

## EMS Fee Increase Proposal for Boulder City

The fire department is requesting guidance on the feasibility of raising EMS ambulance transport fees. The department believes that the city is under charging for these critical, lifesaving services. The department has not raised fees for a number of years and is currently 54.4% behind Mesquite when comparing similar fees. We are also similarly behind all of our other regional partners in this area. The cost of service is similar in all of these communities. The fire department believes it is financially prudent to consider an increase. Below are the estimated costs for service based on the average costs for current service and the need to add additional resources in the near future.

The fire department is proposing that we increase the following fees for FY2022:

- ALS 1 - \$800.00 from \$661.50
- ALS 2 \$1,200.00 from \$765.93
- BLS (Non-Emergent) - \$325.00 from \$275.00
- BLS (Emergent) - \$525 (Reduction) from \$591.28
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**PERSONNEL COSTS ESTIMATES PER CALL** - Several items need to be considered when determining the cost of an ambulance transport. These include the cost of the equipment (ambulance, cardiac monitors, cots, supplies, etc.), personnel costs, vehicle maintenance costs, fuel, regulatory fees, etc. The estimation below is based on estimates from our EMS billing company for August 2020, as this is a completed month. There were 102 medical transports during this month. This total included 73 advanced life support level 1 (ALS 1) calls, 1 advanced life support level 2 (ALS 2) call, and 28 basic life support (BLS) calls. Each call gets a different number of personnel due to the risk level. See below:

- ALS 1 – 5 personnel (1 captain, 1 engineer, and 3 firefighter/paramedics) = \$309.86/hour

Title	Hourly Pay	PERS 44%	Insurance	Workers Comp 22.60%	Medicare 1.45%	Totals
Captain	\$35.74 + 3.574 = \$39.31	\$16.58 w/o 10% Paramedic	\$4.32	\$8.08	.52	\$68.81
Engineer	\$35.73	\$15.72	\$4.32	\$8.07	.51	\$64.35
Paramedic	\$32.48	\$14.29	\$4.32	\$7.34	.47	\$58.90
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<b>Totals</b>	<b><u>\$172.48</u></b>	<b><u>\$75.17</u></b>	<b><u>\$21.60</u></b>	<b><u>\$38.17</u></b>	<b><u>\$2.44</u></b>	<b><u>\$309.86</u></b>

- ALS 2 – 7 personnel (1 captain, 1 engineer, and 5 firefighter/paramedics) = \$427.66/hour

Title	Hourly Pay	PERS 44%	Insurance \$1050.00 Monthly	Workers Comp 22.60%	Medicare 1.45%	Total
Captain	\$35.74 + 3.574 = \$39.31	\$16.58 w/o 10% Paramedic	\$4.32	\$8.08	.52	\$68.81
Engineer	\$35.73	\$15.72	\$4.32	\$8.07	.51	\$64.35
Paramedic	\$32.48	\$14.29	\$4.32	\$7.34	.47	\$58.90
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<b>Total</b>	<b>\$237.44</b>	<b>\$103.75</b>	<b>\$30.24</b>	<b>\$52.85</b>	<b>\$3.38</b>	<b>\$427.66</b>

- BLS – 2 personnel (2 firefighter/paramedics) = \$117.80/hour

Title	Hourly Pay	PERS 44%	Insurance	Workers Comp 22.60%	Medicare 1.45%	Totals
Paramedic	\$32.48	\$14.29	\$4.32	\$7.34	.47	\$58.90
Paramedic	\$32.48	\$14.29	\$4.32	\$7.34	.47	\$58.90
<b>Total</b>	<b>\$64.96</b>	<b>\$28.58</b>	<b>\$8.64</b>	<b>\$14.68</b>	<b>.94</b>	<b>\$117.80</b>

Example: A cardiac related medical incident this past week (January 2021) was an ALS 1 level which required 5 people to respond. The engine company was on scene for 22 minutes and the ambulance was engaged for 1 hour and 25 minutes. This is at an estimated cost shown below:

- ALS 1 – Engine \$70.42 for the crew for 22 minutes
- ALS 1 – Rescue \$166.88 for the crew for 1 hour and 25 minutes
- **Total = \$237.30 for personnel costs for this incident**

**TRAVEL DISTANCES TO REGIONAL HOSPITALS** - Calls for service range in the length of time based on the nature of the call and the distance of travel to the appropriate hospital. Advanced life support calls tends to be transported to a facility in the Henderson or Las Vegas area. Many basic life support calls go to Boulder City Hospital.

- Boulder City Hospital – 2-3 miles
- Henderson Hospital – 15 miles
- St Rose Siena Hospital – 19 miles
- UMC Las Vegas – 28 miles
- Sunrise Hospital – 24.9 miles
- Average Distance of Four Las Vegas Area Hospitals – 21.9 miles

**COST OF AMBULANCE OWNERSHIP/MAINTENANCE** - The cost of purchasing and maintaining an ambulance is another important consideration. An ambulance currently cost approximately \$235,000, as was presented in the ambulance replacement request last year. Estimated range that the life expectancy of an ambulance is between 7 and 14 years. We used 10 years as an estimate due to the extended transports for a large portion of our calls. Many cities transport much shorter distances due to having the larger hospitals located within their community. We currently operate two frontline ambulances and a reserve ambulance for a total cost of \$705,000/10 year life expectancy. This is an approximate cost of ownership of \$70,500/year. The average annual maintenance cost of the two frontline ambulances for 2017-2020 was \$9,318.66. There was an additional \$6,350.19 spent on the reserve ambulances. The fuel costs vary, but were \$18,978.01 for 2020. Finally, the equipment required to be in the ambulance include cardiac monitors (\$39,204.94 each and a 7-10 year life expectancy), the hydraulic cots (\$11,000 each with an \$8,392.00 maintenance contract), as well as many other diagnostic tools and monitors. The break down below for the two frontline ambulance cost of ownership.

- Ambulance - \$235,000 each x 2 = \$470,000 divided by 10 years = **\$47,000 annually**
- Annual Maintenance Costs = **\$9,318.66**
- 2020 Fuel Costs = **\$18,978.01**
- Major Equipment Costs
  - Cardiac Monitors - \$39,204.94 each x 2 = \$78,409.88 divided by 10 years = **\$7,840 annually**
  - Hydraulic Cots - \$11,000 each x 2 = \$22,000 divided by 10 years = **\$2,200 annually**
  - Hydraulic Cot Maintenance = **\$7,833 annually**
- **Total Estimated Costs of Annual Ownership/Maintenance of Two Frontline Ambulances = \$93,169**

**COSTS OF MEDICAL SUPPLIES** – This is an area that has not been adequately billed for in the past even though it is allowable under the law. Medical supplies range between call from \$0.25 for an aspirin to \$600.00 for diabetic care with Glucagon. Below is an example of the billable costs for cardiac related call:

- IV Bundle - \$114.00
- Advanced Airway (if needed) - \$140.00
- Basic Oxygen Therapy - \$50.00
- Aspirin - \$0.25
- Cardiac Drugs - \$5.00 to \$17.46 per dose
- 12-Lead EKG - \$100.00+

- Total - **\$409.25 estimate for example incident**

**TOTAL EMS TRANSPORTS IN 2020** – There were 1163 EMS transports in 2020. To determine the number of incidents by risk level the department used the ratios from August 2020 billing cycle.

- ALS 1 – 65.2% or **758 ALS 1 calls for service**
- ALS 2 – Less than 1% or **11 ALS 2 calls for service**
- BLS – 34% or **395 BLS calls for service**

**ESTIMATED COST PER CALL BY RISK LEVEL** – The department has estimated that it costs \$80.11 per incident to cover the cost of the frontline ambulances and an additional \$40.06 for the required reserve ambulance for a total per call cost of \$120.17. Additionally, the cost for the fire engine that responds on these calls is an additional \$25.79 per call (based on the cost of the engine divided by ten years x 40% (estimated EMS use). This was figured in estimating the cost of service for each call by EMS risk level.

**ALS 1** – Using the example cardiac related call, the average travel distant for the four regional hospitals that would receive these patients (21.7 miles), the time on scene for the call in question (22 minutes for the engine and 1 hour & 25 minutes for the ambulance, and an estimate on the amount of medical supplies used (409.25).

- Ambulance Costs - \$120.17
- Engine Costs - \$25.79
- Personnel - \$237.30
- Medical Equipment - \$409.25 estimate
- **Total for ALS 1 - \$792.51 (Currently at \$661.50)** (Regional Partners Average - \$1,125.55)

**ALS 2** – \$80.11 for the ambulance, 439.22 for personnel, \$634.25 medical equipment estimate. This call type would include cardiac arrest calls. These calls are more labor intensive and require more medical equipment. For this example, the time would be the same for both the engine and the ambulance as the personnel from both would be required for the transport. That would have both units on the call for 1 hour and 25 minutes at a cost of \$272.34 plus the ambulance crew at \$166.88 for a total personnel cost of \$439.22. The average range for the hospital is 21.7 miles. The medical equipment for this call would increase to \$634.25.

- Ambulance Costs - \$120.17
- Engine Costs - \$25.79
- Personnel - \$439.22
- Medical Equipment - \$634.25 estimated
- **Total for ALS 2 - \$1,219.43 (Currently at \$765.93)** (Regional Partners Average - \$1,214.78)

**BLS** – These calls are lower acuity calls that often require less personnel and equipment. They also have a higher chance of being transported to Boulder City Hospital which helps keep cost down and increases in service time for the crews. This call is typically handled by a two-person crew unless it involves bariatric patients.

- Ambulance Costs - \$120.17
- Personnel (For BC Hospital Transport) - \$88.35

- Medical Equipment - \$114-\$300 (estimate as this varies widely based on the nature. This can range for not feeling well which requires diagnostic equipment, an IV, and oxygen to treatment for traumatic injuries such as broken ones that would require IV, pain medications, oxygen, splinting, bandaging, etc.)
- **Total for BLS - \$322.52 to \$508.52 (Currently at \$275.00/non-emergent and \$591.28/emergent)** (Regional Partners Average \$989.48 -Non-Emergent and \$1,045.56-Emergent)

The fire department is proposing that we increase the following fees for FY2022:

- ALS 1 - \$800.00
- ALS 2 \$1,200.00
- BLS (Non-Emergent) - \$325.00
- BLS (Emergent) - \$525 (Reduction)

The department would also request to be able to increase the mileage rate from \$15.00 per mile from the patient's location to the hospital to the treating facility. The department would propose increasing this fee to \$20.00 to account for increasing fuel costs. All other regional jurisdictions are charging between \$30.31 and \$30.39.

The department would also ask the city council to consider allowing the billing company to add specific charges for medical supplies/procedures based on the most current costs. This is allowable under the current laws and is not currently being collected.

Important data when considering this request:

Population with Health Coverage in Boulder City (2018 Data USA)

- 45.1% on employee plans
- 8.84% on Medicaid
- 22.6% on Medicare
- 15.5% on non-group plans
- 1.8% on Military or VA plans
- 6.1% no documented insurance

The fire department needs to seek a full time third ambulance crew as soon as it is feasible. The city is regularly without a staffed ambulance crew due to both units being on medical calls and transporting outside of the city. While we have Henderson Fire and Community Ambulance that can respond, they will not move to our area and stage prior to an actual call for service. They only respond when the 911 call comes in. This is an issue for the community in that several medical issues require an immediate response. One such example is cardiac arrest. The American Heart Association estimates that for every minute definitive care is delayed, a person has their survival chances decrease by 10%. With both Henderson and Community being at least 15 minutes out, the chance of survival is drastically reduced.

A third ambulance would allow us to always have a crew in service and ready to respond to these incidents.

A final discussion would be to consider instituting an ambulance subscription program that would allow people that work or live in Boulder City to join for a small annual fee. This works by allowing the first two ambulance responses to be billed to their insurance. Any fees that are sent back to the individual by the insurance would be waived by the city's biller due to the membership. This program is being used by many fire departments in the country and have been beneficial to the community and the departments alike. This process would also allow us to develop a subscription grant program for people with hardships. The plan would be to follow the same process that is used by the city utility billing process to qualify people for this.