2022 High-Performance EMS Benchmarking Study

Part 4: Financial & Productivity Metrics

The AIMHI benchmarking studies perform a fundamental service to EMS by providing tools through which we can continue to learn about the successes and opportunities of today's emergency care system, ensure its progress and growth, and work to expand the reputation and efficiency of EMS nationally and internationally. The 2022 study is the latest addition to the body of knowledge required for effective service delivery and improvement.

Since the first study in 1998, AIMHI has developed valuable ***evidenced-based*** studies to share ***clinical, operational, and economic*** data across EMS systems serving diverse geographic and demographic communities. Our goal is to provide the EMS community, elected and appointed officials, and regulators with tools, data, and outcomes that demonstrate the value of high-performance, high-value mobile healthcare as the initial point of entry to, and the safety net of, the healthcare continuum.

What Is High Performance/High Value EMS (HP/HVEMS)?

HP/HVEMS systems share key features of system design rarely associated with less cost-effective systems. Characteristics typically include:

- **Sole provider:** All emergency and non-emergency ambulance services are granted to a sole and often competitively selected provider for a specific population or service area.
- **Control center operations:** The ambulance provider has control of the dispatch center.
- **Accountability:** HP/HVEMS systems have performance requirements that can result in financial penalties or replacement of the provider when the requirements are not met. HP/HVEMS systems use and collect data regularly to meet these performance requirements, which has allowed for the ability to collect data for the HP/HVEMS Market Study.
- **Revenue maximization:** HP/HVEMS systems incorporate the business function into their operations, resulting in an understanding of the billing requirements, thus collecting all appropriate revenues from Medicare, Medicaid, self-pay and other third-party payors.
- **Flexible production strategy:** HP/HVEMS match scheduled resources with predicted changes in response demand based on time of day, day of week and time of year.
- **System Status Management (SSM):** HP/HVEMS systems use dynamic deployment techniques to position resources in anticipation of when and where ambulances will be needed.

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AIMHI Members

Member Agency Name	Organizational Structure
Emergency Medical Services Authority (Oklahoma City, OK)	Public Utility Model: Self-Operated
Alberta Health (Edmonton, AB)	Third Service Model – Canada
Emergency Health Service (Halifax, NS)	Third Service Model – Canada
Emergency Medical Services Authority (Tulsa, OK)	Public Utility Model: Self-Operated
Harris County ESD-11 Mobile Healthcare (Spring, TX)	Emergency Services District
Mecklenburg EMS Agency (Charlotte, NC)	Public Utility Model: Self-Operated
Medic Ambulance (Solano, CA)	Private
MEDIC EMS (Davenport, IA)	501c3
MedStar Mobile Healthcare (Fort Worth, TX)	Public Utility Model: Self-Operated
Metropolitan EMS (Little Rock, AR)	Public Utility Model: Self-Operated
Niagara Emergency Medical Services (Region of Niagara, CA)	Third Service Model – Canada
Northwell Health Center for EMS (Syosset, NY)	Health System Based EMS Agency
Novant Health New Hanover EMS (New Hanover County, NC)	Health System Based EMS Agency
Pinellas County EMS - Sunstar (Pinellas County, FL)	Public Utility Model: Contracted
Pro EMS (Cambridge, MA)	Private
Regional Emergency Medical Services (Reno, NV)	Public Utility Model: Self-Operated
Richmond Ambulance Authority (Richmond, VA)	Public Utility Model: Self-Operated
Three Rivers Ambulance Authority (Fort Wayne, IN)	Public Utility Model: Self-Operated

Key Metrics and Takeaways: Financial & Productivity Metrics

- Survey respondents **responded to a total of 980,266 calls**, **transporting 689,168 patients** (70.3% transport ratio).

- The average Response Unit Hour Utilization **(UHU-R) for AIMHI agencies is 0.594**.
  - *Calculated as the number of hours of staffed ambulances ÷ the number of responses in the same time period.*
  - *This essentially means an ambulance is on a call 59.4% of the time it is on duty.*

- The average **Expense per Unit Hour** (one ambulance staffed and on duty) is **$208.28**.
- The **average transport fee is $1,565.11**.
- The **average revenue per Transport is $435.94**.
- The **average expense per transport is $603.03**.
- **6 of the 10 AIMHI agencies** in this report **receive a local tax subsidy** to offset costs for desired service levels.
- The average public subsidy is **$8.28 per capita.**
- **44.8%** of the patient services revenues received come from **Medicare and Medicaid.**

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Table 1: EMS System Delivery Changes in the Past 3-Years

Agency	Change
EMSA - Oklahoma	• Transitioned from a contractor to self-operated model. • Transitioned from all ALS to tiered ambulance deployment.
Mecklenburg EMS Agency - MEDIC (Charlotte, NC)	• Changed response time goal for low-acuity 911 responses. • From all ALS to tiered ambulance deployment.
Metropolitan EMS (Little Rock, AR)	• Transitioned from all ALS to tiered ambulance deployment. • Changed staffing model from 2 EMTs to EVO/EMT units for low acuity transfers
MedStar Mobile Healthcare (Fort Worth, TX)	• Transitioned from all ALS to tiered ambulance deployment. • Revised response priorities to enhance responses to time-critical calls and reduce HOT responses. • Added telehealth for field crews to navigate patients.
Niagara Emergency Medical Services (Niagara, CA)	• Revised response priorities to enhance responses to time-critical calls and reduce HOT responses.
Northwell Health Center for EMS (Syosset, NY)	• Transitioned from all ALS to tiered ambulance deployment. • Added telehealth for call center and field crews to navigate patients.
Pinellas County – Sunstar (Pinellas, FL)	• Transitioned from all ALS to tiered ambulance deployment.
Regional Emergency Medical Services (Reno, NV)	• Ability to utilize an EMT vs. EMT-I on ALS Ambulance with Paramedic. • Enhanced 911 Nurse Triage Line capabilities.
Richmond Ambulance Authority (Richmond, VA)	• Transitioned from all ALS to tiered ambulance deployment. • Changed response time goal for low-acuity 911 responses.

Table 2: Scheduling Efficiency

	AIMHI Agency Respondents		
	Median	Range	
		Low	High
Scheduled Unit Hours	216,892	74,460	335,993
Produced Unit Hours	179,583	60,418	321,872
Scheduling Efficiency	82.8%	68.6%	101.4%

Table 3: Responses & Ambulance Unit Hours Per Capita

	Median/Total	Range	
Total Responses	980,266 (total)	35,855	162,994
Unit Hour Utilization - Response	0.594	0.268	0.885
Total Billed Patient Services (*Includes Treat No Transport, etc.*)	689,168 (total)	24,554	128,946
Unit Hour Utilization - Transport	0.414	0.235	0.521
Population Served	700,000 (average)	226,604	1,120,000
Response Rate Per Capita	0.1384	0.067	0.249
Transport Rate Per Capita	0.0956	0.059	0.176
Ambulance Unit Hours Per Capita	0.2555	0.207	0.607

Table 4: Published Fees

Published Fees	Median	Range Low	Range High
ALS Emergency	$1,673.69	$600.00	$3,100.00
ALS 2 Emergency	$1,754.04	$800.00	$3,270.00
BLS Emergency	$1,494.43	$500.00	$2,251.93
ALS Non-Emergency	$1,245.26	$450.00	$2,875.00
BLS Non-Emergency	$1,051.18	$450.00	$1,720.00
Critical Care Transport	$2,336.80	$1,500.00	$5,725.00
Treat - No Transport	$181.40	$0.00	$500.00
Mileage	$23.14	$11.00	$29.28
ALS Supplies	$25.14	$0.00	$156.00
BLS Supplies	$12.37	$0.00	$100.00
Gross Patient Fees	$1,158,618,904 (total)		
Average Patient Charge	$1,565.11	$532.28	$2,855.30

Table 5: Payer Mix & Amount Collected

FFS Revenue	Net Collections	% of $ Collected
Payer Source:		
Medicare FFS	$52,334,408	17.0%
Managed Medicare	$49,415,549	16.1%
Medicaid FFS	$23,479,772	7.6%
Managed Medicaid	$12,496,551	4.1%
Commercial Insurance (Incl auto)	$93,124,133	30.3%
Self-Pay	$5,114,000	1.7%
Facility Paid	$22,924,322	7.4%
Other	$3,070,950	1.0%

Net Collections - Patient Services Revenue	$307,749,909	100.0%
Net Average $ Collected Per Patient	$435.94	

Table 6: Revenue & Cost Summary

Revenue	Median
Patient Service Revenue Per Capita	$40.50
Patient Service Revenue Per Unit Hour	$172.11
Patient Service Revenue Per Response	$306.67
Patient Service Revenue Per Transport	$435.94

Expense	Median
Expense Per Capita	$56.12
Expense Per Unit Hour	$208.28
Expense Per Response	$428.54
Expense Per Transport	$603.03

About the Academy of International Mobile Healthcare Integration

The Academy of International Mobile Healthcare Integration (AIMHI) represents high performance emergency medical and mobile healthcare providers in the U.S. and abroad. Member organizations employ business practices from both the public and private sectors. By combining industry innovation with close government oversight, AIMHI affiliates are able to offer unsurpassed service excellence and cost efficiency. www.aimhi.mobi | hello@aimhi.mobi | @AIMHI_MIH | www.fb.me/aimhihealthcare

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