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# ECONOMIC IMPACT REPORT

# 2023

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**THORBERG**  
COLLECTORATE

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# Executive Summary

Organized as a not-for-profit public trust authority providing emergency medical transportation services, EMSA has become central to the communities they serve. In 2020, EMSA assumed operational control of the system and began a series of strategic investments and infrastructure improvements in both the eastern and western divisions. Today, EMSA employs nearly 700 workers across the state providing critical pre-hospital care, training new workers entering healthcare professions, and offering both emergency and transfer medical transportation services.

The annual operations of EMSA have an economic contribution in the state that supports 1,264 jobs, generates \$73.8 million in labor income, and is responsible for \$202.1 million in Oklahoma economic activity. Among the key findings in a review of core EMSA functions are the following:

### First Line of Care

- EMSA dispatchers are trained paramedics and the ‘first on the scene’ medical professional
- EMSA crews work with first responders to provide critical pre-hospital care and emergency transportation

### Transfer Transportation

- EMSA crews provide both emergency and institutional patient transfer transportation
- EMSA Care enrollees face no out-of-pocket expenses for emergency transfer services

### Workforce Training

- EMSA Advantage, a free training program for aspiring healthcare professionals, trains EMTs and paramedics who often continue on in a healthcare field
- The lifetime earnings of EMTs and paramedics (\$17. Million to \$2.7 million) represent a significant premium to common occupations available to high school graduates

| EMSA Operations: Total Economic Impact |              |                      |                       |
|--|--------------|----------------------|-----------------------|
| Division                               | Employment   | Income               | Output                |
| East                                   | 550          | \$ 40,362,560        | \$ 90,578,820         |
| West                                   | 714          | \$ 33,434,370        | \$111,550,592         |
| <b>Total</b>                           | <b>1,264</b> | <b>\$ 73,796,930</b> | <b>\$ 202,129,412</b> |

# Overview

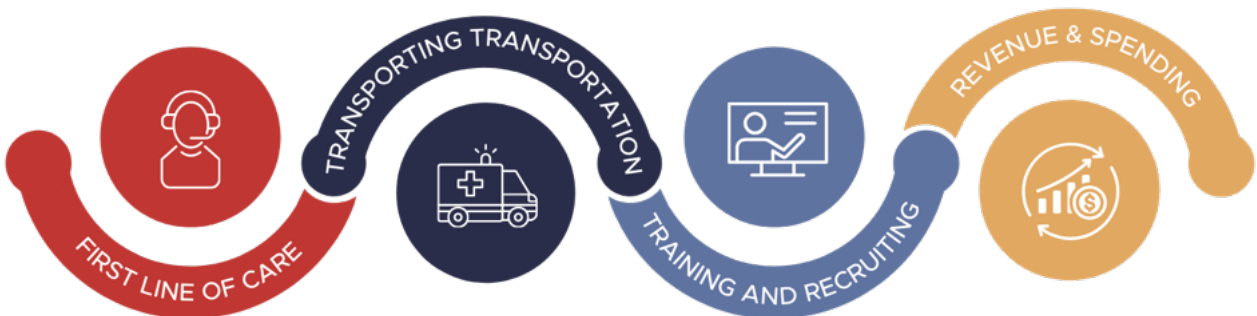
Economic impact reports examine the linkages between an existing or proposed set of industry expenditures and the broader regional economy. Stronger connections and a deeper reliance on local vendors and supply chains are reflected in larger economic multipliers and a more significant economic impact.

As this report examines the economic impact of EMSA operations in Oklahoma, the limitations of this methodological approach should be acknowledged at the outset. The total impact of EMSA operations extends beyond the economic impacts that stem from their interaction with local vendors and the local labor market.

While the full economic and social impact of EMSA operations cannot be calculated and reported in this work, we attempt to

capture a portion of the broader impacts through a narrower examination of economic linkages. Embedded in their annual operating expenditures are at least three critical social functions. First, EMSA provides first-line medical care. Second, EMSA provides emergency and institutional transfer transportation. Third, EMSA provides essential medical training and recruiting in an understaffed healthcare sector.

Following an overview of the structure and brief history of EMSA, each of these critical areas is explored in more detail. The sources and uses of EMSA funding are then presented, followed by a summary of the economic impacts of EMSA operations. A brief discussion concludes the report with an appendix offering additional perspectives on the methodology of economic impacts.





# History and Structure

**1977**

EMSA was established in Tulsa as a not-for-profit public trust authority

**1990**

Oklahoma City joins the EMSA trust

**2009**

EMSAcare was launched

**2020**

EMSA assumes operational control of the EMSA system

**2022**

EMSA starts EMSA Advantage free EMT training program

Emergency Medical Services Authority (EMSA) was established as a not-for-profit public trust authority in Tulsa in 1977 and expanded into Oklahoma City in 1990, creating an Eastern and Western division. As a public trust, EMSA represents beneficiary municipalities in the furtherance of public interests. Today, the Eastern division serves the beneficiary municipalities of Tulsa, Bixby, Jenks, and Sand Springs.

In contrast, the Western division serves Oklahoma City, The Village, Nichols Hills, Valley Brook, Arcadia, and Lake Aluma.

Across these communities, EMSA provides first-line medical care and ambulatory services to more than 1.6 million Oklahomans. Due to the rapid growth in the regions served by EMSA, the organization's services in these areas will continue to broaden in conjunction with the increasing population demands.

EMSA is led by an internal leadership team that oversees independent operations in the Eastern and Western divisions. The Authority assumes responsibility for overseeing billing services, maintaining patient records, managing contractual agreements, and more. EMSA also possesses and directly operates essential assets, including ambulances and headquarters, that are integral to fulfilling its mission.<sup>1</sup>

As a public trust, EMSA operations are subject to the trust agreement and the supervision of 11 trustees, including an independent medical director.

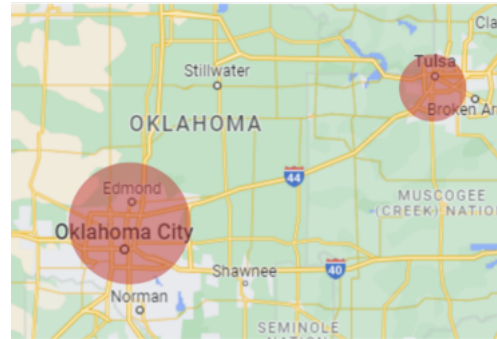
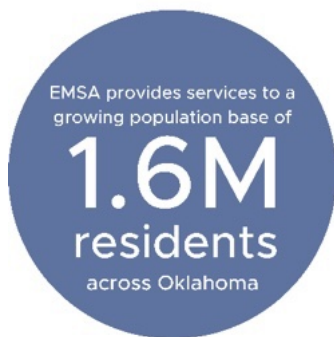
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<sup>1</sup> 'About EMSA', [www.emsaonline.com](http://www.emsaonline.com)

# History and Structure

Appointed trustees can include elected public officials such as city councilors, municipal employees such as department leaders, or private citizens. In addition to establishing the EMSA Board of Trustees, the cities where EMSA operates wield decision-making power. They approve changes to the EMSA Trust Agreement, which governs operations and EMS ordinances. These cities also oversee EMSA's budget and the EMSAcare utility bill subscription program.

EMSA launched EMSAcare, formerly TotalCare, on Oct. 1, 2009. EMSAcare covers out-of-pocket expenses for emergency ambulance rides in exchange for a \$3.65 payment on the city's water bill. Households are automatically enrolled in the fall each year with the annual option to opt out.<sup>2</sup>



Among the trustees is an independent Medical Director, the day-to-day recognized clinical authority in the EMS system. The Office of the Medical Director works with EMSA and other public safety agencies to meet clinical care standards established by the Medical Control Board, which is comprised of 11 community physicians. Of the 11 community physicians, ten board members are emergency department physicians from the East and West Divisions, and one member is from an additional specialty.<sup>3</sup>

The authority leadership, beneficiary-appointed trustees, and the independent medical director work in concert to ensure the best medical practices and efficient operations and that public interests are served.

<sup>2</sup> 'EMSACARE', [www.okc.gov/residents/emsacare](http://www.okc.gov/residents/emsacare)

<sup>3</sup> 'About US MCB OMD', [www.okctulomd.com](http://www.okctulomd.com)

# First Line of Care



In Oklahoma City and Tulsa, 911 emergency calls are received at a central dispatch and immediately transferred to an appropriate dispatcher based on the emergency type: police, fire, or medical. The strategic co-location of the call centers allows for seamless communication and collaboration, which is crucial for effective and timely response to emergencies.

All medical dispatchers are EMSA employees and trained paramedics. Within seconds of dialing 911, residents begin to receive medical care as a certified paramedic dispatches the nearest available ambulance, provides a calming presence, and collects essential information.

In doing so, EMSA is the very first line of care for patients. After receiving a call, EMSA dispatchers are the 'first on the scene' in providing care as they collect information and dispatch the nearest unit, all while calming and assuring the caller and disseminating information to first responders.

During dispatching, 7-8 operators work in shifts across the East and West divisions. Once on a call, operators declare whether the call is a Priority I or Priority II to inform which crew is best suited to respond to the call.



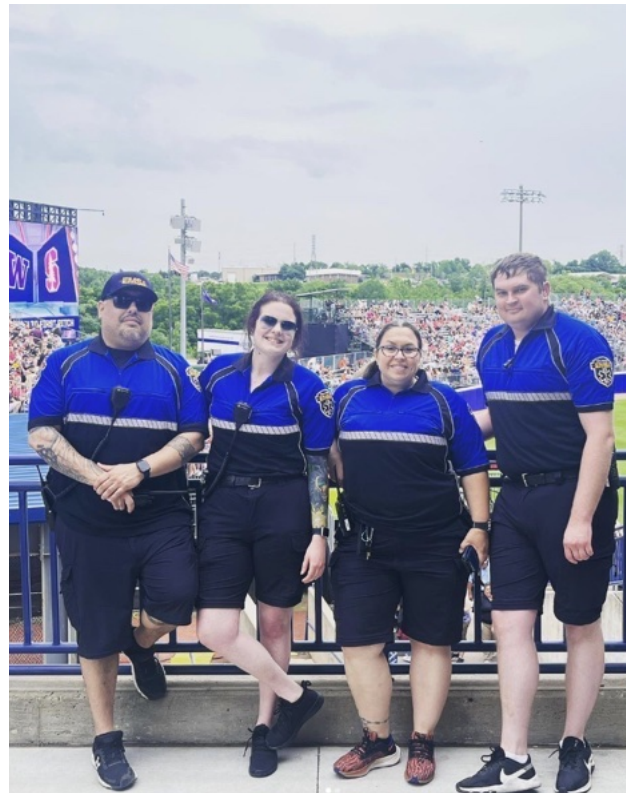
# First Line of Care



After callers dispatch the coordinated truck, the fire department stabilizes the situation until EMSA arrives. Meanwhile, the EMSA dispatcher remains on the line. Once the EMSA crew arrives, first responders recommend an appropriate course of action, which the patient may decline.

EMSA trucks, crews, and dispatchers are often on-site at major community events to provide care and emergency transport when necessary.

In June 2023, EMSA employees remained on-site at the 2023 NCAA Softball Women's College World Series at the Oklahoma City ASA Hall of Fame Stadium. EMSA ensured the health and safety of over 12,000 softball fans throughout the tournament.



*EMSA employees keeping over 12,000 softball fans safe and healthy at the NCAA Softball Women's College World Series at the ASA Hall of Fame Stadium, @emsaoak on Instagram*

A photograph of an EMSA ambulance with the number 371 and the word 'PARAMEDIC' visible. The EMSA logo and 'EMERGENCY MEDICAL SERVICES AUTHORITY' are also present. A circular icon of an ambulance with a cross is overlaid on the right side of the image.

# Transfer Transportation

Prior to dispatching the EMSA truck and team to an emergency, a dedicated team of employees focuses on maintaining and preparing the mechanics and logistics of both the trucks and equipment. In addition to administration and emergency services personnel, EMSA employs a skilled crew of mechanics – some stationed at the East Division and others at the West Division – to ensure the upkeep and efficient operation of their extensive fleet of trucks. Of the 99-truck fleet, 52 trucks are in the Central Oklahoma fleet, and 47 are in the Eastern Oklahoma fleet.

These trucks collectively put on over 300,000 miles per year, so standby mechanics are crucial in maintaining the fleet's health, thereby becoming critical to the patient. Recognizing the demand for auto-repair operations, EMSA strategically stations standby mechanics to swiftly address any unforeseen mechanical issues to return the unit to circulation. The EMSA mechanic team oversees fleet maintenance, cleaning operations, and vehicle parts replacement. At peak deployment, EMSA operates around 42-43 trucks per division.



In addition to mechanics, EMSA logistic technician employees play a vital role in managing the inventory of equipment in the warehouse and on the trucks. This collaboration extends to working closely with the EMSA emergency service crew. The logistics team meticulously oversees inventory processes for the medical equipment and supplies regularly used and replenished during truck operations. Trucks are specifically prepared for an ALS or BLS team as part of this process and loaded accordingly. During the loading and unloading operations, EMTs are responsible for thoroughly cleaning the trucks to ensure the optimal conditions for the next crew.

# Transfer Transportation



While transporting and transferring patients, EMSA paramedics and EMTs meet demanding 12-hour shifts. Throughout each shift, emergency healthcare staff typically service 6-8 calls. EMSA responds to emergency calls and provides transportation services for non-emergency situations, including scheduling cancer treatment appointments, doctor's appointments, and more.

Beyond critical medical supplies and equipment packed by first responders, EMSA ensures that compassionate consideration is added to their emergency response efforts. Specifically, responders ensure that comfort items for children, ranging from snug stuffed animals to thoughtfully curated backpacks, are an integral part of their mission to ensure patient well-being.

EMSA's East Division created a partnership with the local nonprofit organization Joy in the Cause. Joy in the Cause supplies EMSA trucks with 'comfort kits' designed to put children navigating medical emergencies at ease. These kits serve as a source of reassurance during challenging times for both the young patients and their families.

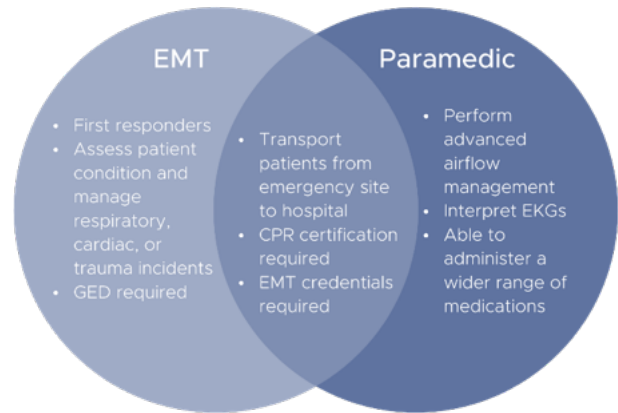


*Stuffed animals from 'Joy In the Cause' @joyinthecause on Instagram*

# Workforce Training

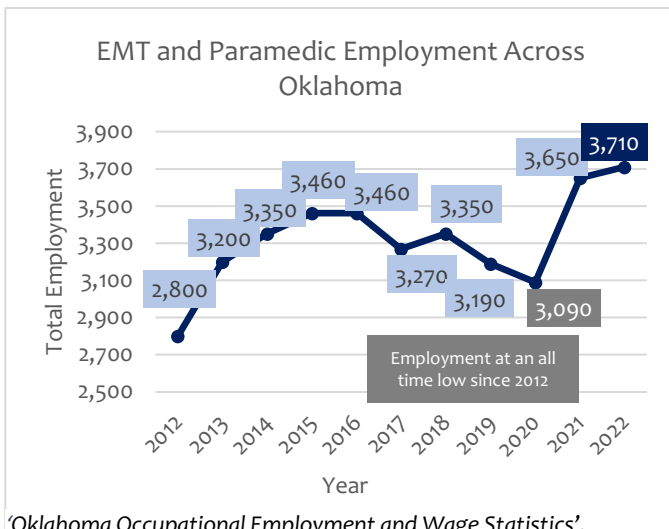


Successful responses and EMSA transports require a well-trained crew of first responders. EMSA is an innovative leader in solving its staffing challenge while encouraging growth in an understaffed healthcare labor market. Overall, paramedic and EMT employment in Oklahoma has increased over the last decade from 2,800 employees in 2012 to 3,710 employees in 2022. However, from 2017 to 2020, it shrunk by nearly 400 employees. The COVID-19 pandemic further contributed to decreased statewide paramedic and EMT employment in 2020, hitting an all-time low since 2012. In 2021, EMSA established EMSA Advantage as a proactive initiative to fill the labor supply gap of emergent care workers.



'EMTs and Paramedics', bls.gov

Recognizing the importance of maintaining a robust and properly trained emergency care workforce, EMSA Advantage emerged as the solution to address labor market deterioration. The EMSA Advantage initiative created new EMTs and paramedics within the state and attracted workers from neighboring states. EMSA was pivotal in replenishing the workforce through targeted recruitment efforts and comprehensive training programs.



'Oklahoma Occupational Employment and Wage Statistics', www.bls.gov

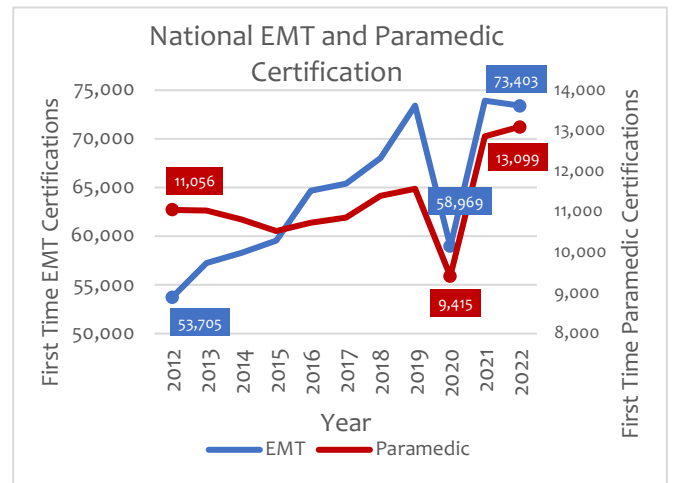


# Workforce Training



EMSA Advantage is a free EMT training program for qualified applicants. Upon graduation, students sign a contract to work for EMSA for at least 18 months with the system credentials of an Emergency Medical Technician (EMT). The program is 12-16 weeks, with field training and classroom instruction 40 hours per week and field orientation instruction and training. Since 2022, 141 students have graduated with an additional 25 students expected to graduate in March of 2024. After passing the National Registry testing, EMSA pays for the students' State EMS license. EMSA also built educational community partnerships to maintain course and program structure.

Paramedics have additional training compared to EMTs and can perform more advanced procedures, such as IV administration and EKG monitoring. After working as an EMT for six months, EMTs can apply to be a paramedic through EMSA's program. EMTs are paid to attend full-time paramedic and clinical classes. Like EMT training, EMSA covers all costs in exchange for a 3-year full-time contract post-graduation.<sup>6</sup>



'National EMS Certification', nremt.org

In addition to providing training, EMSA advertises EMSA Advantage through free community education events to inspire and encourage students to pursue medical education and training.

Many incoming EMSA Advantage students use paramedic training as an entry point to seek additional education in a healthcare career. In addition to those pursuing medical education, EMSA Advantage students include veterans.

<sup>6</sup> 'EMSA Advantage', [www.joinemsa.com](http://www.joinemsa.com)

# Workforce Training



The EMSA Advantage initiative provides an entry point for aspiring healthcare professionals into a labor market stressed by a chronic undersupply of labor. For the individual, the EMSA Advantage initiative invites driven individuals to make an investment in their own human capital. Investments in new education and new skills are rewarded through higher earnings over the individual’s work-life.

A report from the Georgetown University Center on Education analyzed the 2007-2009 American Community Survey datasets to estimate the returns to education across detailed occupations. By summing the earnings of different aged workers in the same occupations with similar educational attainment the researchers created a synthetic estimate of lifetime earnings.

| Lifetime Earnings Estimate 2022 Dollars |             |             |             |
|---|-------------|-------------|-------------|
| Oklahoma City                           |             | Tulsa       |             |
| EMTs                                    | Paramedics  | EMTs        | Paramedics  |
| \$1,762,529                             | \$2,720,505 | \$1,772,798 | \$2,763,995 |

*Occupational Employment and Wage Statistics 2022; Author calculations*

They estimate an EMT/Paramedic blended lifetime earnings of workers with some training beyond a high school diploma are \$1.7 million.<sup>7</sup>

We offer a similar estimate of lifetime earnings for EMTs and Paramedics specific to the Oklahoma City and Tulsa metropolitan areas. We start with the 25<sup>th</sup> percentile of earnings of workers aged 25-34, adjusted from national data for each market. We then assume 2% growth after inflation through age 64. Using this approach, we estimate an EMSA-trained EMT to have lifetime earnings greater than \$1.7 million and a paramedic to have lifetime earnings greater than \$2.7 million.

| Yearly Earnings Estimate 2022 Dollars |               |           |          |           |
|---------------------------------------|---------------|-----------|----------|-----------|
| City                                  | Oklahoma City |           | Tulsa    |           |
| Percentile/ Occupation                | EMT           | Paramedic | EMT      | Paramedic |
| 25th Percentile                       | \$29,180      | \$45,040  | \$29,350 | \$45,760  |
| Median                                | \$30,770      | \$48,080  | \$30,480 | \$48,080  |
| 75th Percentile                       | \$37,520      | \$49,690  | \$33,290 | \$50,760  |
| EMSA Annual Base Minimum*             | \$47,145      | \$67,180  | \$47,145 | \$67,180  |

*2022 Occupational Employment and Wage Statistics, Author calculations, \*www.joinemsa.com*

<sup>7</sup> *The College Payoff: Education, Occupations, and Lifetime Earnings; Carnavale, Anthony P., Rose, Stephen J., Cheah, Ban*

# Workforce Training



To better appreciate the value of the training, we compare the median earnings of entry level aged workers (25-34) with EMT and paramedic training to the median earnings of the most in-demand occupations for those with a high school diploma or equivalent.

The EMSA Advantage initiative solves a staffing challenge for EMSA, provides a gateway into the medical profession for workers in EMSA markets, and offers participants valuable training that is reflected in a lifetime earnings premium for program graduates.

| EMSA Graduate Earnings Comparison   |                                   |             |                   |
|---|-----------------------------------|-------------|-------------------|
| Occupation Title  | Median Earnings Worker Age 25-34* | EMT Premium | Paramedic Premium |
| <b>EMSA</b>   |                                   |             |                   |
| Emergency Medical Technicians   | \$36,460                          | -           | -                 |
| Paramedics  | \$50,190                          | -           | -                 |
| <b>Highest Job Openings, 2022 - 2032</b>  |                                   |             |                   |
| Home Health and Personal Care Aides   | \$24,595                          | \$11,865    | \$25,595          |
| Stockers and Order Fillers  | \$27,620                          | \$8,840     | \$22,570          |
| Customer Service Representatives  | \$31,300                          | \$5,160     | \$18,890          |
| Office Clerks, General  | \$30,790                          | \$5,670     | \$19,400          |
| Secretaries and Administrative Assistants, Except Legal, Medical, and Executive | \$32,490                          | \$3,970     | \$17,700          |
| First-Line Supervisors of Food Preparation and Serving Workers                  | \$27,360                          | \$9,100     | \$22,830          |
| Maintenance and Repair Workers, General   | \$41,630                          | -\$5,170    | \$8,560           |

Elka Torpey, "Education level and projected openings, 2022-32," Career Outlook, U.S. Bureau of Labor Statistics, January 2024  
 \*American Community Survey 2019

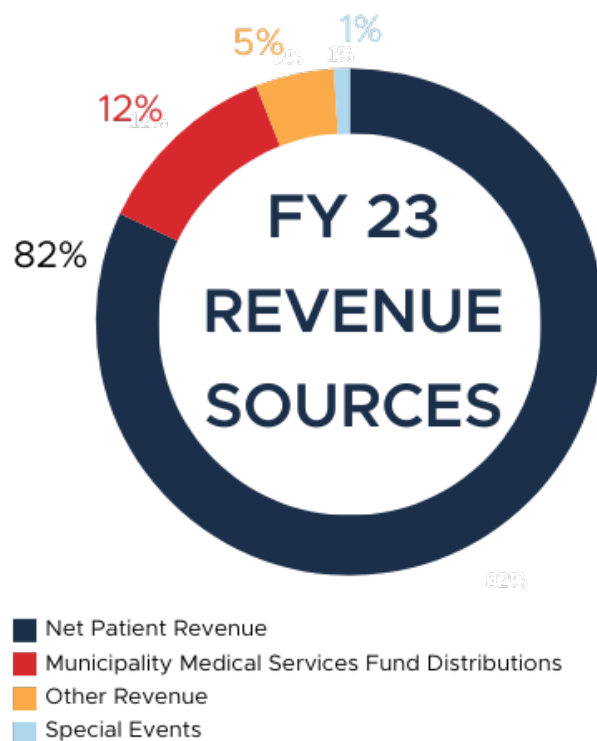


# Funding & Finances

Operating independently from the general funds of Oklahoma City and Tulsa, EMSA's revenue mainly stems from commercial insurance and federal reimbursement programs (Medicare, Medicare HMO, and Medicaid), making it self-sustainable. Additionally, federal grants contribute extra funds, ensuring the sustainability of quality services at a relatively minimal cost.

In 2022, Patient billing revenues, including commercial insurance, Medicare/Medicaid, and self-pay payments, made up nearly 85% of EMSA's operational budget. To ensure financial efficiency and accountability, EMSA publishes monthly financial statements and updates its budget to reflect the variances in the previous month.

The EMSAcare program addresses the challenges posed by Medicare reimbursement rates and the costs associated with providing healthcare to uninsured patients. By offering an accessible funding mechanism, EMSAcare alleviates the need for general fund tax subsidies, ensuring cost-effective and reliable emergency medical services for the community.



'Fiscal Year 2023 Revenue Sources', [www.emsaonline.com](http://www.emsaonline.com)

It is worth emphasizing that EMSA operates largely on net patient revenue with municipal fund distributions coming largely as a utility bill pass through. This arrangement effectively allows Oklahoma City and Tulsa to provide municipal coverage of emergency transportation and pre-hospital care to city residents without obligating general revenue fund dollars that are used for other essential services.

# Economic Impacts



Economic impact reports measure economic connections between an existing or proposed activity and the broader economy. In this context, we consider the direct economic activity in the Oklahoma and Tulsa metropolitan statistical areas (MSA) associated with the corresponding EMSA division’s annual operations. This set of immediate economic outcomes estimates broader connections between EMSA operations and the state’s economy.

Economic impacts are reported separately for the East and West Divisions and summed together to estimate EMSA’s total economic impact across the cities served.

Direct economic impacts reflect EMSA’s direct production of ambulatory and health care services, direct employment of paramedics, EMTs, management, and other personnel, and direct compensation of those employees.

Indirect economic impacts begin with the first line of purchases by EMSA from local vendors. As these vendors respond to the additional demand for their goods and services from EMSA, additional rounds of economic impacts are realized.

An additional layer of economic impact is realized as employees of EMSA and all affected vendors spend a portion of their new income in the local economy. These impacts are reported as induced impacts.

| EMSA Operations Economic Impact - East |            |                     |                     |
|--|------------|---------------------|---------------------|
|  | Employment | Income              | Output              |
| Direct                                 | 298        | \$26,257,357        | \$45,494,711        |
| Indirect                               | 87         | \$5,333,746         | \$15,202,672        |
| Induced                                | 165        | \$8,771,456         | \$29,881,437        |
| <b>Total</b>                           | <b>550</b> | <b>\$40,362,560</b> | <b>\$90,578,820</b> |

*Author impact calculations using the EMSA FY 23 Revised Budget*

| EMSA Operations Economic Impact - West |            |                     |                      |
|--|------------|---------------------|----------------------|
|  | Employment | Income              | Output               |
| Direct                                 | 376        | \$26,416,330        | \$52,647,053         |
| Indirect                               | 100        | \$6,272,748         | \$17,809,406         |
| Induced                                | 237        | \$12,697,515        | \$41,094,133         |
| <b>Total</b>                           | <b>714</b> | <b>\$33,434,370</b> | <b>\$111,550,592</b> |

*Author impact calculations using the EMSA FY 23 Revised Budget*

# Economic Impacts



In the Eastern division, EMSA directly produces more than \$45M in output of ambulatory healthcare services, with 298 employees and \$26M in compensation. EMSA purchases an additional \$9.8M of goods and services from a network of regional suppliers.

The direct production, employment, and vendor purchases by EMSA generate additional rounds of economic activity. The economic impact of EMSA operations in the Eastern division totals more than \$90M, supporting 552 jobs and \$40M in labor income.

EMSA’s Western division directly produces more than \$52M in services, 376 employees, and \$26M in compensation. Further purchases of over \$11.6M of goods and services from a network of regional suppliers support EMSA operations in the Western division.

EMSA supports additional economic activity as vendors respond to EMSA purchases and employees spend in the local economy. EMSA’s Western division operations yield an economic impact of over \$110M, supporting 602 jobs and \$33M in labor income.

Across both divisions, EMSA’s combined operations contribute to over \$200M in total economic output, supporting 1,154 jobs and \$73M in labor income.

| EMSA Operations Economic Impact - Total |              |                     |                      |
|---|--------------|---------------------|----------------------|
|   | Employment   | Income              | Output               |
| Direct                                  | 674          | \$52,673,687        | \$98,141,764         |
| Indirect                                | 187          | \$11,606,494        | \$33,012,078         |
| Induced                                 | 403          | \$21,468,971        | \$70,975,570         |
| <b>Total</b>                            | <b>1,264</b> | <b>\$73,796,929</b> | <b>\$202,129,412</b> |

*Author impact calculations using the FY 23 Revised Budget*

Finally, note that the economic impacts from any given year do not fully account for impacts of net income that is reinvested through capital expenditures and infrastructure improvements. Through this pattern of reinvesting in the community through the local economy the EMSA economic impact would be expected to grow organically over time.

# Conclusion

It's easy to think of EMSA as the emergency ambulance service you often see but hope to never need. In truth, the contributions EMSA crews and offices make in the communities they serve go far beyond emergency medical transportation services. Since taking control of the EMSA system in 2020, leadership has increased their commitment to investing in their service communities and improving system-wide infrastructure. Today, EMSA is a community leader in first-line medical care, workforce development, and ambulatory services.

From the moment a worried caller is connected to a paramedic-trained EMSA dispatcher they begin to receive assurance, instruction, and first-line medical assistance. EMSA crews provide critical pre-hospital care to emergency patients and staff large community events where acute needs may arise. Through their ESMA Advantage in-house program and strategic education partnerships, they offer an entry point for aspiring healthcare professionals. Graduates of EMSA training programs earn a significant premium relative to their similarly educated peers in lifetime earnings. A dedicated team prepares, maintains, and dispatches a fleet of nearly 100 trucks across two geographic divisions. EMSA-trained EMTs and paramedics stabilize patients, provide a reassuring voice, and transport patients where they can receive the care they need.

In service of these critical functions, EMSA imposes a significant economic impact on their communities. Funded primarily through third-party payers and a small pass-through municipal subsidy, critical care and transportation are provided community-wide with no impact on municipal general revenue funds and limited out-of-pocket expenses by patients. The economic impacts reported in this brief reflect operations only and do not adequately capture the strategic capital investments made and the productivity gains from training programs. Despite these limitations, the annual operations of EMSA support an economic contribution of 1,264 jobs and \$73.8 million in labor income and is responsible for \$202.1 million in Oklahoma economic activity.

| EMSA Operations: Total Economic Impact |              |                      |                       |
|--|--------------|----------------------|-----------------------|
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