
| Ondansetron | 2,739 |
| Epinephrine | 2,586 |
| Sodium Chloride | 1,804 |
| Morphine | 1,216 |
| Albuterol | 1,047 |
| Adenosine | 1,018 |
| Fentanyl | 844 |

CPR Provided Prior to EMS Arrival

Return of Spontaneous Circulation

| | |
|-----------------------------|-----|
| No | 68% |
| Yes | 27% |
| Not Recorded/Not Applicable | 5% |

Cardiac Arrest incidents are defined as incidents where complaint reported by dispatch is equal to “Cardiac Arrest/Chest Pain” and provider impression contains “Cardiac Arrest/Chest Pain/Cardiac Arrhythmia” or cardiac arrest during EMS event equals yes.

The Community Paramedicine Pilot Program's objective is to fill unmet needs to untapped resources, reduce 911 utilization/ED visits, and create partnerships within the community. The data below reflects the year 3 findings of the MIH/CP Pilot Program (06/01/2018 - 05/31/2019).

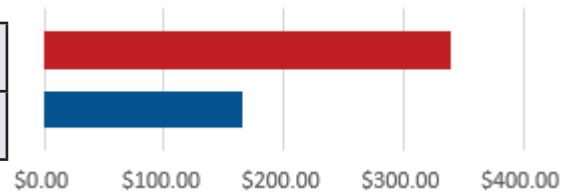
| | |
|-----------------------------|-----------------|
| 35 Providers Trained | |
| 67 Providers Made Visits | |
| 3,644 Patient Encounters | |
| 1,771 Initial | 1,706 Repeat |

Top Reasons for Service

| | |
|---|-----|
| Abdominal Pain/ Problems | 54 |
| Breathing Problem | 108 |
| Cardiac Arrest/ Death | 134 |
| Diabetic Problem | 38 |
| Falls | 414 |
| Healthcare Professional/ Admission | 45 |
| Heart Problems/ AICD | 74 |
| Medical Alarm | 122 |
| No Other Appropriate Choice | 106 |
| Overdose | 40 |
| Psychiatric Problem/ Abnormal Behavior/ Suicide Attempt | 58 |
| Sick Person | 376 |
| Traumatic Injury | 67 |
| Unknown Problem/ Person Down | 53 |

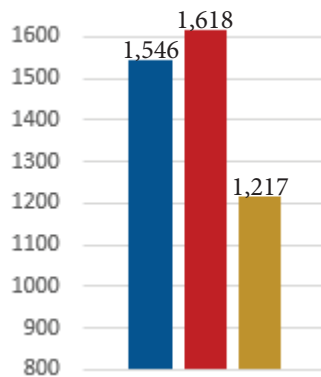
Average Cost

| | |
|-------------------|----------|
| MIH/CP Encounter | \$165.67 |
| ALS/BLS Encounter | \$338.60 |



Average Cost by Pilot Primary Objective

| Pilot Program Primary Objective | MIH/CP Encounter | ALS/BLS Encounter |
|--|------------------|-------------------|
| Re-Admission (Follow-Up) - Primary focus is to continue care for an acute event to prevent unnecessary readmission back to inpatient facilities. | \$150.50 | \$335.56 |
| Non-Urgent, Non-Scheduled - Primary focus is to correctly navigate low acuity patients away from urgent resource utilization. | \$198.25 | \$328.75 |
| Both Non-Urgent, Non-Scheduled AND Re-Admission (Follow-Up) | \$176.82 | \$351.17 |



| | |
|---|-------|
| Estimated number of EMS transports prevented | 1,546 |
| Estimated number of ED visits prevented | 1,618 |
| Number of 911/PSAP calls diverted to MIH/CP program | 1,217 |

57
Estimated # of Hospital Readmissions Prevented

44
participants referred to PCP

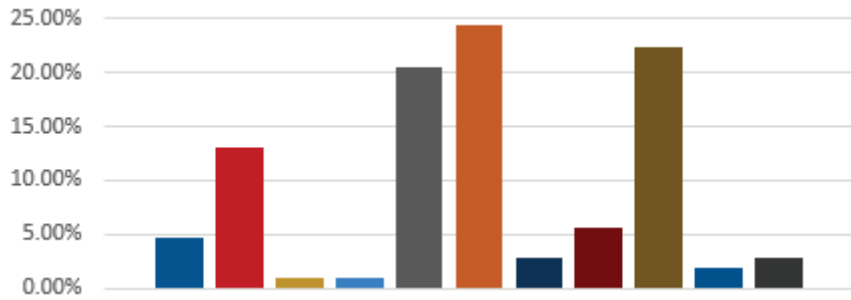
498
participants who have a PCP at time of referral

24
participants referred to subspecialist

41.29
Average patient encounter in minutes

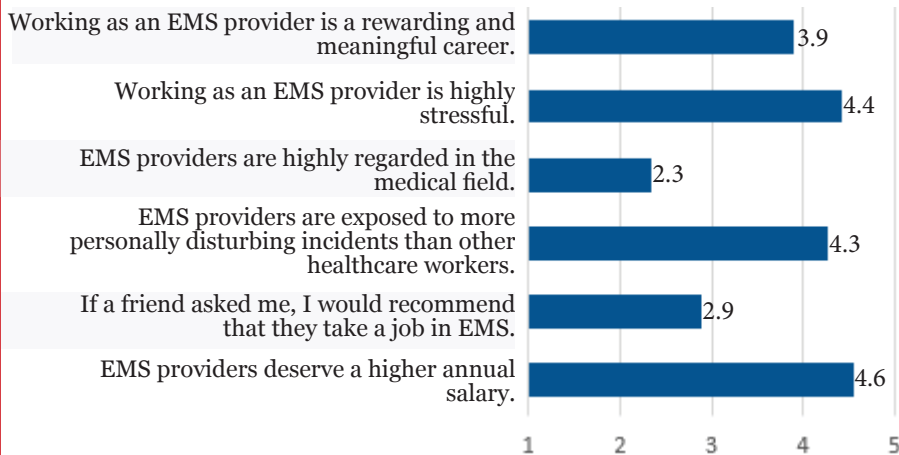
This report presents the findings of the KBEMS' 2018 Attrition Survey. The primary objective of this report is to determine the trends and other factors that contribute to Kentucky EMS employee attrition. The survey was administered to 950 KY EMS providers who discontinued their license / certification in 2018.

Primary Reason for Allowing License / Certification to Expire



| | | | |
|---|--------|---|--------|
| Work Injury | 4.67% | Poor Management and/or Hostile Work-place Environment | 2.80% |
| External Factors | 13.08% | Relocated | 5.61% |
| Inflexible Work Schedule | .93% | Retired | 22.43% |
| Lack of Promotion Opportunities | .93% | Simply Did Not Enjoy Working in EMS | 1.87% |
| Low Salary and/or Poor Benefits Package | 20.56% | Unable to Find a Full-time Position | 2.80% |
| No longer working for a KY EMS Service | 24.30% | | |

Participant Attitudes & Beliefs



5 Point Likert Scale: 1 = STRONGLY DISAGREE 3 = NEUTRAL 5 = STRONGLY AGREE

Participant Demo-

109 Participants
(11.47% Response Rate)

Gender

| | |
|--------|--------|
| Female | 22.94% |
| Male | 77.06% |

Race

| | |
|------------------|--------|
| White | 95.41% |
| Hispanic | .92% |
| Other / Declined | 3.67% |

Age Range

| | |
|---------|--------|
| 18 - 24 | 4.59% |
| 25 - 34 | 17.43% |
| 35 - 44 | 25.69% |
| 45 - 54 | 21.10% |
| 55 - 64 | 22.94% |

Residence

| | |
|--------------|--------|
| Kentucky | 74.53% |
| Out of State | 25.47% |

Education

| | |
|---------------------|--------|
| High School Diploma | 14.55% |
| Some College | 49.09% |
| Associate's Degree | 20.00% |
| Bachelor's Degree | 6.36% |
| Master's Degree | 9.09% |
| Doctorate Degree | 0.91% |

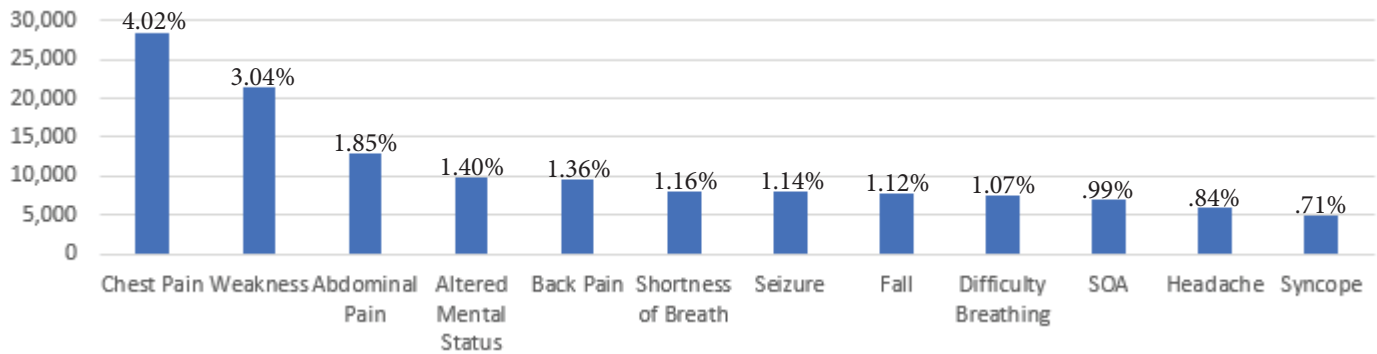
Provider Level

| | |
|-----------|--------|
| EMR | 7.27% |
| EMT | 66.36% |
| AEMT | 2.73% |
| Paramedic | 23.64% |

Certified Educator

| | |
|-----|--------|
| Yes | 13.64% |
| No | 86.36% |

Top Patient Primary Chief Complaints



Top Procedures Administered

| | |
|--------------------------------------|---------|
| Extremity Vein Catheterization | 200,206 |
| Evaluation Procedure | 184,807 |
| 12 Lead ECG Obtained | 145,675 |
| 3 lead ECG Obtained | 78,496 |
| Moving a Patient to a Stretcher | 47,581 |
| Patient Assessment | 45,539 |
| Glucose Measurement | 20,335 |
| Spinal Immobilization | 20,279 |
| Cardiac Monitoring (Regime/Therapy) | 13,193 |
| Intravenous Insertion | 12,197 |
| Adult Continuous Physical Assessment | 11,427 |
| Electrocardiographic Monitoring | 7,423 |

Top Medications Administered

| | |
|------------------------------------|---------|
| Oxygen | 154,057 |
| Nitroglycerin | 25,564 |
| Aspirin | 24,376 |
| Albuterol | 17,614 |
| Ondansetron | 15,303 |
| Sodium Chloride 9 MG/ML Injectable | 14,477 |
| Naloxone | 12,968 |
| Fentanyl | 12,118 |
| Epinephrine | 12,070 |
| Ipratropium | 6,611 |
| Methylprednisolone | 5,372 |
| Albuterol / Ipratropium | 5,062 |

Top Provider Primary Impressions

| | | | |
|-----------------------------|--------|----------------------------|--------|
| Weakness | 99,274 | Pain, Unspecified | 25,379 |
| General Examination | 42,423 | Other Reduced Mobility | 20,584 |
| Injury, Unspecified | 40,137 | Back Pain | 15,391 |
| Altered Mental Status | 33,545 | Generalized Abdominal Pain | 14,910 |
| Respiratory Distress, Acute | 28,245 | Malaise | 13,105 |
| Chest Pain, Unspecified | 27,062 | Unspecified Abdominal Pain | 13,051 |

*160,199 incidents reported where provider primary impression was not recorded or not applicable.

CURRENT BOARD PROJECTS

- » Continued work and collaboration with the Legislative research commission on the filing of 202 KAR 7:xxx- Ambulance Fee Schedule Posting, and update of 202 KAR 7:520- Ambulance Block Grant
- » Research, development, and publishing of 2018 EMS Workforce Attrition Report
- » Research, development, and publishing of 2018 Mobile Integrated Healthcare/ Community Paramedicine Pilot Program Study.
- » Continued work on CDC/NIOSH EMS Workplace injury surveillance research.
- » Continued collaboration with the Kentucky Department of Public Health in creating a free, on-line training program for first responders on Opioid Exposure protective equipment/actions.
- » Continued revisions and complete update of the KBEMS State EMS Protocol.
- » Continued work on the review and appropriate amendment of Kentucky EMS regulations to protect the health and safety of citizens of the Commonwealth through the provision of effective Emergency Medical Services, while eliminating unnecessary and/or burdensome regulatory processes and red-tape.
- » Continued work on developing statewide protocols for “Stroke-Alert” pre-notification protocols.
- » Continued work on “Cardiac Arrest Center” designation and destination guidance for EMS.
- » Representation on the National Infragard Board of Directors
- » Representation on the National EMS Advisory Committee.
- » Support of the 2019 Bryant Stiles Fire Officers School, 2019 Kentucky State EMS Fire School, 2019 Lake Cumberland Healthcare Symposium, and 2019 Kentucky EMS Conference and Expo.
- » Continuous updates to destination guidance for EMS providers for Trauma, STEMI, Stroke with or without Large Vessel Occlusion, Sepsis, and Cardiac Arrest
- » Establish a cross-walk between the current Kentucky EMS Scope of Practice for all professions, with that of the newly adopted NHTSA Scope of Practice document.
- » Provide research on EMS professional fatigue and work hours
- » Implement agreements with “Biospatial” which will allow EMS agencies to trend and evaluate their patient care data, and establish and compare trends with other agencies in the state and around the nation.
- » Establish Kentucky-specific Performance measures utilizing EMS agency provided data to the Kentucky State Ambulance Reporting System (KSTARS) to establish best practices and benchmarks, and enhance care delivery across the Commonwealth.



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