



Kootenai County Emergency Medical Service System



2020 ANNUAL REPORT

TABLE OF CONTENTS

Introduction1

Staff2

Joint Powers Board6

System Partners7

EMS Services Utilization9

System Enhancements.....10

Finance & Administrative Division 11

Support Services Division17

Clinical Services Division20

Future System Enhancements25

Conclusions26

Introduction

Kootenai County Emergency Medical Services System (KCEMSS) is a fire-based EMS system that serves the greater Kootenai County Area. KCEMSS with our fire department partners provide emergent first response, emergent transport, interfacility transport as well as regional Critical Care transports.

KCEMSS with our partner agencies staff 6 ALS transport units and 3 BLS transport units 24 hours a day. Our fire department partners staff 8 ALS fire quick response apparatus and 6 BLS/ILS fire quick response apparatus. The system responded to approximately 16,000 calls for service in 2020 with approximately 11,000 transports.

KCEMSS functions as a high-performance EMS system providing efficient, cutting edge medical care in a timely manner, with a great concern for the public we serve.

Mission Statement

To provide exceptional, compassionate, and innovative medical care and service to the citizens and visitors of Kootenai County.

Vision Statement

KCEMSS provides comprehensive support and leadership to create a sustainable EMS delivery system focusing on clinically superior, efficient and innovate care.

KCEMSS Staff

KCEMSS has six administrative staff that consist of the following:



William "Bill" Keeley - Chief Officer

BS, NREMT-P, Idaho Paramedic

Bill was appointed Chief of Kootenai County Emergency Medical Services (KCEMSS) in July of 2020. Prior to his appointment as Chief Officer Bill served as the Division Chief of Clinical Services for KCEMSS. Bill came to KCEMSS after retiring from Kootenai County Fire and Rescue, after 22 years of service. Bill held multiple positions including FF/EMT, FF/Medic, Company Officer, and finally Division Chief of EMS. Bill holds a Bachelor of Science in Psychology from Towson State University in Towson Maryland and completed his Paramedic training at Spokane Community College in Spokane Washington.

Bill has served in EMS since 1988 as an EMT, Advanced EMT, Paramedic, Field Training Officer, Quality Improvement Officer, EMS Instructor, and EMS Division Chief. Bill has served in various types of EMS delivery services including: EMS ground transport both Fire Based and third service, EMS Air Transports and Fire First Response. Bill holds both his National Registry and Idaho State Paramedic License.

In his current role Bill oversees the delivery of Emergency Medical Services via a fire-based system serving Kootenai County in North Idaho. In his role as EMS Chief, Bill serves on many local and regional EMS, Emergency Management and Healthcare committees.



Rodney Geilenfeldt - Division Chief of Clinical Services

BS, Idaho Paramedic

Rodney Geilenfeldt joined KCEMSS in September 2020 as the Division Chief of Clinical Services. Rodney comes to us from San Diego, CA where he spent the last 30 years working in Fire and EMS Services. He began his career in 1991 as an EMT and became a Paramedic in 1998 working for a private ambulance company. In 2000, he began his Fire Service career with the City of El Cajon Fire Department. Rodney held the ranks of Firefighter/Paramedic, Fire Engineer and then of Fire Captain, which he held for 12 years. Rodney was also an acting Battalion Chief before he retired to join KCEMSS. Rodney mentored and precepted many successful Paramedic students and trained numerous new Firefighters over these years and was involved in many EMS related committees and programs in San Diego County.

In addition to his many years of public safety experience, Rodney comes to us with 20 years of EMS educational experience. He taught EMT courses at Miramar College for many years prior to becoming the EMT Program Director at EMSTA College in San Diego. Rodney retired from EMSTA College as the Paramedic Program Coordinator to join KCEMSS having taught well over 5,000 students at the EMT, AEMT and Paramedic level.

Rodney graduated with his bachelor's degree from California State University, Long Beach and completed his Paramedic training at Palomar College. He has years of training in Emergency Management, Incident Command, HAZMAT, Rescue Systems, Fire and EMS Operations, Fire Officer and Chief Officer training and many leadership courses.

Rodney oversees the clinical aspects of our EMS system which include developing and maintaining EMS System protocols, quality improvement programs and the Critical Care Transport program. Rodney also oversees and coordinates EMS training in the County.



Scott Higgins - Division Chief of Logistics

NREMT-P. Idaho Paramedic

Scott was appointed Division Chief of Support Services on October 2020. Scott served as Support Services Officer for Kootenai County EMS System since April 2017.

Scott came to KCEMSS from Southeast Kansas after 32 years of service where he was an EMT, and later became a Paramedic, serving with both Hospital based and County operated EMS systems.

Scott holds an Associate's Degree in Emergency Medicine/Paramedicine from Cowley College in Kansas, and is currently studying for his bachelor's degree in EMS Management at Columbia Southern University in Orange Beach, Alabama. In addition, Scott has many hours of training in Emergency Management.

Scott began in EMS in 1985, initially as an EMT, later as a Paramedic. In his current role, Scott oversees the KCEMSS fleet of 15 ambulances, 4 staff vehicles, a specialty transport UTV, and multiple MCI trailers. Scott developed a central supply program for KCEMSS and oversees the purchase and distribution of medical supplies to all KCEMSS paid and volunteer partner agencies.

Scott is certified by Zoll Medical and Stryker as a preventative maintenance technician and performs yearly certifications on our Zoll heart monitor/defibrillators and the Stryker Power load ambulance gurney systems in each ambulance. Scott also oversees all Narcotics used for patient care in the KCEMSS system, tracking each dosage in compliance with DEA regulations utilizing a tracking program, and other safeguards for storage.

Scott serves on many local EMS and Emergency Management Committees



Tracy Abrahamson - Director of Administration

Tracy joined the Kootenai County Emergency Medical Services System in 2003. As the Director of Administration, she is responsible for all the company's financial functions including accounting, planning and budget, audit, treasury, investments, human resources, information technology systems and risk management. Tracy manages an 8.6-million-dollar budget and oversees KCEMSS compliance with Medicare and Medicaid. She assures that KCEMSS adheres to all federal, state and local government regulations and filing requirements, and she processes and maintains compliance with federal and state grants. Tracy is also the certified compliancy officer for KCEMSS and serves as the Secretary/Treasurer to the Kootenai County EMS Joint Powers Board.



Amy Evans - Administrative Assistant III – Clinical

Amy joined KCEMSS in October of 2014 as an Administrative Assistant. Amy is currently the Administrative Assistant III for the Clinical and Logistics Divisions.



Tara Whitmore - Administrative Assistant III – Financial

Tara joined KCEMSS in September 2017 as an Administrative Assistant. Tara is currently the Administrative Assistant III for the Administrative Division including Accounting and HR.

Joint Powers Board (JPB)

KCEMSS is governed by a Joint Powers Board. The JPB oversees the financial and policy functions of KCEMSS as well as choosing and supervising the Chief Officer. The JPB is made up of elected officials from our partner agencies and a representative from the Kootenai County Board of County Commissioners. The JPB consist of the following members:



Woody McEvers - Chairman

Commissioner McEvers represents the City of Coeur D'Alene and is the Chairman of the JPB.



Joe Doellefeld - Vice Chairman

Commissioner Doellefeld represents Kootenai County Fire & Rescue and is the Vice Chairman of the JPB.



Dave Halpin - Commissioner

Commissioner Halpin represents Northern Lakes Fire District.



Mike Sexsmith - Commissioner

Commissioner Sexsmith represents the BLS transport agencies and the non-transport agencies including: Spirit Lake Fire District, Timberlake Fire District, Worley Fire District, Hauser Lake Fire District, Mica Kidd Island Fire District and Eastside Fire District. Commissioner Sexsmith is a member of the Spirit Lake Fire District board.



Chris Fillios - Commissioner

Commissioner Fillios is a Kootenai County Commissioner and represents the County on the JPB.

System Partners

KCEMSS has a Master Provider Agreement with all fire departments in Kootenai County, Harrison Ambulance and Shoshone County Fire District 2 to provide first response and transport services within Kootenai County.

Coeur d'Alene Fire Department – Chief Kenny Gabriel - Coeur d'Alene Fire Department staffs 4 Quick Response Units and 2 ALS Ambulances out of 4 stations within the City of Coeur d'Alene.

Kootenai County Fire & Rescue – Chief Chris Way – Kootenai County Fire & Rescue staffs 4 Quick Response Units and 2 ALS ambulances out of 4 stations within Post Falls, Dalton Gardens and unincorporated areas surrounding the City of Coeur d'Alene.

Northern Lakes Fire District - Chief Pat Riley – Northern Lakes Fire District staffs 2 Quick Response Units and 2 ALS ambulances out of 2 stations, 1 in the Rathdrum area and 1 in the Hayden Area.

Spirit Lake Fire District – Chief John Debernardi – Spirit Lake Fire District staffs 1 Quick Response Unit and 1 BLS/ILS ambulance out of a single station in Spirit Lake.

Timberlake Fire District – Chief Brandon Hermetet – Timberlake Fire District staffs 1 Quick Response Unit and 1 BLS/ILS Ambulance out of a single station in Athol.

Worley Fire District – Chief Dan Sneve – Worley Fire District staffs 1 Quick Response Unit and 1 BLS/ILS Ambulance out of a single station in Worley.

Hauser Lake Fire District – Chief James Neils – Hauser Lake Fire District staffs 1 Quick Response Unit and a reserve BLS ambulance/Rescue vehicle out of 1 station in Hauser Lake.

Mica Kidd Island Fire District – Chief Dan Sneve – Mica Kidd Island Fire District staffs 1 Quick Response Unit out of a single station in The Mica Kidd Island area of Kootenai County.

Eastside Fire District – Chief Jerry Lynn – Eastside Fire District staffs 2 Quick Response Units out of 2 stations on the east side of Lake Coeur d'Alene.

Harrison Community Ambulance – President Jim Fruehan – Harrison Community Ambulance is a not-for-profit volunteer agency that operates 2 BLS/ILS ambulances on the southeast side of Lake Coeur d'Alene. ALS coverage is supplied by Kootenai County EMS System.

Shoshone County Fire District 2 – Chief Mark Aamodt – Shoshone County Fire District 2 covers the Cataldo area of Kootenai County under contract with KCEMSS.

Kootenai County EMS System – The system provides Critical Care Transport Services, using contract employees, to the Hospitals and facilities in the five northern counties of Idaho.

EMS Service Utilization

In 2020 Kootenai County had a population of 165,697. This includes the Cities of Coeur d'Alene, Post Falls, Hayden, Rathdrum, Spirit Lake, Athol, Worley, Harrison, Hauser Lake and the Villages of Fernan, State Line and Huetter. KCEMSS covers all these areas as well as the unincorporated areas of Kootenai County including all the Forrest Service and Idaho Department of Lands undeveloped areas. KCEMSS call volume continues to increase each year. In 2020 COVID did have a negative impact on our call volume.

KCEMSS	2020
Population	165,697
Square Miles EMS Service	1375 sq miles
Population per Square Mile	111
Total EMS Patient Encounters	15,723
Average EMS Responses per Day	43
Population Below Poverty Level	12.1%
Median Household Income	\$54,457
Average Age	63 years old
Busiest Time of the Day	1400
Busiest Day of the Week	Thursday
Busiest Month of the Year	August
ALS %	50.4%
BLS %	48%
CCT %	1.6%
Non-Transports	5,544
Transports	10,179

System Enhancements

KCEMSS has done some significant enhancements to the system, as partially noted in other division reports, to improve the system efficiency for providers as well as customer service improvements.

1. Seven AutoPulse mechanical CPR devices
2. 18 MDTs
3. 3 Aeroclaves disinfectant units
4. Currently rolling out Handtevy pediatric program
5. New tablets for field reporting
6. New CCT ventilator
7. New CCT Pumps
8. New website and member agency SharePoint site
9. Pre-Authorization process on NETs/CCTs that allows KCEMSS to be able to bill and collect on these types of calls.
10. Continued evaluation using ESO and GIS data to better adjust response areas and system resources.



FINANCE & ADMINISTRATION DIVISION

The Finance and Administration Division of KCEMSS is directed by Tracy Abrahamson. Her, along with her assistant Tara Whitmore, perform all the administrative functions related to finance management, budget preparation, human resources, financial investments, risk management, ambulance billing processes and oversight, auditing and information technology systems.

Below is information about some of the Systems processes, finances, and highlights for the 2020 year.

KCEMSS Partnerships:

KCEMSS is a fire-based EMS system and contracts with all fire districts and one not-for-profit organization within Kootenai County to deliver the best EMS and ambulance services possible. KCEMSS owns and maintains 15 ambulances equipped with the medical equipment and supplies necessary to operate.

KCEMSS relies on their partner agencies to provide the trained paramedics and EMT's to operate the ambulances and deliver the medical services to the residents and visitors of Kootenai County. This relationship with the fire districts reduces the need for duplicate facilities and personnel when compared to stand-alone ambulance services you see around the country. This also explains why you see fire fighters on all the ambulances.

6 fire districts house and operate 14 of the 15 ambulances owned by KCEMSS, and another 3 fire districts provide quick response EMS services to the rural areas of Kootenai County. One not-for-profit organization operates with their own equipment in Harrison Idaho but is subsidized financially by KCEMSS. The contracts with all these agencies totaled \$5,224,535 or 62% of the total operating budget of KCEMSS for FY2020. This is by far the largest operating expense for KCEMSS.

Contract payments to the fire districts are primarily used to cover the personnel expenses of those operating the ambulances, some training and supervision, and with the quick response agencies it helps to offset their direct EMS operating expenses.

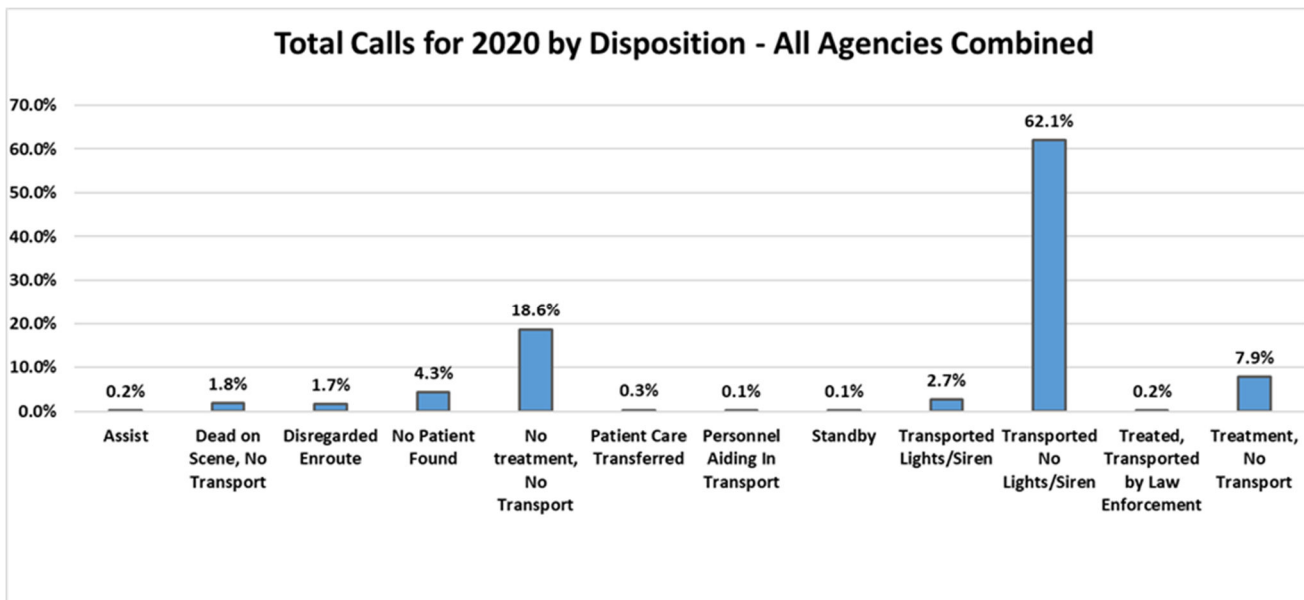
Ambulance Call Volume and Billing Processes:

In 2020 KCEMSS, through our partner agencies and critical care providers, responded to 15,723 calls. Below is a breakdown of total calls by agency and disposition.

Call Volume by Agency & Disposition

INCIDENT DATES: 1/1/2020 - 12/31/2020

DISPOSITION	CDAFD	KCFR	NLFD	SLFD	TLFD	WFD	KCEMSS	ESFD	MKI	HLFD	TOTAL
Assist	24	3	3	3	1	2		1	0	0	37
Dead on Scene, No Transport	95	69	68	21	15	5		1	1	4	279
Disregarded Enroute	110	71	19	24	17	15		9	0	3	268
No Patient Found	343	186	84	27	18	10		11	0	2	681
No treatment, No Transport	1027	1010	504	150	106	80	1	19	3	29	2,929
Patient Care Transferred	2	3	2	4	2	3		26	0	0	42
Personnel Aiding In Transport	16	2	0	2	0	0		0	0	0	20
Standby	0	0	1	6	2	1		0	0	1	11
Transported Lights/Siren	111	100	160	18	19	8	3	0	0	0	419
Transported No Lights/Siren	4049	2752	1941	321	311	218	166	0	0	2	9,760
Treated, Transported by Law Enforcement	23	11	2	1	0	0		1	0	1	39
Treatment, No Transport	332	632	192	22	37	11		7	2	3	1,238
Total Calls	6132	4839	2976	599	528	353	170	75	6	45	15,723



You can see from the graph above, 64.8% of total calls ended in a transport. Another 7.9% of KCEMSS responses end with a treatment or evaluation on scene - without a transport.

KCEMSS bills patients for all transports, and a small percentage of treatments without a transport. Treatments without a transport are billed only when advanced services are provided, such as an EKG. In 2020 – 10,418 of the 15,723 calls were billed to patient's insurance and/or directly to the patient. That is 66.3% of total calls that generated income for KCEMSS to pay for operational expenses.

KCEMSS utilizes an outside billing and collections company from western Washington. We are often asked "why don't you use a local billing company?" This is an excellent question. Ambulance billing has a completely different set of rules and processes for billing compared to hospitals, doctor offices, and other health care services. It is a specialized and unique skill set that we were unable to find locally. KCEMSS requested bids back in 2013 seeking companies with the knowledge necessary to successfully

bill and collect under the stringent Medicare and Medicaid guidelines for ambulance services. There were a handful of companies, some from overseas, but we felt the most qualified company was Systems Design out of western Washington. We have built a strong business partnership with Systems Design over the last seven years. Their knowledge, continued education and cutting-edge technology is top notch, and they keep us in compliance with all local, state, and federal ambulance billing guidelines.

KCEMSS Funding Sources:

Another question KCEMSS is often asked is “Why do I receive an invoice for ambulance service when I pay taxes for ambulance services?” Below we will walk you through the answer.

Kootenai County Emergency Medical Services has two main sources of revenue:

1. **Ambulance Revenue** is generated by billing the users of the EMS System that receive ambulance and medical services from KCEMSS. Billing rates are set based on the cost of doing business and these rates are approved by the Board of County Commissioners. KCEMSS’ actual cash receipts from ambulance services are substantially less than the amount that is billed out for these services. KCEMSS is bound by what government services such as Medicare and Medicaid will pay. Medicare on average pays KCEMSS 51.4% of each bill submitted to them. The balance is written off to contractual adjustments and KCEMSS cannot by law bill the patient for the difference. We can only bill for the patient’s deductible if it has not been met. Medicaid on average pays 39.6% of each bill submitted by KCEMSS. These payment caps by government payers are a national problem for all ambulance service providers.

For the 2020 Fiscal Year, KCEMSS’ gross ambulance revenue from billing patients was \$8,731,260. Of that \$8,731,260 - \$3,523,064 was written off to contractual adjustments due to these caps from Federal, State and other contracted payers. That is over 40% of the Systems billed ambulance revenue that we are forced to write off. Approximately 84% of KCEMSS payers fall within the various payer groups who have caps.

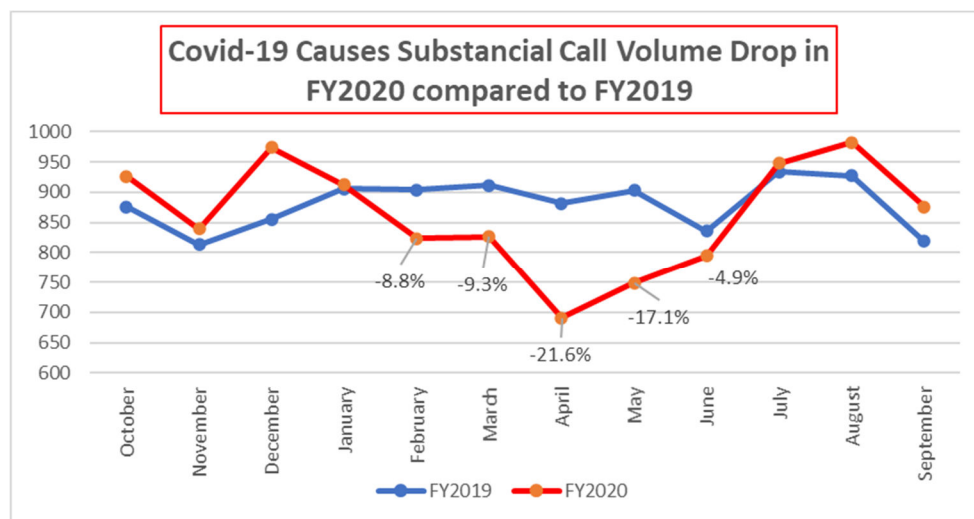
2. **Property Tax Revenue** is the second largest source of income for KCEMSS. Because of the limitations on ambulance revenues set by the various payer groups described in # 1 above, KCEMSS receives property taxes through the Kootenai County Board of Commissioners from the “Ambulance District” tax levy. Without this levy, we could not provide the level of services to the citizens and visitors of Kootenai County that we currently provide. Property taxes received for the 2020 Fiscal year totaled \$3,020,866.

For the 2020 fiscal year, the Ambulance District tax levy was .0001383730 which calculates out to \$27.67 a year for a property with an assessed value of 200,000. This Kootenai County Ambulance District tax levy is one of the lowest levy rates in the State of Idaho.

Property taxes in Idaho have limits for annual increases of a maximum of 3% over the prior year, plus any new development added to the tax rolls. There is legislation in the works that could limit this even more.

Other Revenue Resources for the 2020 Fiscal Year:

For FY2020, KCEMSS’ ambulance revenue, net of contractual adjustments, was down by \$-95,707 or -1.8% compared to 2019 due to a drop in ambulance calls. This was substantially off from the initial projections of a 2% increase before the Covid-19 pandemic hit. The Covid-19 pandemic hit the System hard; reducing the call volume from February to June of 2020 by 550 billable calls before we saw a recovery.



With the Covid-19 pandemic the government provided financial assistance to healthcare providers to offset lost revenue and Covid-19 related expenses through an HHS stimulus package, Idaho Cares funding and FEMA. KCEMSS received funding from all three programs as follows:

- HHS stimulus funding of \$130,573 applied against lost revenue and Covid-19 expenses.
- Idaho Cares funding of \$135,111 applied against Covid-19 expenses.
- FEMA funding of \$9,598 applied against Covid-19 expenses.

Other revenue sources for 2020 include interest income, additional capital grants and miscellaneous income.

On the following pages you will find the systems condensed income statement and balance sheet for the 2020 and 2019 Fiscal Years.

**Statement of Revenues, Expenses and Changes in Net Position
For the Years Ended September 30, 2020 and 2019**

	2020	2019
OPERATING REVENUES		
Ambulance services (net of contractual adjustments)	5,224,796	5,320,504
Miscellaneous income	1,499	2,727
Total operating revenue	<u>5,226,295</u>	<u>5,323,231</u>
OPERATING EXPENSES		
Contracts	5,224,535	5,171,363
Subsidies	125,149	117,675
Depreciation expense	630,114	606,909
Employee benefits	148,166	148,198
Insurance	21,274	16,993
Legal and accounting	7,037	6,231
Payroll taxes	40,542	41,985
Bad debt write-offs	637,382	673,672
Wages and salaries	539,784	564,155
Medical supplies	226,121	182,760
Billing services	236,460	237,357
Fuel	62,896	79,109
Vehicle Maintenance	104,164	100,298
Equipment under threshold	59,592	54,758
Medical Director contract	70,000	70,000
Change in net pension liability	116,313	67,536
Other operating expenses	168,463	197,855
Total operating expenses	<u>8,417,992</u>	<u>8,336,852</u>
Operating (loss)	<u>-3,191,697</u>	<u>-3,013,621</u>
NON-OPERATING REVENUES (EXPENSES)		
Tax transmittal revenue	3,020,867	2,849,330
Gain on Disposal of Asset	-	176,697
Grants	360,139	19,810
Rent Income	900	1,800
Other income	10,141	10,240
Interest income	34,041	54,852
Interest Expense	-18,694	-28,167
Total non-operating revenues (expenses)	<u>3,407,394</u>	<u>3,084,562</u>
Change in net position	215,697	70,941
Total net position - beginning	<u>6,008,291</u>	<u>5,937,350</u>
Total net position - ending	<u><u>6,223,988</u></u>	<u><u>6,008,291</u></u>

STATEMENTS OF NET POSITION
For Periods Ending September 30, 2020 and 2019

	2020	2019
ASSETS		
Current and other assets	4,093,943	3,753,386
Capital assets, net of accumulated depreciation	3,346,301	3,680,648
Total Assets	<u>7,440,244</u>	<u>7,434,034</u>
DEFERRED OUTFLOWS OF RESOURCES		
Proportionate share of collective outflows of resources	98,095	69,172
Total deferred outflows of resources	<u>98,095</u>	<u>69,172</u>
LIABILITIES		
Current liabilities	580,260	562,542
Long-term liabilities	723,683	856,869
Total Liabilities	<u>1,303,943</u>	<u>1,419,411</u>
DEFERRED INFLOWS OF RESOURCES		
Proportionate share of collective inflows of resources	10,408	75,504
Total deferred inflows of resources	<u>10,408</u>	<u>75,504</u>
NET POSITION		
Net investment in capital assets	2,502,429	2,589,604
Unrestricted	3,721,559	3,418,687
Total net position	<u>6,223,988</u>	<u>6,008,291</u>

KCEMSS is happy to report a sound financial position at the close of 2020.

Factors bearing on the Systems future:

As outlined in the previous section on funding sources, you can see KCEMSS has limited resources to increase the Systems revenue. We are bound by insurance and property tax caps, and ambulance call volume is uncontrollable and unpredictable. Sudden decline or increases in demand can happen without notice. The most notable financial challenges KCEMSS faces are as follows:

- Contracts are primarily labor reimbursement, and it is the # 1 operating expense at 62%. Labor expenses have and will continue to rise.
- The ambulance fleet and equipment are aging and will soon need to be replaced.
- If the county growth continues at the current rate, the amount of ambulance coverage we provide will not be sufficient in the next couple of years. Paying for added service is a challenge but necessary.

Support Services Division

In my position of Division Chief of Support Services. I function in the role of Duty Chief and respond to incidents as both a primary ALS patient care provider and/or part of the EMS incident management team. The KCEMSS Support Services Division is staffed by a Division Chief of Support Services, and one Administrative Assistant full time, with other administration staff employed by the system cross trained to the point of being able to order, receive, and distribute supply requests for the system and partner agencies. The Division Chief of Support Services is certified at the Paramedic Level, and services on the rotation of EMS duty chiefs, and responds to emergencies as needed throughout Kootenai County and the surrounding region.

The Support Services Division oversees the following functions of the system.

Fleet Management: Oversees a fleet of 15 Ambulances and 4 Administrative vehicles, as well as one MCI truck, and three MCI trailers strategically located across Kootenai County.

Ambulances are distributed throughout the county as follows:

2 Full Time 24/7/365 ALS ambulances and 1 reserve ambulance at each of the 3 ALS Transport agencies.

1 full time 24/7/365 BLS ambulance and 1 reserve at both Spirit Lake Fire and Timberlake Fire

1 full time 24/7/365 ambulance at Worley Fire Department

1 system reserve kept at the administrative office building of KCEMSS when not in use by an agency.

Calendar year 2020 Ambulance Fleet stats:

Miles driven: 277,201.

Engine Hours: 15,410

Maintenance cost for fleet: \$77,731.14

In addition to the other fleet management responsibilities, the Support Services division has received some training from our ambulance manufacturer and performs routine maintenance and repairs to the patient module, as well as all emergency lighting on the vehicle.

Medical Equipment: The Support Services Division also oversees the procurement, distribution and maintenance of the medical equipment supplied to the 15 ambulances, as well as to licensed QRU's for the system transport departments. This equipment includes 27 Zoll Medical X series cardiac monitor defibrillators, 15 Stryker Power Pro ambulance gurneys and Power Load systems, Mobile Data Terminals, GPS systems, Wi Fi systems, and NARCBOX narcotic box storage/tracking systems in each ambulance and ALS QRU. The Division Chief of Support Services is certified by Zoll Medical and Stryker to do maintenance and provide some repairs to their respective products.

Support Services provides routine maintenance and certifications of the Zoll Monitors at a cost savings of \$7985 annually. Maintenance and repairs of the Stryker gurneys and power load systems at a cost savings of approximately \$25,000 annually.

Central Supply: Support Services Division oversees the procurement, and distribution of disposable supplies and medications to the entire system thru our Central Supply program. This program was instituted in calendar year 2018, and the system saw an immediate savings of approximately \$30,000 the first year in supplies and medications alone.

2020 was a year like no other, with COVID19 changing the way EMS will operate in the future. Personal Protective Equipment for EMS providers nationwide, and for that matter, worldwide became very hard to obtain as Covid19 spread. This was also true in Kootenai County. The Support Services division was following the early reports out of China, and through our relationship with vendors, were gathering intel that supplies were going to be hard to come by soon. We were able to make some substantial stockpile purchases before COVID even hit Kootenai County, which has kept us ahead of the game in providing our partner agency providers with the PPE needed to protect them, while taking care of our customers. Support Services/Central Supply was also busy leveraging donations from the public, and acquiring allotments from county, state, and federal emergency management partners, which helped keep our providers safe and our costs down.

For Calendar year 2020, the Central Supply for KCEMSS disbursed 101,434 individual pieces of consumable supplies to our partner agencies for use in EMS related calls, at a total budget expense of \$224,348.94. These expenses and distributions are tracked via our inventory software program Operative IQ.

2020 and Covid19 also saw the Support Services Division obtaining grant funding to purchase three Aeroclave disinfectant spraying machines for use in decontaminating the patient compartment and interior equipment after every transport, which no doubt saved our providers and the public from spread of the virus during transport. Support Services also obtained grant funding and replaced an aging Critical Care Transport ventilator with a state-of-the-art unit that will serve Kootenai County EMS and our customers for years to come. Other grant funded technology and patient care centered purchases recently include 18 Mobile Data Terminals for each ambulance and staff vehicle to communicate with dispatch when being dispatched to calls and purchased 7 Zoll AutoPulse mechanical CPR machines that are strategically placed throughout the system for use in cardiac arrest events.

Controlled Substance tracking: Support Services division is responsible for ensuring KCEMSS is compliant with all up to date federal and state law as it pertains to narcotic possession and distribution as a medical provider. We accomplish this with technology and training.

We currently utilize Operative IQ's narcotic tracking software, which allows us to track the life of a vial of controlled substance from the moment we take possession from our partner Pharmacy, through the life cycle of the drug, until it is ultimately administered or destroyed. In addition to the Operative IQ program, we utilize a storage system in each ambulance and ALS Engine throughout the system that

securely stores the narcotics, and tracks each time they are accessed, by time stamp and the user that opens the box.

Support Services Division Chief is also active in numerous KCEMSS system related committees, serving as chair of the Equipment and BLS agency committees, as well as local and regional planning committees, including the Kootenai County EOC, Kootenai County Local Emergency Planning Committee, Spillman Users Group, and the Kootenai County MAC fire agency planning committee.

Of recent note, the Support Services Division was pleased to take the lead in planning and vaccinating 490 of Kootenai County's finest EMS/Fire/Law Enforcement personnel for the Covid19 virus. This was in partnership with Panhandle Health District.

Clinical Services Division

In my position of Division Chief of Clinical Services (Clinical Services Chief) I function in the role of Duty Chief and respond to incidents as both a primary ALS patient care provider and/or part of the EMS incident management team. I am also responsible for and develop, coordinate, and manage the clinical aspects for the EMS System partner agencies and other Emergency Service responders. This is a highly responsible managerial position in planning, organizing, and directing the training and clinical activities of the EMS system. I assure clinical competence through monitoring provider credentialing, administering “best practice” EMS protocols, monitoring translation of education into clinical practice through various mechanisms, and directing the overall EMS System educational programs. In this position, I serve as a liaison between KCEMSS, EMS System agencies, and external system partners on clinical and training issues. I report to the Chief of EMS, and partner with the Medical Directors, EMS System partners and other stakeholders to carry out the essential functions of this job.

System Statistics

An important aspect of this position requires system monitoring. Each month, I run statistics on call volume and specific clinical aspects of the system. This provides critical information on call volume increases and compliance of system protocols and procedures.

Key call volume statistics include:

- ***Emergent call volume (911)***
 - Emergent call volume is the number of times 911 was called for a medical emergency.
- ***Non-Emergency transports***
 - Non-Emergency transports are typically calls that are scheduled, routine or are calls for patients that need to be transported from one facility to another. Most of these calls are at the BLS level.
- ***Critical Care transports***
 - Critical Care transports are calls that typically require a higher level of care than an ALS unit can provide. Many of these transports are for patients that require complicated ventilators or are on medications outside of the scope of practice for paramedics.
- ***Call dispositions and types***
 - Call dispositions and types are a list of items that describe the outcome of each call. These include: if the patient was transported or not and if so, how they were transported; if the call was cancelled or there was no patient found once we arrived at scene or if treatment was rendered at scene and the patient refused transport.

Performance statistics include:

- ***Unit hour utilization***
 - Unit Hour Utilization (UHU) is calculated by dividing the number of EMS transports by the number of "unit hours" per month. These hours are typically 720-744 depending on how many days are in the month. This calculation gives us the percentage of time a unit is on a call per hour.

- **Run times**
 - Run times are averaged for the month and show overall times it takes a unit to complete a call. It measures: “Chute Time”, which is how long it takes from the time of dispatch to when the unit starts responding to the call; “Response Time”, which is how long it takes a unit to arrive at the incident; “Scene Time”, how long they stay at the incident; “Transport Time”, how long it takes for the unit to transport; “Turnaround Time”, which is how long it takes the unit to go back in service.
- **Time Sensitive Emergencies (Cardiac, Stroke, Trauma)**
 - Time Sensitive Emergencies are monitored both monthly and weekly. Each medical emergency has different data points that are measured, including specific assessments, treatments, and alerts to the Emergency Room.
- **Geographical run volume**
 - This is a breakdown of the number of calls per zip code in Kootenai County. .

2020 EMS System Statistics

Call Volume System	Total
Emergency Call Volume (Total Number of Emergent Reports)	13962
Total NET Call Volume (Total Number of NET Reports)	1597
Total CCT Call Volume (Total Number of CCT Reports)	153
Total Standby Call Volume (Total Number of Standby Reports)	8
Total Mutual Aid Call Volume (Total Number of Mutual Aid Reports)	3
Total Call Volume (Total Number of Reports)	15723

Level of Service (Emergent)	Total
BLS	8060
ALS	5119
Total	13179

Run Times System	Average
Chute Time- (minutes: seconds)	01:26
Percent of Calls Under 1:40	66%
Response Time- (minute: seconds)	07:57
Scene Time- (minute: second)	15:17
Percent of Calls Under 18:00 minutes	79%
Average Transport Time	15:01
Turn Around Times- (minute: second)	16:42
Percent of Calls Under 18:00 minutes	68%
Average Total Call Time	43:19

Unit Utilization	Average
Medic - 11	0.226
Medic - 13	0.210
Medic - 31	0.257
Medic - 32	0.350
EMS - 41	0.040
Medic - 51	0.196
Medic - 52	0.132
EMS - 61/63	0.061
EMS - 81/82	0.066
System Unit Utilization	0.181
* Based on total call volume (Reports written) *	

Zip Code Breakdown	Total
83801	452
83803	55
83804	114
83810	2
83814	3672
83815	3209
83822	12
83833	109
83835	1489
83837	12
83849	0
83854	4345
83856	22
83858	988
83861	7
83864	0
83869	426
83876	324
Other	81
Total	15319

Dispositions	Total
Assist	37
Cancelled (No Patient Contact)	1
Cancelled (Prior to Arrival at Scene)	264
No Patient Found	684
Dead on Scene, No Transport	279
No Treatment/No Transport	2921
Patient Evaluated, No Treatment/Transport Required	8
Patient Treated, Released (AMA)	1
Patient Case Transferred	42
Treated / Transported by Law	39
Personnel Aiding in Transport	19
Standby	11
Transported Lights/Siren	419
Transported No Lights/Siren	9761
Treatment/No Transport	1237
Total	15723
Transport Percentage	64.7%

Protocols

The last quarter of 2020 was spent researching and developing updated EMS protocols. Protocols are written to detail for the EMS provider the care that is to be followed for specific patient complaints or situations. Protocols are always being evaluated for their effectiveness and to ensure they are current with the latest trends in EMS nationwide. These protocols are a combined effort between the Medical Directors and the Division Chief of Clinical Services.

The updated EMS protocols will be completed early 2021. All EMS providers will be trained and oriented to these protocols prior to the tentative start date of July 1st, 2021.

Quality Improvement

Quality improvement works in conjunction with the research, development, and implementation of system Protocols. Quality improvement is the process of making system-level changes in clinical processes with a continuous reassessment to improve the delivery of high-quality prehospital care.

The first project I started working on was the documentation of Time Sensitive Emergencies (TSE). Cardiac STEMI patients, stroke patients and trauma patients are all classified as TSE. Prior to focusing on the TSE documentation, for example, STEMI Alert documentation went from an average of 25% to 100% in November and December and Stroke Alert documentation went from an average of 31% to 94% in November and December.

We still have work to do on TSE documentation, but the trend is heading the right direction. Documentation in our electronic reporting program will be the focus in 2021 as well as monitoring the new/updated EMS protocols.

Training

Another focus in my role is that of training. In the Fall of 2020, a group of Firefighter/EMTs from Timberlake, Spirit Lake and Worley Fire were going through Advanced EMT training and I began working with the lead instructor and each department to aid in preparing them for national certification. This has led into a more structured plan on delivering EMS training to the BLS transport departments monthly.

Critical Care Transports

Our CCT program had 156 transports in 2020, an average of 13 per month. We currently have a total of 9 CCT providers with one in training. We still have times during the month where we do not have CCT coverage, and we are always looking to add more providers.

We anticipate our CCT call volume to increase in 2021 due to Shoshone County no longer able to provide that service. We are working closely with Shoshone Medical Center and Shoshone County EMS as they try to adjust to this change.

Future System Enhancements/Issues

KCEMSS staff continue to look at enhancements needed within the system. Some of these enhancements may be obtainable in the next budget year while some may be more long term, but all are under discussion and part of the larger long-term goals of KCEMSS.

1. Ambulance replacement – We are starting to have the discussion of ambulance replacement. We have obtained the current cost of both replacing and remounting the current fleet and are discussing what approach would be best to deal with a fleet that has more miles than expected for the time frame and has an increase in mechanical issues.
2. Additional transport unit – As call volume continues to increase (Post COVID downturn) the discussion of adding an additional transport unit needs to be discussed and planned. The current increase in call volume does not support the need for an additional 24/7 staffed ambulance but a part-time swing staffed ambulance would be helpful in the future. This would allow KCEMSS to continue to increase the staffing on this vehicle as call volume increases without a unabsorbable budget impact. This discussion is also impacted by the availability of backup ambulances. There are times in the system where we do not have an available ambulance to staff due to mechanical issues.

These two issues (Ambulance replacement and additional staffed ambulance) are tied together and must be solved in conjunction. These are also competing funding issues as staffing is continuous funding but that would decrease the available funds for ambulance replacement.

3. System wide CQI process to evaluate care being provided and to drive the needs for training within the system.

Conclusion

KCEMSS is an efficient and dynamic Fire Based EMS System that continues to provide efficient, caring and clinically excellent EMS care to the community we serve while providing excellent stewardship of the money that we receive from the residence of Kootenai County.

KCEMSS continues to grow as our call volume increases. This continues to put stress on the system. Through continued planning and management KCEMSS has developed a fluid plan that will allow us to manage increasing call volumes as well as unforeseen circumstances (COVID-19) in a way that continues to provide the level of care or residences have come to expect.

KCEMSS and its partner agencies are in an excellent position to continue to provide the highest level of service to the residence and visitors of Kootenai County into the future.