

Emergency Ground Ambulance Utilization and Payment Rates in Massachusetts

March 2023



MASSACHUSETTS
HEALTH POLICY COMMISSION

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Ground ambulance services are a key component of the health care system, providing timely emergency medical services (EMS) and transport for patients in need of care. Which ambulance service provider is used, such as whether it is contracted with a patient's health insurer or is municipally-operated, may lead to outcomes such as potential “surprise billing” or higher payment rates for ambulance services, respectively. In this publication, the HPC **evaluated payment rates for emergency ground ambulance use among commercially-insured patients in the Commonwealth** by examining rates for transports by the type of ambulance service that responded, regardless of out-of-network status.

About half of Advanced Life Support (ALS) 1 Emergency and Basic Life Support (BLS) Emergency ambulance encounters in the Commonwealth were serviced by privately-owned ambulance services and half by municipally-owned services. In contrast to national findings, commercial payers in the Commonwealth paid municipally-owned services about twice as much per transport as they paid privately-owned services. Payments to municipally-owned services were also more highly variable and increased faster, with median payments for municipally-owned ALS 1 Emergency services growing from just under \$1,500 in 2017 to more than \$2,000 in 2020. Median commercial ambulance payments in Massachusetts in 2019 were 2.7 and 4.6 times higher than Medicare and MassHealth rates, respectively.

Areas for future potential research and monitoring include investigating the impact of the COVID-19 pandemic on emergency ground ambulance use and rates, following the work and recommendations of the federal Advisory Committee on Ground Ambulance and Patient Billing, and keeping track of progress in other states on addressing emergency ground ambulance billing and rates.

- **Most (78%) ambulance encounters in Massachusetts in 2019 were ALS 1 Emergency or BLS Emergency transports.** Most of these encounters originated at a residence or at the scene of an accident or acute event.
- About **half** of ALS 1 Emergency and BLS Emergency ambulance encounters in the Commonwealth were serviced by **privately-owned** ambulance services and **half** serviced by **municipally-owned** services.
- For both ALS 1 Emergency and BLS Emergency encounters, **paid amounts varied more than three-fold across commercial payers.**
- **In contrast to national findings, commercial payers paid municipally-owned services about twice as much per transport as they paid privately-owned services.** Payments to municipally-owned services were also more highly variable and growing faster, with median payments for municipally-owned ALS 1 Emergency services growing from **just under \$1,500** in 2017 to **more than \$2,000** in 2020.
- **Median commercial ambulance payments in Massachusetts in 2019 were 2.7 and 4.6 times higher than Medicare and MassHealth rates, respectively.** They were also higher than maximum allowable rates in Connecticut, which regulates rates through its Office of Emergency Management Services.

➤ **INTRODUCTION**

- Ground Ambulance Landscape in Massachusetts
- Commercial Payment for Ambulance Services
- Other Payment Approaches
- Areas for Future Research
- Data and Methods

Emergency medical services (EMS) bridge public safety and health care systems and reflect characteristics of both.

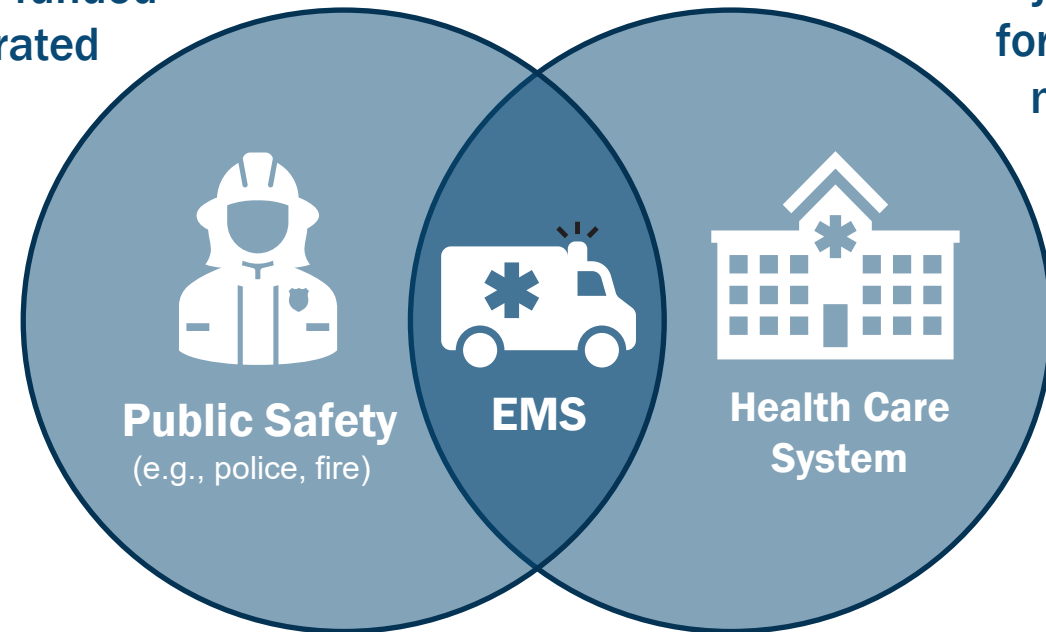
EMS IN MASSACHUSETTS

EMS is the pre-hospital assessment, treatment and other services utilized in responding to an emergency or provided during the emergency.¹ In 2020, there were 1.6 million EMS patient transports in Massachusetts.² EMS is a critical component of the health care system, extending health care delivery from the community into facility settings.

In Massachusetts, EMS is regulated by the Office of Emergency Medical Services (OEMS) of the Department of Public Health, which also certifies EMS personnel and licenses ambulance services in the Commonwealth.

Each local jurisdiction in the Commonwealth must designate a primary ambulance service to provide EMS services.³ As described in more detail later in the chartpack, ambulance service providers may be publicly-owned (e.g., provided by a municipality's fire department, or other department) or privately-owned (e.g., a for-profit or not-for-profit entity). Statewide EMS coverage is essential to the health and safety of Massachusetts residents, and publicly-owned ambulance services play an important role in ensuring EMS coverage across the Commonwealth.

Municipally-funded
and operated



Majority private
for-profit and
non-profit
entities

**EMS may be provided by
publicly or privately-
owned entities.**

(1) 105 CMR 170.000: *Emergency Medical Services System*

(2) National Association of State EMS Officials. 2020 National Emergency Medical Services Assessment. May 27, 2020. Available at: https://www.ems.gov/pdf/National_EMS_Assessment_2020.pdf

(3) M.G.L. c. 111C, § 10; 105 CMR 170.510

Ambulances are vehicles used in the provision of EMS. Based on the level of intervention provided, ambulance services may be broadly categorized into three distinct categories:

➤ Basic Life Support (BLS)

- Interventions that do not puncture the skin, such as cardiopulmonary resuscitation (CPR), burn care, spinal immobilization, splinting, and wound care.¹

➤ Advanced Life Support (ALS)

- Interventions that puncture the skin or are otherwise more invasive or complex, such as intravenous medication administration, nasotracheal intubation, needle decompression, and manual defibrillation.²

➤ Critical Care Transport

- Transport of a critically ill or injured patient using medical techniques, pharmacology, and technological life support systems that exceed those in the Statewide EMS Treatment Protocols, including the ALS Interfacility Transfer Protocol.³

*BLS and ALS transports may be further subdivided into **emergency and non-emergency** categories.*

(1) Massachusetts Office of Emergency Medical Services, Department of Public Health. Emergency Medical Services Pre-Hospital Statewide Treatment Protocols. Official Version 2022.1. June 1, 2022. Available at: <https://www.mass.gov/doc/emergency-medical-services-statewide-treatment-protocols-version-20221-effective-june-1-2022/download>

(2) Ibid.

(3) 105 CMR 170.000: Emergency Medical Services System

Out-of-network billing issues **may arise for ambulance services** in particular because patients needing emergency transport do not have the ability to choose an ambulance provider in their insurer’s network.¹

If the ambulance provider is not in the patient’s network, there is **no agreed-upon rate**, and the insurer may pay an amount equal to or less than full amount charged by the ambulance provider. While difficult to determine how frequently it occurs, if the insurer pays less than full charges, the patient may receive a **“surprise bill”** from the ambulance provider seeking the difference between the amount paid by the insurer and full charges (i.e., **“balance billing”**).

Out-of-network or surprise billing in Massachusetts has been an area of continued policy interest for the Health Policy Commission (HPC)^{2,3,4}.

(1)U.S. Public Interest Research Group (PIRG). Emergency: The High Cost of Ambulance Surprise Bills. December 2022. Available at: <https://publicinterestnetwork.org/wp-content/uploads/2022/12/EMERGENCY-The-high-cost-of-ambulance-surprise-bills-USPIRG-Education-Fund-December-2022-Final.pdf>

(2)Massachusetts Health Policy Commission. Out-of-Network Billing in Massachusetts. May 2020. Available at: <https://www.mass.gov/doc/out-of-network-billing-in-massachusetts-chartpack/download>

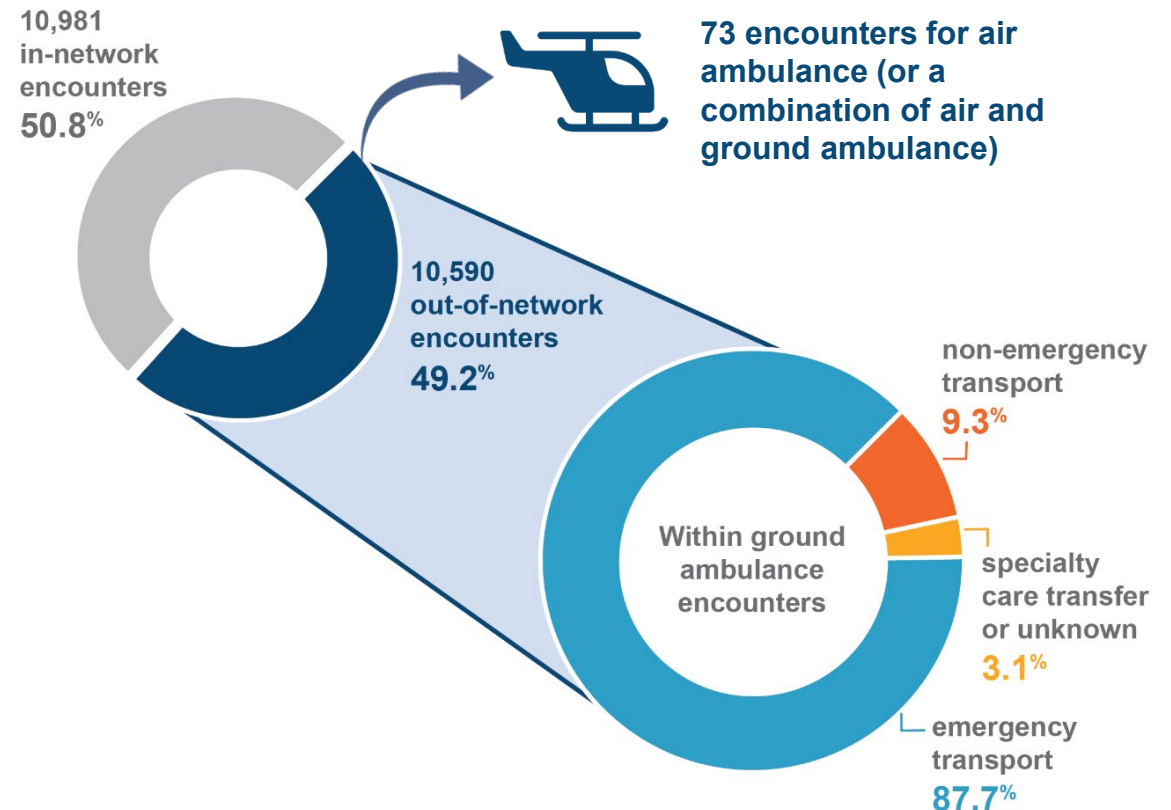
(3)Massachusetts Health Policy Commission. HPC DataPoints, Issue 14: The Price is Right? Variation in Potential Out-of-Network Provider Payment Benchmarks. August 2019. Available at: <https://www.mass.gov/info-details/hpc-datapoints-issue-14-the-price-is-right-variation-in-potential-out-of-network-provider-payment-benchmarks>

(4)Massachusetts Health Policy Commission. Policy Brief on Out-of-Network Billing. January 2016. Available at: <https://www.mass.gov/files/documents/2016/07/xu/2015-ctr-out-of-network.pdf>

The federal No Surprises Act, which took effect on January 1, 2022, protects individuals from receiving surprise medical bills when they receive most emergency services, including services from out-of-network air ambulance service providers. However, **ground ambulance services are excluded from these billing protections.** The law established an advisory body to study ambulance billing and recent work has sought to examine the prevalence of potential surprise billing for ground ambulance transports nationally.¹

The HPC has previously reported on out-of-network billing in the context of ambulance transports and found that **nearly half of ambulance encounters in 2017 resulted in at least one out-of-network claim.** In the absence of protections, potential surprise billing for emergency ground ambulance transports **continues to impact commercially-insured Massachusetts residents.**^{1,2C}

Out-of-Network Claims for Ambulance-Based Services, 2017



(1)Adler L, Ly B, Duffy E, Hannick K, Hall M, Trish E. Ground Ambulance Billing and Prices Differ by Ownership Structure. Health Affairs. January 18, 2023. Available at: <https://www.healthaffairs.org/doi/abs/10.1377/hlthaff.2022.00738?journalCode=hlthaff>

(2)Murphy SP. An Ambulance Bill Could Make You Sick. The Boston Globe. October 14, 2021. Available at: <https://www.bostonglobe.com/2021/10/14/business/an-ambulance-bill-could-make-you-sick/>

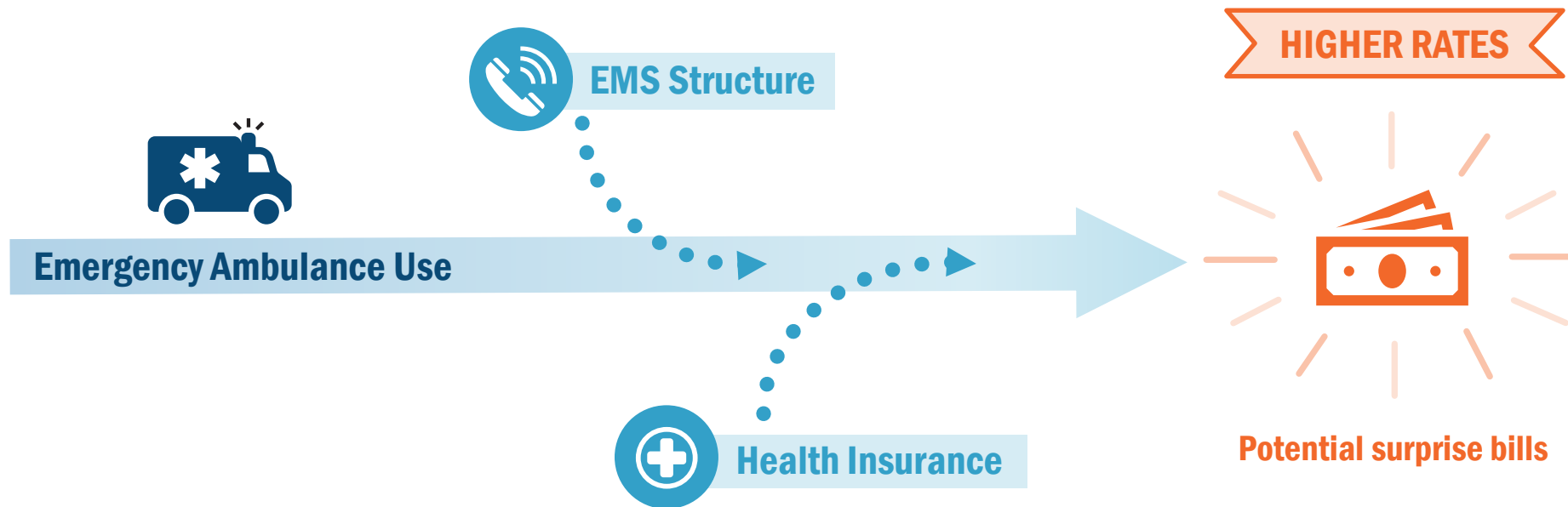
(3)Fraser D. Cape Cod Ambulance Fees Take Patients by Surprise. Cape Cod Times. August 1, 2020. Available at: <https://www.capecodtimes.com/story/special/special-sections/2020/08/01/cape-cod-ambulance-fees-take-patients-by-surprise/114063410/>

Data notes: Ambulance claims were identified using a combination of site of service codes and CMS' Healthcare Common Procedure Coding System (HCPCS) codes. Each ambulance encounter includes charges for activation (e.g., advance life support or basic life support), mileage, and any other supplies or services provided (e.g., IV therapy). Includes claims from three large Massachusetts commercial payers that had an out-of-network indicator well-populated for the majority of their claims: Tufts Health Plan, Neighborhood Health Plan (now AllWays), and Anthem.

Data sources: HPC analysis of Center for Health Information and Analysis All-Payer Claims Database, v7.0 for 2017.

Apart from network status, which impacts potential surprise billing, the EMS structure in a given municipality (i.e., which type of ambulance provider responds to a 9-1-1 emergency call) may result in **higher payment rates** for emergency ambulance services.

This publication seeks to explore this additional dimension of emergency ground ambulance use among commercially-insured patients in the Commonwealth by examining payment rates for transports by the type of ambulance service that responded.



The aim of this report is to build upon prior research to develop a more comprehensive understanding of the emergency ground ambulance landscape in the Commonwealth.

- Characterize emergency ground ambulance use among commercially-insured members in the Commonwealth, **regardless of out-of-network status**, including:
 - Utilization rates of BLS Emergency and ALS 1 Emergency services
 - Charges and total paid amounts for BLS Emergency and ALS 1 Emergency ambulance services
 - Use of municipally-operated versus privately-owned ambulance services

- To the extent possible, compare commercial ground ambulance payment rates to those of other payers (i.e., MassHealth and Medicare) and states.

- Introduction
- **GROUND AMBULANCE LANDSCAPE IN MASSACHUSETTS**
- Commercial Payment for Ambulance Services
- Other Payment Approaches
- Areas for Future Research
- Data and Methods

Landscape

In Massachusetts, OEMS licenses ambulance services at the BLS, ALS (Advanced and Paramedic), and critical care service levels. Ambulances may be staffed by **EMS first responders (EFRs) and emergency medical technicians (EMTs)**. EMTs are further classified into the categories of EMT-Basic, Advanced EMT, and Paramedic.¹ The different categories of EMTs differ in the amount of training required, and, consequently, in the interventions that they are qualified to perform.

Prior to the onset of the COVID-19 pandemic, ambulances operating at the BLS and ALS level in Massachusetts were required to be staffed with at least two EMTs, with BLS transports requiring staff certified at the EMT-Basic level and ALS transports requiring at least one staff certified at the EMT-Advanced or EMT-Paramedic levels, dependent on the type of ALS transport.² In March, 2020, in order to ensure sufficient staffing during the public health emergency, DPH allowed ambulances at the BLS and ALS levels to be staffed with one EMT at the ambulance transport level, who would provide patient care, and one first responder, who would drive the vehicle.³ This change in regards to BLS transports was made permanent, effective January 6th, 2023.

(1) 105 CMR 170.000: *Emergency Medical Services System*

(2) *Ibid.*

(3) Order to the Commissioner of Public Health Providing for Continuity of Emergency Medical Services Care. March 17, 2020. Available at: <https://www.mass.gov/doc/march-17-2020-ems-care-order/download>

(4) Bebinger, M. Hospitals and Nursing Homes Frustrated by Ambulance Staffing Shortage. WBUR. November 21, 2021. Available at: <https://www.wbur.org/news/2021/11/24/ambulance-staffing-shortage-massachusetts>

(5) Mercer, M. States Strive to Reverse Shortage of Paramedics, EMTs. The Pew Charitable Trusts. February 6, 2023. Available at: <https://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2023/02/06/states-strive-to-reverse-shortage-of-paramedics-emts>

(6) George K, Sweeney S. State Actions to Address EMS Workforce Shortages. National Conference of State Legislatures. July 27, 2022. Available at: <https://www.ncsl.org/health/state-actions-to-address-ems-workforce-shortages>

STAFFING CHALLENGES

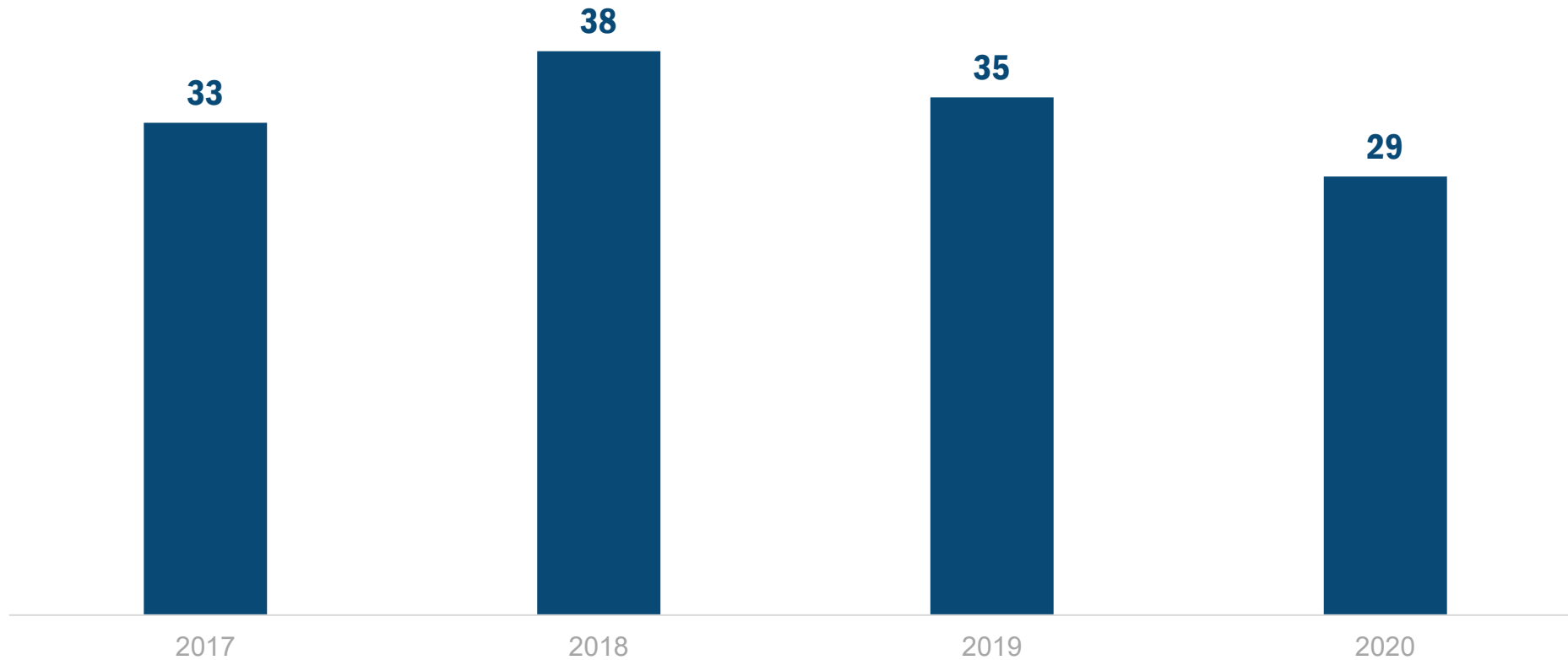
EMS staffing challenges have been reported in Massachusetts⁴ and nationally. Nationally, wages, work-life balance, and burnout have been reported as factors in EMS staffing turnover.⁵ To address EMS staffing challenges, other states are considering policy options including adjusting licensure and certification requirements, expanding recruiting and retention efforts, and addressing burnout and safety concerns.⁶

Between 2017 and 2019, there were between 33 and 38 ambulance transports per year per 1,000 commercially-insured members, with fewer transports in 2020.



Landscape

Number of ambulance encounters among commercially-insured patients per 1,000 member-years, 2017 to 2020



Notes: The COVID-19 pandemic had a notable effect on health care utilization in 2020. In the 2022 Health Care Cost Trends Report and Policy Recommendations, the HPC reported that health care utilization among commercially-insured patients was 5.3% lower in 2020, compared to 2019. This exhibit includes the following transport types: ALS 1 Non-emergency, ALS 1 Emergency, BLS Non-emergency, BLS Emergency, ALS 2, and specialty care transport. Member-years by year: 1,638,560 in 2017, 1,598,429 in 2018, 1,501,434 in 2019, and 1,407,052 in 2020.

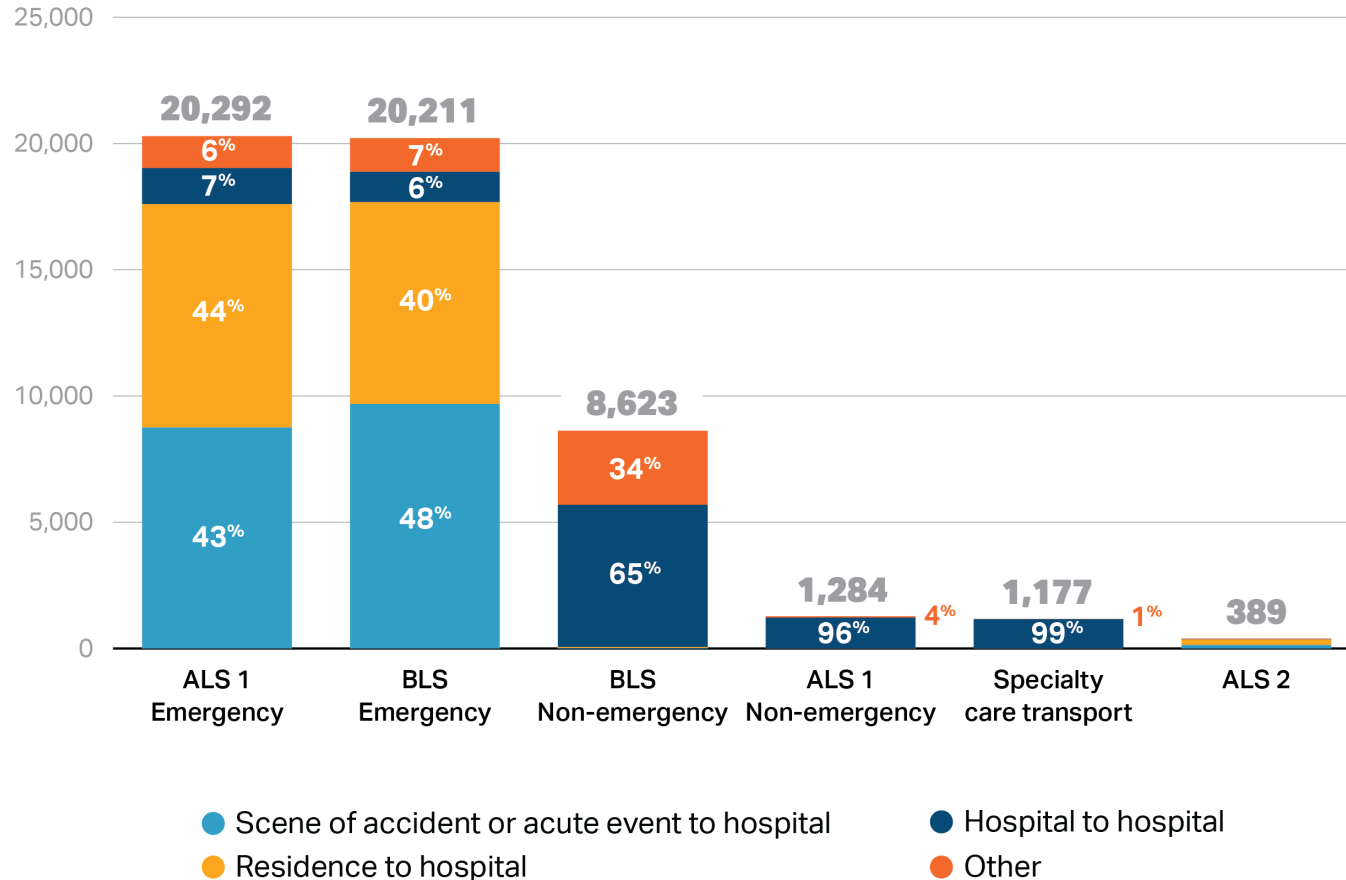
Sources: HPC analysis of Center for Health Information and Analysis All-Payer Claims Database v10.0, 2017-2020

Most ambulance encounters in 2019 were ALS 1 Emergency or BLS Emergency transports, of which 87% were transports to a hospital from a non-hospital location.



Landscape

Number of ambulance encounters by transport type and origin and destination points among commercially-insured patients by transport type, 2019



Whether a BLS or an ALS ambulance responds to an emergency may depend on factors such as the ambulance providers that service the municipality and/or the availability of ambulances themselves.

Notes: Percentages less than 1% and volumes less than 11 were omitted from the exhibit. Transport types were identified using procedure codes A0426 (ALS 1 Non-emergency), A0427 (ALS 1 Emergency), A0428 (BLS Non-emergency), A0429 (BLS Emergency), A0433 (ALS 2), and A0434 (Specialty Care Transport). Origin and destination points identified using the following procedure modifier codes: "H" for hospital, "R" for residence, and "S" for scene of accident or acute event. The "Specialty Care Transport" category includes ambulance transports that may not be defined as "Critical Care Transports" by the MA DPH OEMS.

Sources: HPC analysis of Center for Health Information and Analysis All-Payer Claims Database v10.0, 2017-2020.

In Massachusetts, ambulance services are provided by both publicly and privately -owned entities, with privately-owned entities being either for-profit or not-for-profit.

- **Publicly-owned ambulance services** are generally municipal entities and are commonly associated with fire departments, although some are standalone, non-fire department entities that are categorized as a “third service” (e.g., Boston EMS, Fall River EMS). Two ambulance services in the Commonwealth are operated by their town’s police department.¹ Publicly-owned services may play an important role in the provision of ambulance services in rural areas.
- **Privately-owned ambulance services** can be either **not-for-profit** services sometimes associated with hospitals or with colleges and universities,² or **for-profit** entities.

Publicly-owned and privately-owned ambulance services differ in their mix and sources of funding. While both types of ambulance services may receive payments from Medicare, MassHealth, and commercial insurers for services, additional funding sources vary. **Publicly-owned** ambulance services may receive funding from municipal budgets¹ or subscription services.² **Privately-owned** ambulance services may receive funding from contracts with municipalities³ and health care facilities⁴. Many also obtain significant revenue from non-emergency transports. Other potential sources of funding may include charitable donations, in-kind contributions, and state and federal grants.⁵

As of March 2022, 24% of 318 ambulance services licensed in Massachusetts are privately-owned.⁶ Municipalities may contract with these companies to provide EMS services, although it is not known how many of these services are contracted with municipalities at a given time. For example, a contract between a privately-owned ambulance service and a municipality may stipulate that the ambulance service ensure that a certain number of staffed BLS and/or ALS ambulances are always available for dispatch in that municipality, in exchange for the right to respond to all EMS calls within that municipality.⁷ A municipality must designate a primary ambulance service, and the municipality's primary ambulance service must designate, at a minimum, two backup ambulance services.⁸

*In the following exhibits, publicly-owned ambulance services are referred to as “**municipal**” services and privately-owned ambulance services are referred to as “**private**” services.*

(1) Nation, GA III. George A. Nation III, Taking Advantage of Patients in an Emergency: Addressing Exorbitant and Unexpected Ambulance Bills, 62 Vill. L. Rev. 747 (2017). Available at: <https://digitalcommons.law.villanova.edu/vlr/vol62/iss4/4>

(2) U.S. Government Accountability Office (GAO). Ambulance Providers: Costs and Medicare Margins Varied Widely; Transports of Beneficiaries Have Increased. October 2012. Available at: <https://www.gao.gov/products/gao-13-6>

(3) HPC review of Centers for Health Information and Analysis (CHIA) Ambulance and Wheelchair Van Cost Reports, FY2019.

(4) Ibid.

(5) U.S. Government Accountability Office (GAO). Ambulance Providers: Costs and Medicare Margins Varied Widely; Transports of Beneficiaries Have Increased. October 2012. Available at: <https://www.gao.gov/products/gao-13-6>

(6) Office of Emergency Medical Services, Department of Public Health. Ambulance Services List – March 2022. Accessed at: <https://www.mass.gov/service-details/find-an-ambulance-service-in-Massachusetts>. Note: Since the time of the publication of this list, there may have been some minor corrections to the categorizations of ambulance services.

(7) HPC review of three publicly-available contracts between private ambulance services and municipalities.

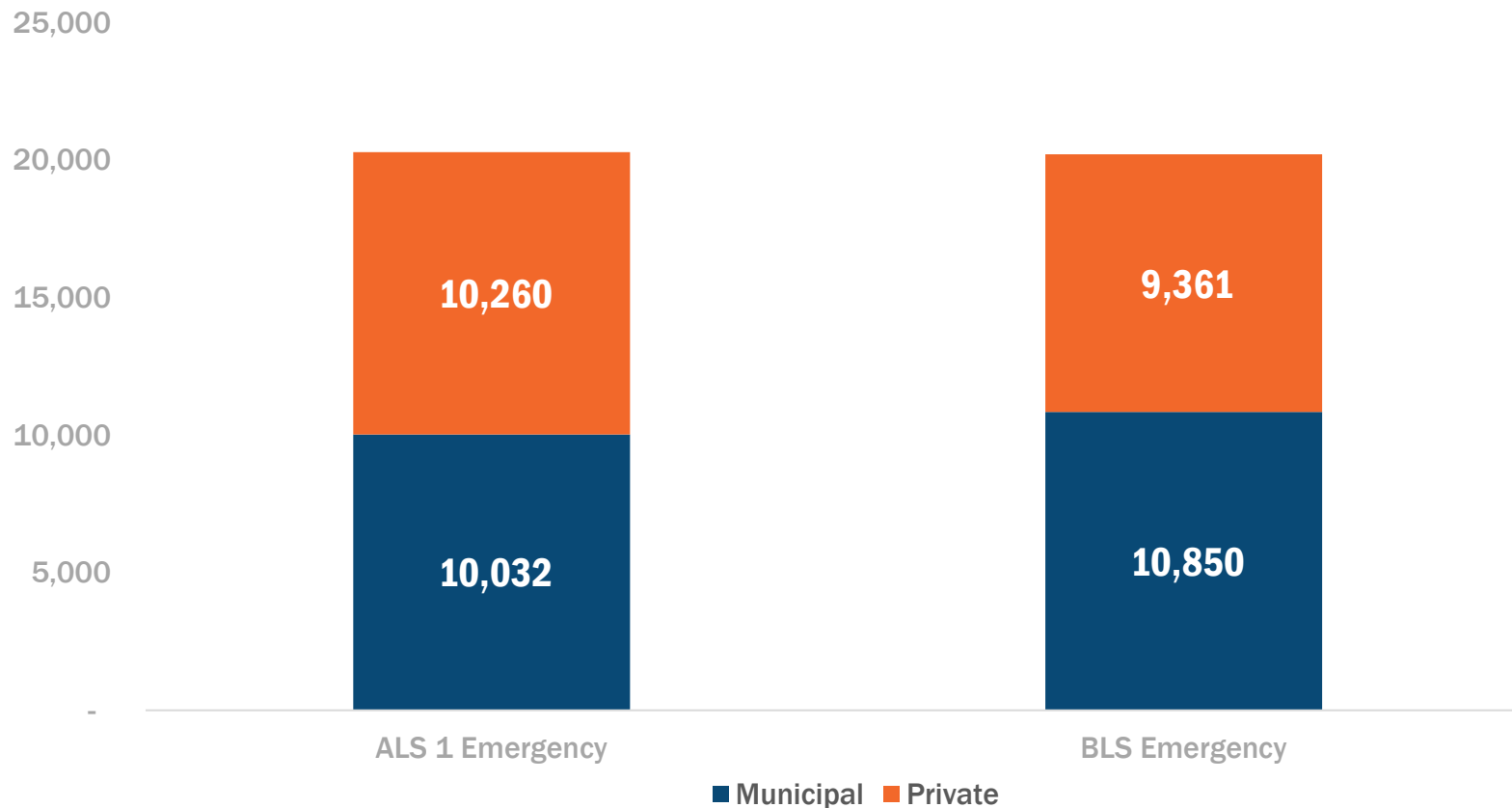
(8) 105 CMR 170.385: *Emergency Medical Services System*

In 2019, private and municipal ambulance services accounted for similar shares of ALS 1 Emergency and BLS Emergency transports among commercially-insured patients.



Landscape

Number of ambulance encounters serviced by private or municipal ambulance services among commercially-insured patients by transport type, 2019



In 2021, there were nearly 1.4 million emergency and non-emergency ambulance rides in Massachusetts across all payers. Of these ambulance rides, 65% were provided by a private ambulance service.³ This may suggest that a higher share of non-emergency transports are provided by private ambulance services.

Notes: Amounts include service and ground mileage components. ALS 1 Emergency ambulance transports were identified using procedure code A0427 and BLS Emergency transports were identified using procedure code A0429. Ambulance providers were categorized as municipal if their national billing provider identifier (NPI) organization name included the terms "town", "city", or "fire", or were otherwise identified as municipal in the March 2022 version of the Office of Emergency Medical Service's Ambulance Services List.

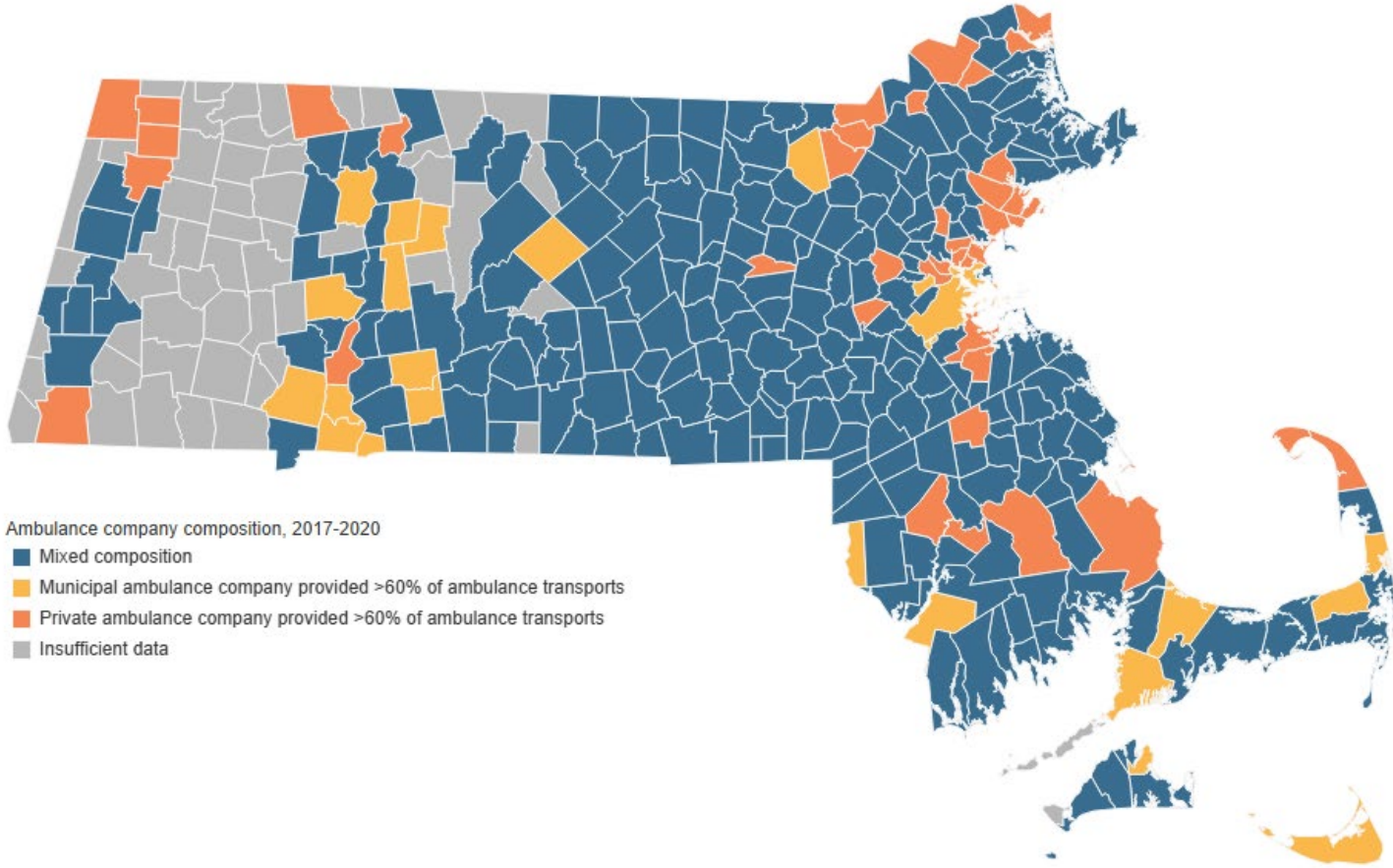
Sources: (1) HPC analysis of Center for Health Information and Analysis All-Payer Claims Database v10.0, 2017-2020. (2) Office of Emergency Medical Services, Department of Public Health. Ambulance Services List - March 2022. Accessed at: <https://www.mass.gov/service-details/find-an-ambulance-service-in-massachusetts> (3) Massachusetts Department of Public Health, MATRIS V2 & V3, extracted on 2/7/23. Data includes all runs including emergent and non-emergent from 2020-2021 involving patient contact. Ambulance services were determined to be public or private based on OEMS data. Ambulance services are required to enter data into MATRIS per A/R 5-403 Statewide EMS Minimum Dataset. Data are required to be submitted within 7 days; however, actual submission timeframes vary by ambulance service.

Most areas of Massachusetts were served by a roughly even mix of municipal and private ambulance services, although one in 5 municipalities were served predominantly by one or the other.



Landscape

Municipalities in Massachusetts by ambulance service composition based on transports of commercially-insured patients, 2017-2020



Notes: An ambulance service is identified as servicing most encounters in a municipality if they serviced at least 60% of ALS 1 Emergency and BLS Emergency ambulance encounters in that municipality between 2017 and 2020. The municipality where an ambulance transport occurred was determined using patient zip code. ALS 1 Emergency ambulance transports were identified using procedure code A0427 and BLS Emergency transports were identified using procedure code A0429. Ambulance providers were categorized as municipal if their national billing provider identifier (NPI) organization name included the terms "town", "city", or "fire", or were otherwise identified as municipal in the March 2022 version of the Office of Emergency Medical Service's Ambulance Services List.

Sources: (1) HPC analysis of Center for Health Information and Analysis All-Payer Claims Database v10.0, 2017-2020. (2) Office of Emergency Medical Services, Department of Public Health. Ambulance Services List - March 2022. Accessed at: <https://www.mass.gov/service-details/find-an-ambulance-service-in-massachusetts>

In a 2012 study, the U.S. Government Accountability Office (GAO) found that **providers' costs for providing ground ambulance transports averaged \$429** (ranging from \$224 to \$2,024 per transport), just below Medicare's payment rate at the time.¹ The GAO found that significant factors in costs included the volume of transports, intensity of transports, and the level of government subsidies received.²

In Massachusetts, costs for the provision of private ambulance services may include employee compensation, vehicle expenses, occupancy expenses, direct allocable expenses, and administrative expenses.³ Municipal ambulance services may report similar costs. While costs for providing ambulance services may vary for each ambulance service, increasing rates may be one indication of increasing costs for providing services over time.

AMBULANCE COST REPORTS

Based on HPC review of cost reports from private ambulance services in Massachusetts who earned more than \$100,000 from MassHealth in FY2019:

- 25 out of 31 of such services (81%) reported having “911 Emergency Contracts”
- 4 out of 31 such services (13%) reported receiving a municipal subsidy (i.e., revenue from a municipality for provision of ambulance services)

(1)U.S. Government Accountability Office (GAO). Ambulance Providers: Costs and Medicare Margins Varied Widely; Transports of Beneficiaries Have Increased. October 2012. Available at: <https://www.gao.gov/products/gao-13-6>

(2)Ibid.

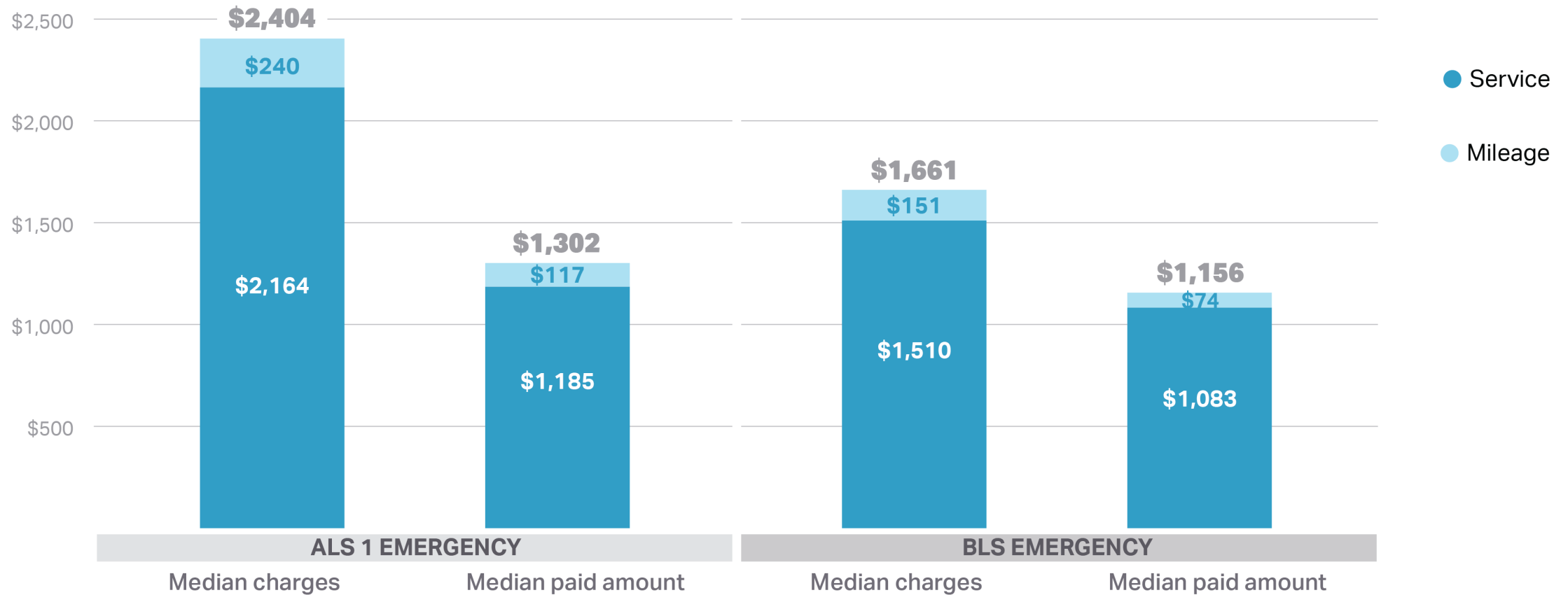
(3)HPC review of Centers for Health Information and Analysis (CHIA) Ambulance and Wheelchair Van Cost Reports, FY2019. Review included ambulance providers who filed a complete report and reported providing BLS and/or ALS services.

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- **COMMERCIAL PAYMENT FOR AMBULANCE SERVICES**
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Most of the payment for ambulance encounters is for the service component with mileage a relatively small portion.

Commercial Payment

Median charges and paid amounts for ambulance encounters among commercially-insured patients by billing component and transport type, 2019



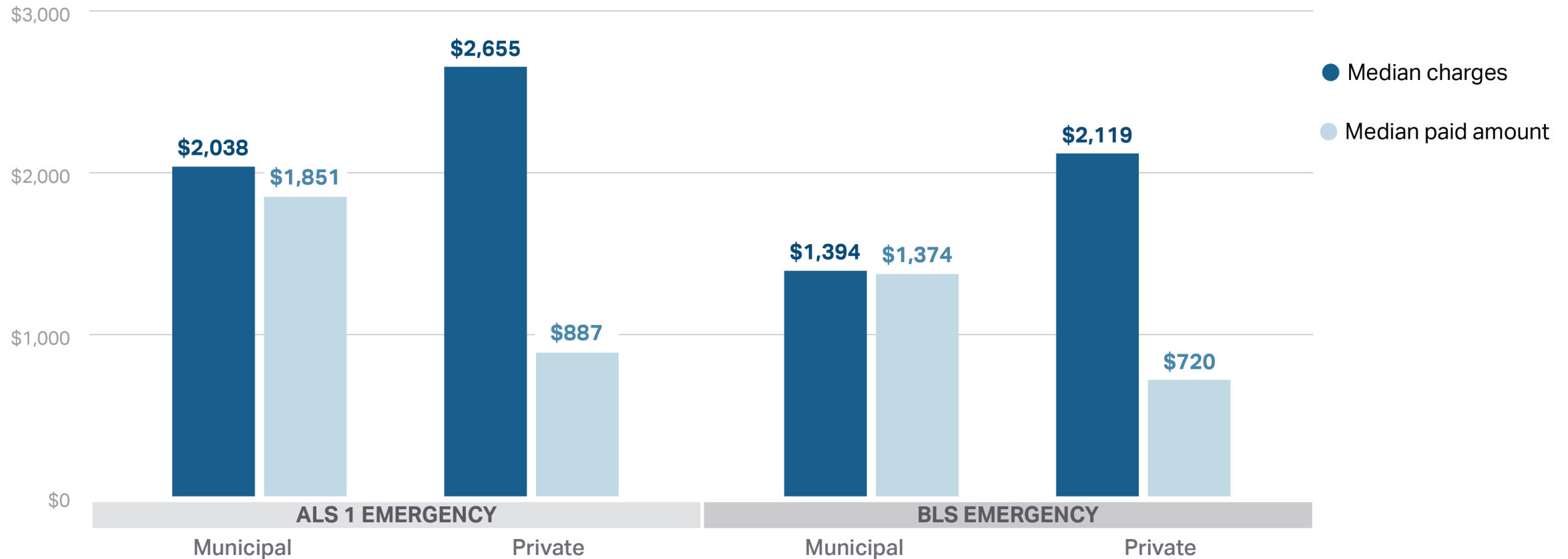
Notes: ALS 1 Emergency ambulance transports were identified using procedure code A0427 and BLS Emergency transports were identified using procedure code A0429. Ground mileage was identified using procedure code A0425.
Sources: HPC analysis of Center for Health Information and Analysis All-Payer Claims Database v10.0, 2017-2020.

Payers paid municipal ambulance services roughly double what they paid private ambulance services per transport.



Commercial Payment

Median charges and paid amounts for ambulance encounters among commercially insured patients by ambulance service type, 2019



Notes: Amounts include service and ground mileage components. ALS 1 Emergency ambulance transports were identified using procedure code A0427 and BLS Emergency transports were identified using procedure code A0429. Ambulance providers were categorized as municipal if their national billing provider identifier (NPI) organization name included the terms “town”, “city”, or “fire”, or were otherwise identified as municipal in the March 2022 version of the Office of Emergency Medical Service’s Ambulance Services List.

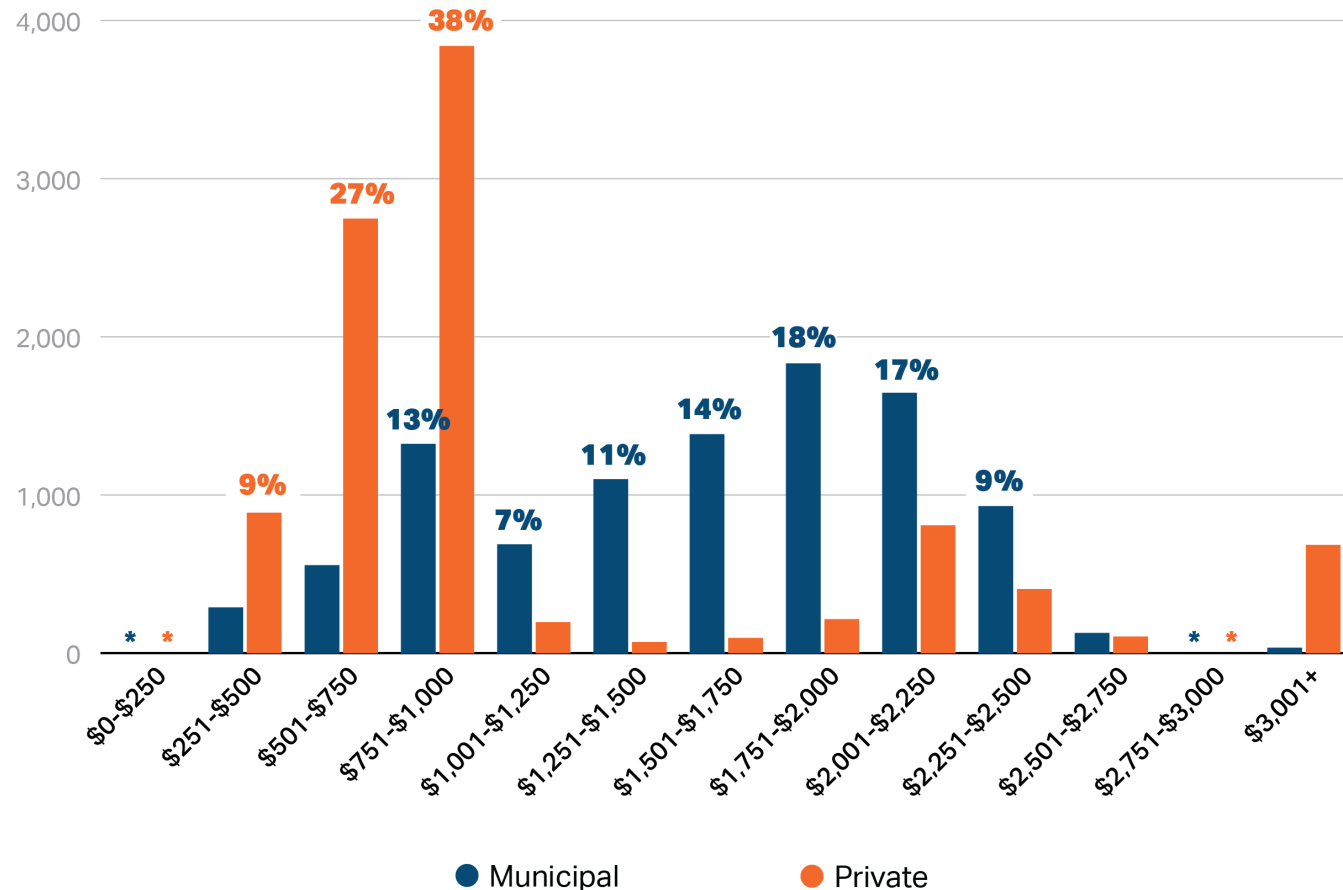
Sources: (1) HPC analysis of Center for Health Information and Analysis All-Payer Claims Database v10.0, 2017-2020. (2) Office of Emergency Medical Services, Department of Public Health. Ambulance Services List – March 2022. Accessed at: <https://www.mass.gov/service-details/find-an-ambulance-service-in-massachusetts>

Most payments (excluding mileage) for ALS 1 encounters to private services were between \$500 and \$1,000 while payments to municipal services were between \$750 and \$2,500.



Commercial Payment

Number of ALS 1 Emergency ambulance encounters by ambulance service type and paid amount, 2019



For paid amounts (excluding mileage) among **BLS Emergency** ambulance encounters, 57% of those with private services ranged from \$501 to \$750 and 47% of those with municipal services ranged from \$1,251 to \$1,500.

Boston EMS provided a significant portion of BLS Emergency encounters in the dataset.

Notes: Amounts exclude ground mileage component. * indicates values that are protected due to small cell sizes. ALS 1 Emergency ambulance transports were identified using procedure code A0427. Ambulance providers were categorized as municipal if their national billing provider identifier (NPI) organization name included the terms "town", "city", or "fire", or were otherwise identified as municipal in the March 2022 version of the Office of Emergency Medical Service's Ambulance Services List.

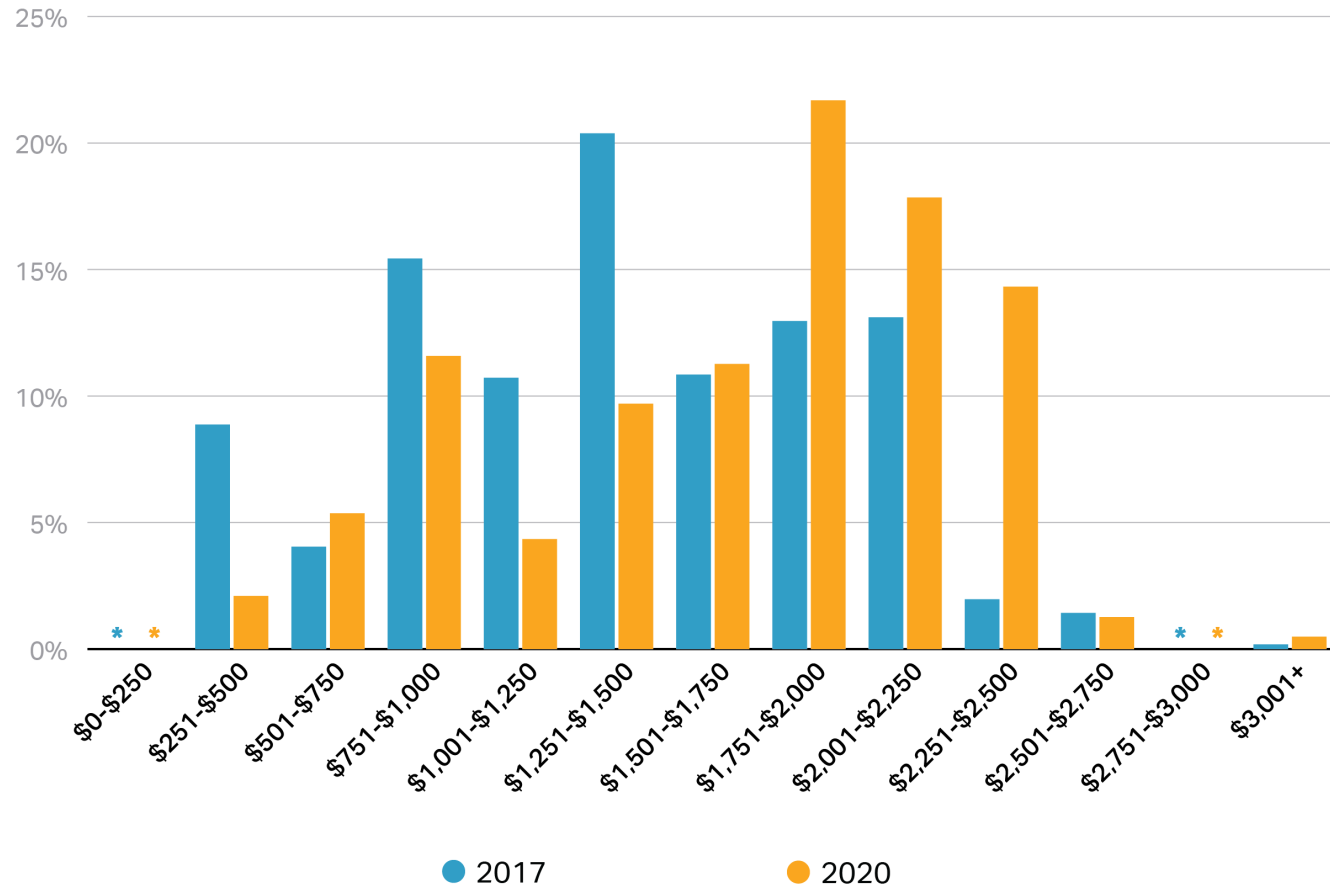
Sources: (1) HPC analysis of Center for Health Information and Analysis All-Payer Claims Database v10.0, 2017-2020. (2) Office of Emergency Medical Services, Department of Public Health. Ambulance Services List - March 2022. Accessed at: <https://www.mass.gov/service-details/find-an-ambulance-service-in-massachusetts>

17% of payments to municipal services for ALS 1 Emergency encounters exceeded \$2,000 in 2017. That proportion doubled to 34% in 2020.



Commercial Payment

Percent of ALS 1 Emergency encounters via municipal ambulance services by paid amount, 2017 versus 2020



Between 2017 and 2020, paid amounts for **BLS Emergency** encounters via municipal ambulance services also increased, with more transports exceeding \$1,250 per encounter in 2020 (59%) compared to 2017 (14%).

Notes: Amounts exclude ground mileage component. * indicates values that are protected due to small cell sizes. ALS 1 Emergency ambulance transports were identified using procedure code A0427. Ambulance providers were categorized as municipal if their national billing provider identifier (NPI) organization name included the terms "town", "city", or "fire", or were otherwise identified as municipal in the March 2022 version of the Office of Emergency Medical Service's Ambulance Services List.

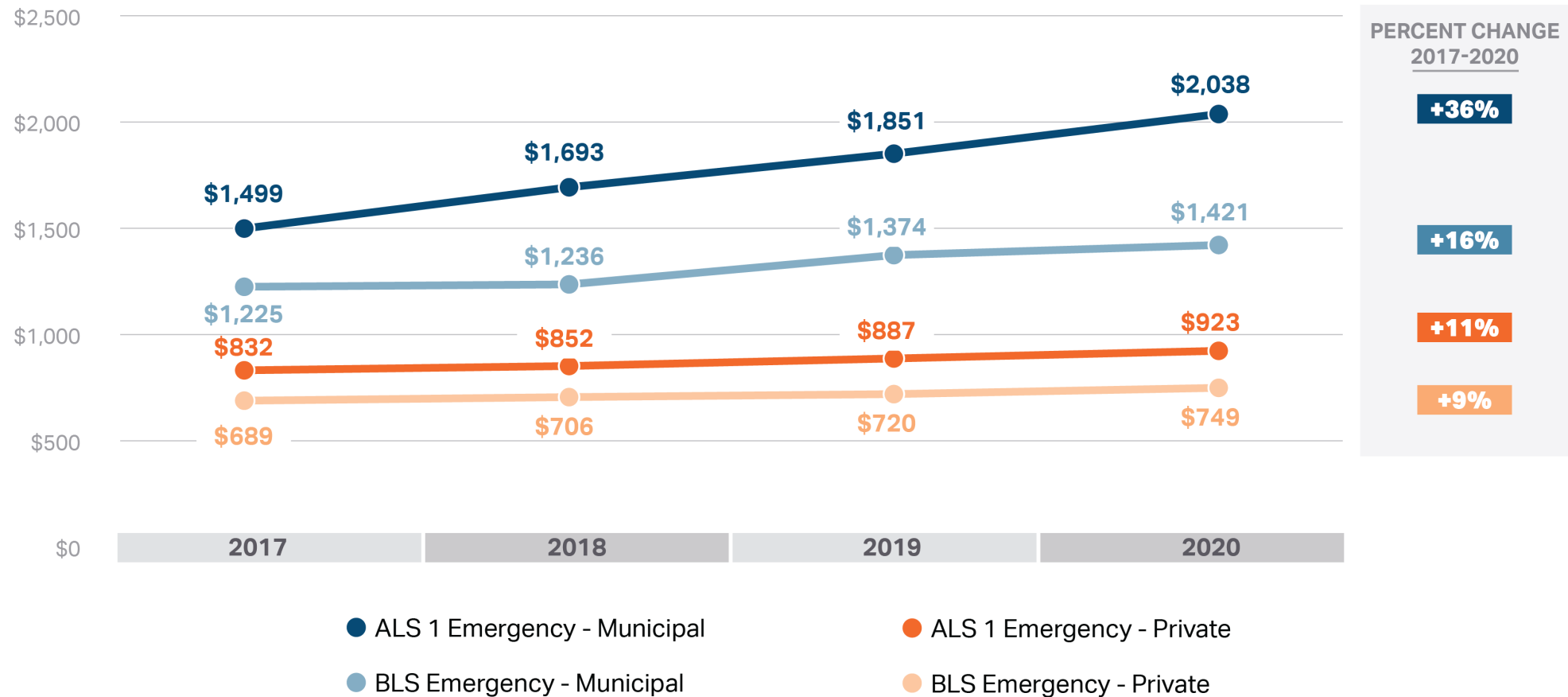
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Median paid amounts have grown the fastest for ambulance encounters with municipal ambulance services.



Commercial Payment

Median paid amounts for ambulance encounters among commercially-insured patients by transport type and service type, 2017 to 2020



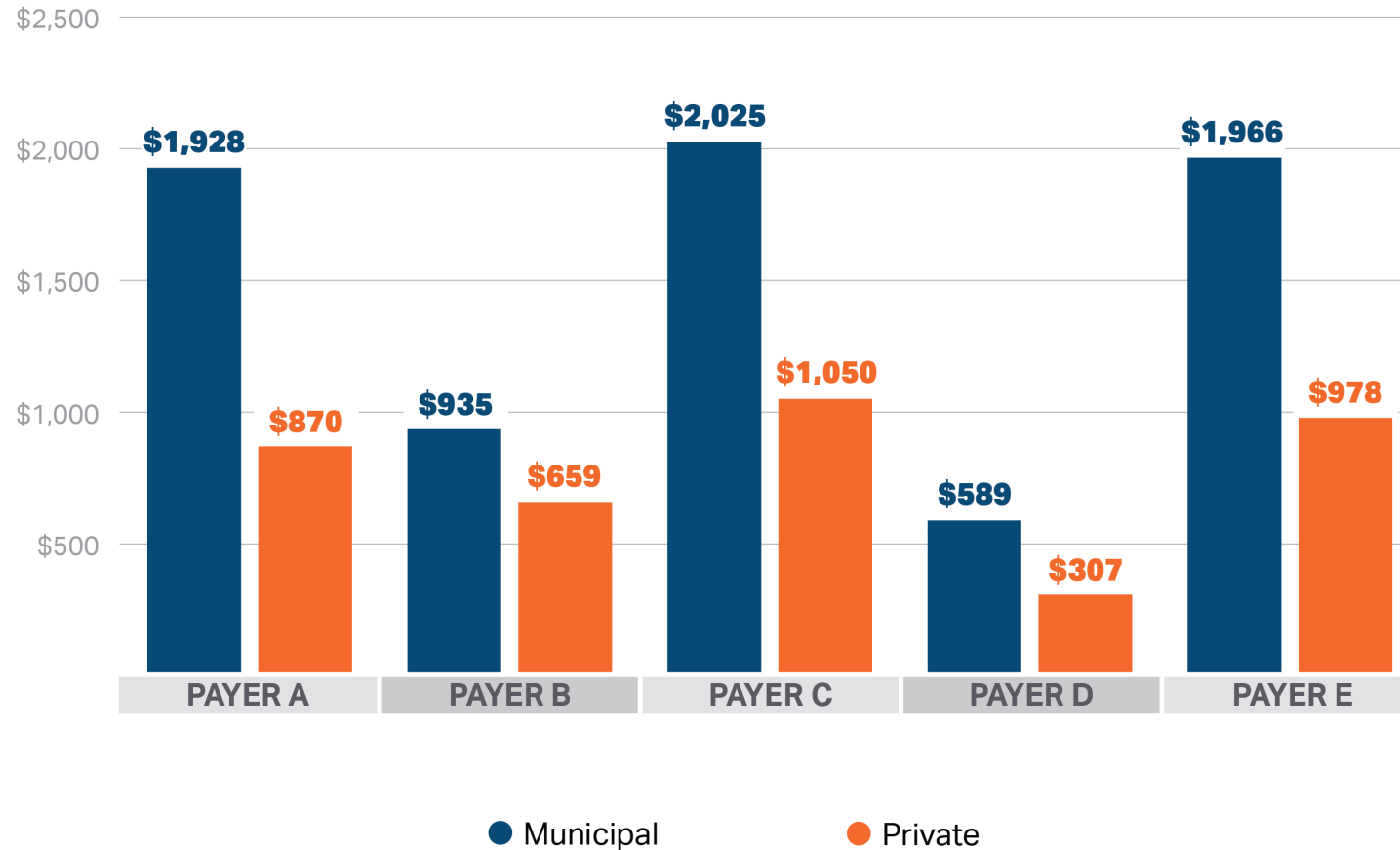
Notes: Amounts include service and ground mileage components. ALS 1 Emergency ambulance transports were identified using procedure code A0427 and BLS Emergency transports were identified using procedure code A0429. Ambulance providers were categorized as municipal if their national billing provider identifier (NPI) organization name included the terms "town", "city", or "fire", or were otherwise identified as municipal in the March 2022 version of the Office of Emergency Medical Service's Ambulance Services List.

Sources: (1) HPC analysis of Center for Health Information and Analysis All-Payer Claims Database v10.0, 2017-2020. (2) Office of Emergency Medical Services, Department of Public Health. Ambulance Services List - March 2022. Accessed at: <https://www.mass.gov/service-details/find-an-ambulance-service-in-massachusetts>

All payers paid substantially more to municipal than private ambulance services, with significant variation across payers.

Commercial Payment

Median paid amounts for ALS 1 Emergency ambulance encounters by service type and payer, 2019



Payments for **BLS Emergency** transports by municipal ambulance services were also much higher than private payments for each payer.

Differences in payment within each commercial health insurer may be related to intra-payer differences in rates of contracting with private versus municipal ambulance services.

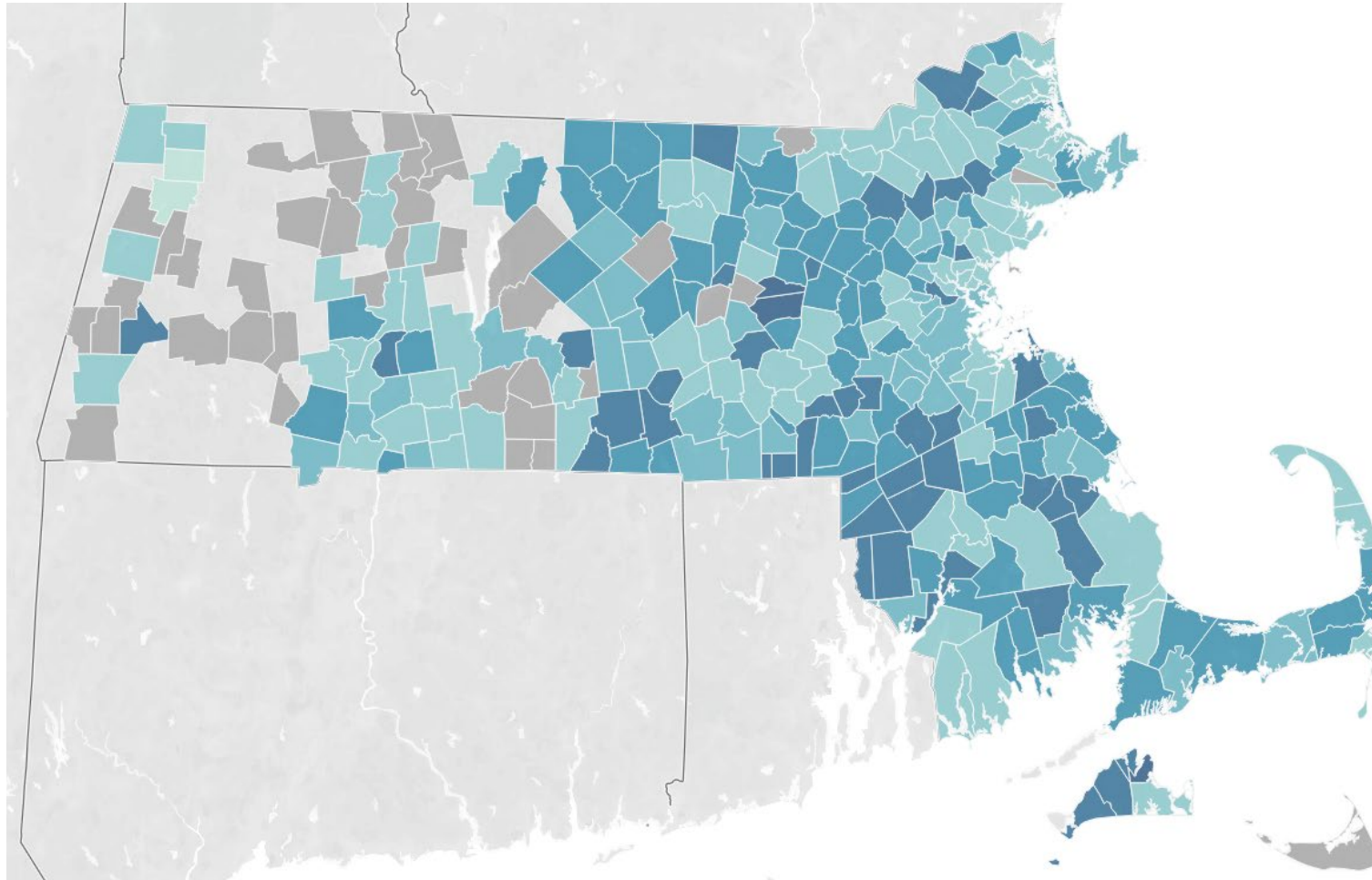
Notes: Payers include AllWays Health Partners, Anthem, Blue Cross Blue Shield of Massachusetts, Harvard Pilgrim Health Care, and Tufts Health Plan. Amounts include service and ground mileage components. ALS 1 Emergency ambulance transports were identified using procedure code A0427. Ambulance providers were categorized as municipal if their national billing provider identifier (NPI) organization name included the terms “town”, “city”, or “fire”, or were otherwise identified as municipal in the March 2022 version of the Office of Emergency Medical Service’s Ambulance Services List.

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Due to both variation in EMS structure and mix of commercial payers, there is wide variation in median paid amounts for ALS 1 Emergency encounters by patient municipality.

Commercial Payment

Median paid amounts for ALS 1 Emergency encounters by municipality, 2019



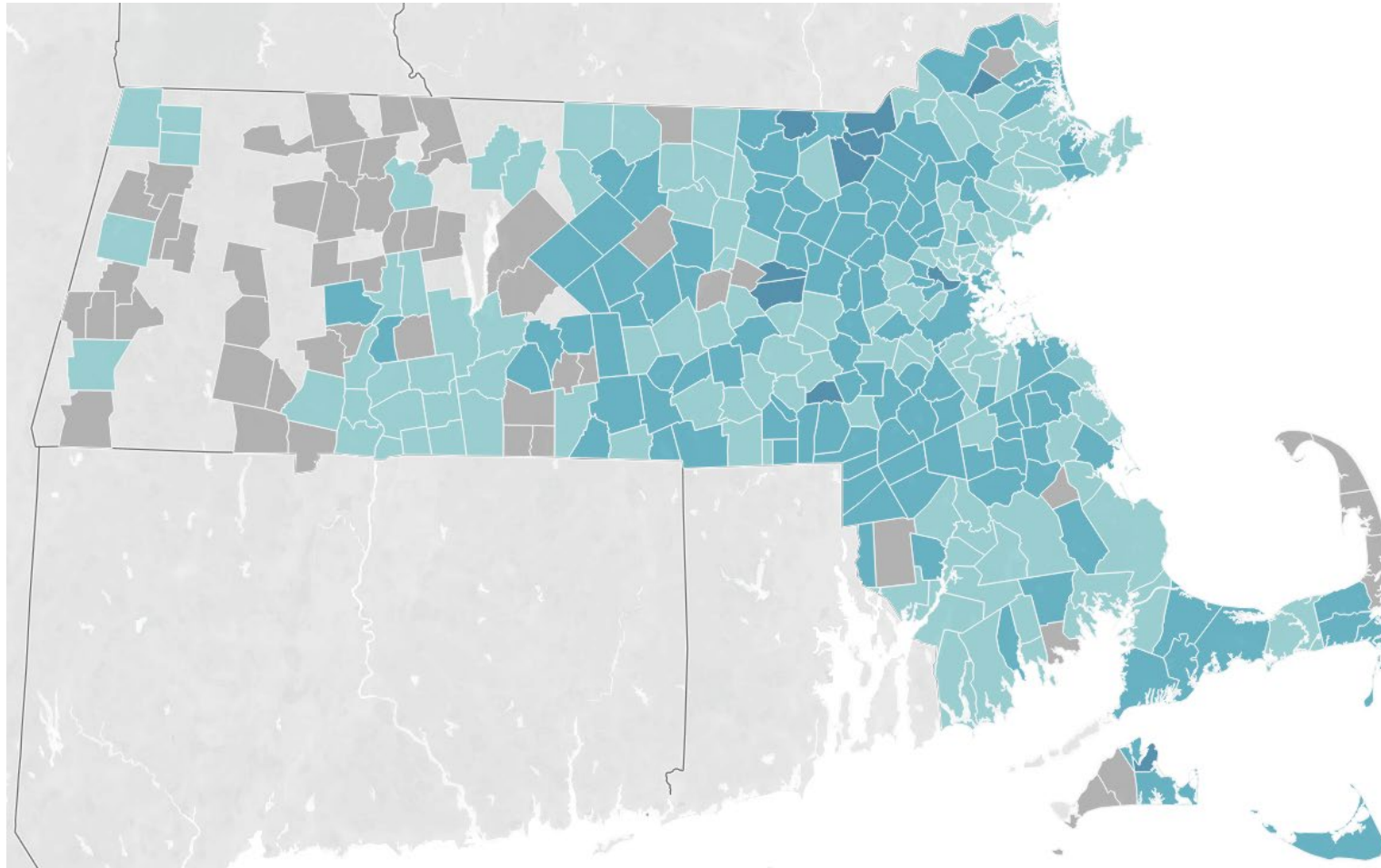
Notes: Amounts exclude ground mileage component. The municipality where an ambulance transport occurred was determined using patient zip code. ALS 1 Emergency ambulance transports were identified using procedure code A0427. Ambulance providers were categorized as municipal if their national billing provider identifier (NPI) organization name included the terms "town", "city", or "fire", or were otherwise identified as municipal in the March 2022 version of the Office of Emergency Medical Service's Ambulance Services List.

(1) HPC analysis of Center for Health Information and Analysis All-Payer Claims Database v10.0, 2017-2020. (2) Office of Emergency Medical Services, Department of Public Health. Ambulance Services List - March 2022. Accessed at: <https://www.mass.gov/service-details/find-an-ambulance-service-in-massachusetts>

Variation in paid amounts between municipalities was also observed for BLS Emergency encounters among commercially-insured patients.

Commercial Payment

Median paid amounts for BLS Emergency encounters by municipality, 2019



Notes: Amounts exclude ground mileage component. The municipality where an ambulance transport occurred was determined using patient zip code. BLS Emergency ambulance transports were identified using procedure code A0429. Ambulance providers were categorized as municipal if their national billing provider identifier (NPI) organization name included the terms "town", "city", or "fire", or were otherwise identified as municipal in the March 2022 version of the Office of Emergency Medical Service's Ambulance Services List.

(1) HPC analysis of Center for Health Information and Analysis All-Payer Claims Database v10.0, 2017-2020. (2) Office of Emergency Medical Services, Department of Public Health. Ambulance Services List - March 2022. Accessed at: <https://www.mass.gov/service-details/find-an-ambulance-service-in-massachusetts>

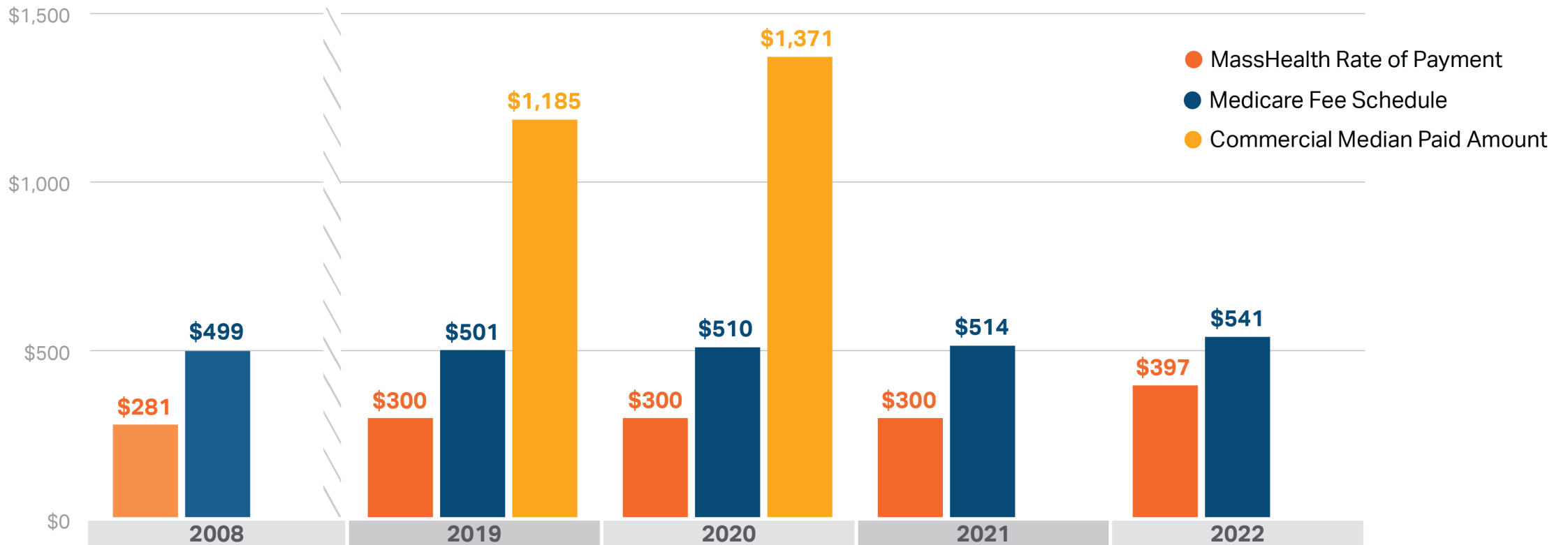
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Commercial paid amounts for ALS 1 Emergency ambulance encounters were far higher than MassHealth or Medicare payments in 2019 and 2020. However, both MassHealth and Medicare payment rates increased in 2022.



Other Payment Approaches

Rates of payment for ALS 1 Emergency ambulance encounters by payer, 2008 and 2019-2022



Notes: All calculated amounts exclude ground mileage. Commercial Paid Amount is a median. Medicare Fee Schedule amount assumes Metropolitan Boston geographic area (Middlesex, Norfolk, and Suffolk counties). Commercial paid amount is what the payer reports as being paid on the claim but does not include potential balance billing.

Sources: (1) Commercial total paid amount from HPC analysis of Center for Health Information and Analysis All-Payer Claims Database v10.0, 2017-2020. (2) Medicare fee schedule amounts from Medicare Ambulance Fee Schedule Public Use File, 2008 to 2022, available at: <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AmbulanceFeeSchedule/afspuf>. (3) MassHealth Rate of Payment for 2008 to 2022 from HPC review of 114.3 CMR 27.00 as published in Massachusetts Register issue 1108 and 101 CMR 327.00 as published in Massachusetts Register issues 1407, 1412, 1456, and 1482.

In Massachusetts and at the federal level, billing for emergency ground ambulance services remains unsettled policy.



Other Payment Approaches

- **Massachusetts has limited billing protections for commercially-insured patients receiving emergency ambulance transports.**
 - For emergency transports among patients whose health insurer is not contracted with the ambulance service providing the transport, the ambulance service has discretion on the amount charged for the transport and the health insurer has discretion on the amount paid to the ambulance service for the transport. In addition to the potential for balance billing, this may also contribute to higher rates.
 - Massachusetts enacted additional patient protections against surprise billing in 2021, though they did not apply to ground ambulances (nor include an out-of-network reimbursement amount or limit).
- As noted in the introduction, **ground ambulance services were excluded from the billing protections in the federal No Surprises Act.**¹
 - A 2021 brief reported that 51% of emergency ground ambulance rides among privately insured people pose a risk of a surprise bill.²
 - In 2023, an **Advisory Committee on Ground Ambulance and Patient Billing** will be convened, whose activities will culminate in a report including recommendations related to disclosure of charges and fees for ground ambulance services and insurance coverage and the prevention of balance billing.³

Four states in the Northeast have adopted policies to protect consumers from ground ambulance surprise bills, ranging from banning balance billing to holding patients harmless for out-of-network emergency transports.



Other Payment Approaches

STATE	EXEMPTIONS	CONSUMER PROTECTIONS	RESOLUTION OF PAYMENT DISPUTES:
Maine	Non-emergency ambulance rides	Bans balance billing	Arbitration. However, through 2023, must reimburse at designated rates – see next slide
New York	Interfacility transportation (non-emergency)	Bans balance billing	Payment standard: Insurers must pay the out-of-network ambulance based on “usual and customary rate, which cannot be excessive or unreasonable.”
Maryland	Private ambulance services, unless it has a contract with a municipal authority	Bans balance billing	
Vermont	Non-emergency ambulance rides	Holds patients harmless	None

MAINE

- In 2021, the Maine legislature enacted a law (Maine P.L. 2021, Chapter 241) that **requires payers to reimburse out-of-network ambulance service providers for emergency services according to certain guidelines**, unless the payer and the service provider agree otherwise, until December 31st, 2023. In addition, the law requires payers to offer a **standard contract** to all ambulance service providers willing to participate in their provider network.¹
 - P.L. 2021, ch. 241 requires reimbursement at the lesser of: (1) the ambulance service provider's rate OR (2) 180% or 200% of the Medicare rate for that service (depending on whether the ambulance service is an out-of-network or in-network provider for that payer, respectively), plus any adjustment required for rurality

CONNECTICUT

- Since 1988, the **Connecticut Office of EMS maintains the rates for which ambulance services are paid** and annually adjusts the rates based upon a federal cost index. As of 2022, the Connecticut Office of EMS published the maximum allowable rates for individual EMS organizations. For 2023, providers may request a rate increase of up to 2.8%.²

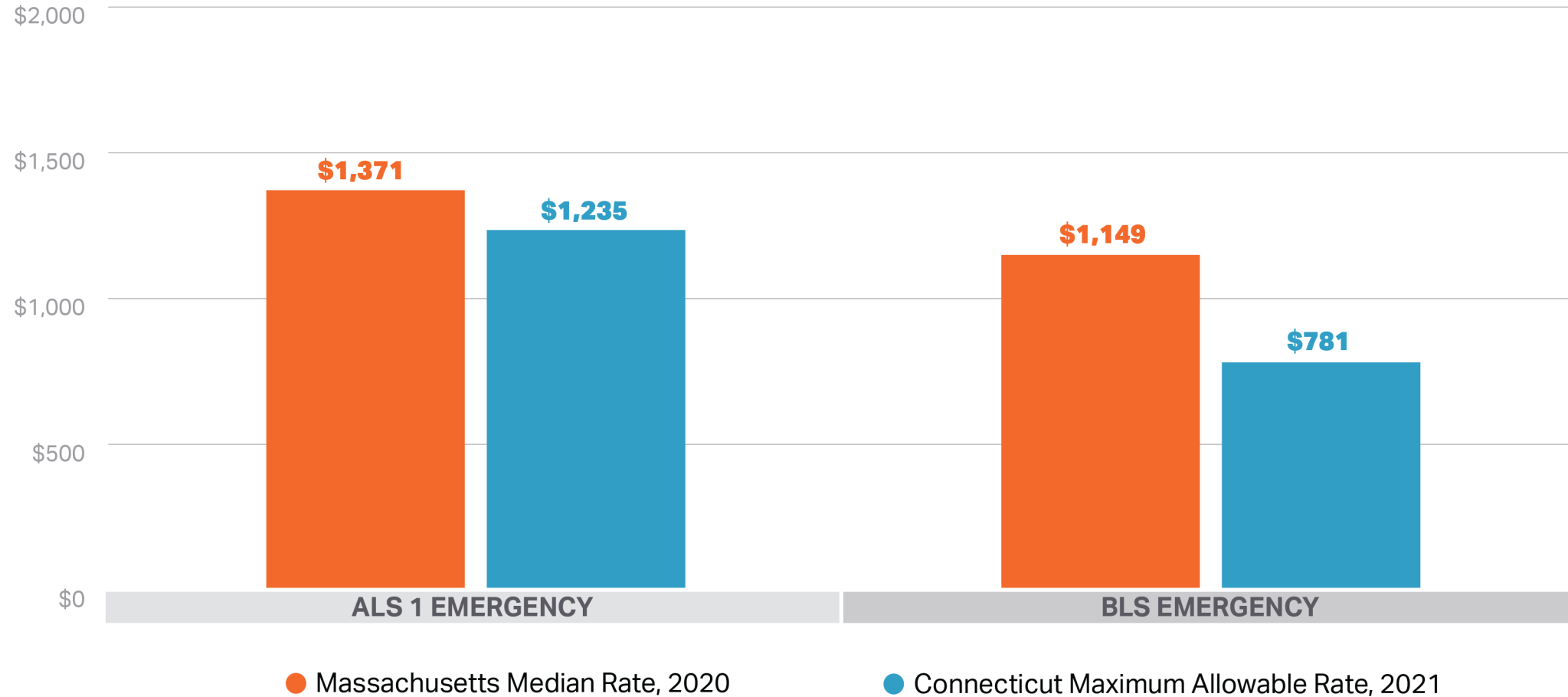
(1) Maine P.L. 2021, ch. 241. Available at: http://www.mainelegislature.org/legis/bills/display_ps.asp?id=1258&PID=1456&snum=130

(2) State of Connecticut Department of Public Health Office of Emergency Medical Services. Short-Form Rate Application Package for Requesting 2023 Rates. Available at: <https://portal.ct.gov/-/media/Departments-and-Agencies/DPH/dph/ems/pdf/Home/2023-Short-Form-Rate-app.pdf>

In 2020, emergency ambulance encounters in Massachusetts were paid at higher median rates than the maximum allowable 2021 rate in Connecticut, a state with reimbursement guidelines.



Rates for ambulance encounters by state and transport type, 2020 and 2021



Notes: Massachusetts rate is median total paid amount for ambulance encounters among commercially-insured patients in 2020. Connecticut rate is the maximum allowable rate for ambulance encounters among all patients in 2021. Rates do not include ground mileage or other ancillary charges.

Sources: (1) HPC analysis of Center for Health Information and Analysis All-Payer Claims Database v10.0, 2017-2020. (2) State of Connecticut Department of Public Health Office of Emergency Medical Services. Schedule of Maximum Allowable Rates, Effective January 1, 2021 through December 31, 2021. Available at: https://portal.ct.gov/-/media/Departments-and-Agencies/DPH/dph/ems/pdf/Home/ShortFormAppMemo_wAttachment_June9_2020.pdf

Both Maine and Connecticut have recently convened working groups consisting of different types of stakeholders to study EMS and ground ambulance billing.



Other Payment Approaches

- In the fall of 2022, **Maine** convened a commission to study EMS in the state and to make recommendations on the structure, support, and delivery of EMS, including reimbursement rates. The commission included legislators, representatives from ambulance services, and other government representatives, and ultimately recommended increasing funding for EMS in the state and additional study of the issue.¹
- Starting September 2022, **Connecticut** convened a working group to examine Medicaid and private commercial EMS rates, the EMS workforce, and the provision of EMS. The working group includes representatives from state agencies, EMS providers (volunteer, municipal, hospital-based, and for-profit), hospitals, health carriers, and others. As of January 2022, the findings of the workgroup are pending.²

(1)Emergency Medical Services Study. Maine State Legislature. Available at: <https://legislature.maine.gov/emergency-medical-services-study>

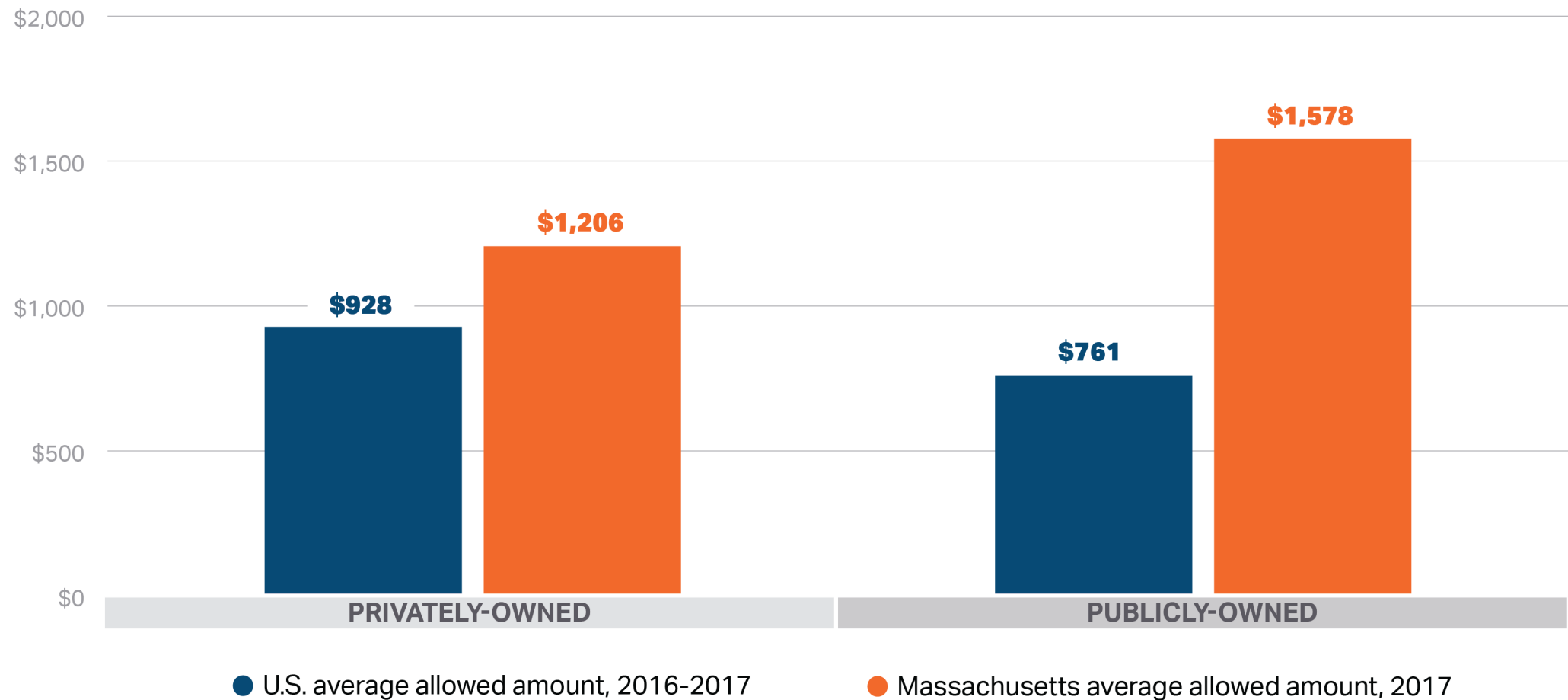
(2)Emergency Medical Services Working Group. Connecticut State Department of Public Health. Available at: <https://portal.ct.gov/DPH/Emergency-Medical-Services/EMS/EMS-Working-Group>

Average paid amounts for ALS 1 Emergency transports via publicly-owned ambulance services in Massachusetts were twice as high as average paid amounts for similar transports among commercially-insured patients nationally.



Other Payment Approaches

Allowed amounts for ALS 1 Emergency ambulance transports among commercially-insured patients, U.S. and Massachusetts



Notes: For the U.S. category, privately-owned means private, independent ambulance services (i.e., not private equity, facility, or non-profit) and publicly-owned means public sector ambulance services. For the Massachusetts category, privately-owned means private ambulance service of any type (i.e., for-profit or not-for-profit) and publicly-owned means municipal ambulance services. U.S. average allowed amount is for ambulance transports with an urban pickup point and a standardized mileage of 8 miles using data winsorized at the 1st and 99th percentiles. Massachusetts average allowed amount includes all pickup points and actual mileage, excluding encounters with allowed amounts outside of the 1st and 99th percentiles.

Sources: (1) Adler L, Ly B, Duffy E, Hannick K, Hall M, Trish E. Ground Ambulance Billing and Prices Differ by Ownership Structure. Health Affairs. January 18, 2023. Available at: <https://www.healthaffairs.org/doi/abs/10.1377/hlthaff.2022.00738?journalCode=hlthaff> (2) HPC analysis of Center for Health Information and Analysis All-Payer Claims Database v10.0, 2017-2020.



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Areas for future potential research and monitoring for the **HPC** include:

- The **impact of the COVID-19 pandemic** on emergency ground ambulance use and payment rates, especially into 2021 and beyond.
- **Progress in other states** on addressing emergency ground ambulance billing and rates (e.g., Maine and Connecticut).
- The work and recommendations of the **federal Advisory Committee on Ground Ambulance and Patient Billing**.

Additional areas of interest for the **Commonwealth** may include:

- Enacting potential protections against out-of-network or “surprise bills” for emergency ground ambulance transports for Massachusetts residents with fully-insured commercial health insurance.
- Expanding the role of Mobile Integrated Health Care and Community EMS initiatives in Massachusetts in delivering out-of-hospital care for patients, as well as inter-facility transfer alternatives.
- Addressing current issues faced by the EMS workforce, especially in light of the COVID-19 pandemic.



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- **Data Source:** Massachusetts All Payer Claims Database (APCD) version 10, 2017 – 2020
- **Unit of Measurement:** Ambulance encounters (same number, same date)
- **Exclusions:** Round-trip ambulance encounters and ambulance encounters with non-Massachusetts ambulance companies.
- **Other Notes:** Encounters are those with a ground mileage procedure code (A0425) claim line and a transport type procedure code (A0426, A0427, A0428, A0429, or A0433) claim line. This study does not account for potential balance billing.

Stakeholders Consulted

- **Blue Cross Blue Shield of Massachusetts**
- **Massachusetts Executive Office of Health and Human Services – Department of Public Health (DPH)**
 - **DPH Office of Emergency Medical Services (OEMS)**
- **Point32Health**
- **ProEMS**

The Massachusetts Health Policy Commission (HPC) is an independent state agency charged with monitoring health care spending growth in Massachusetts and providing data-driven policy recommendations regarding health care delivery and payment system reform. The HPC's mission is to advance a more transparent, accountable, and equitable health care system through its independent policy leadership and innovative investment programs. The HPC's goal is better health and better care – at a lower cost – for all residents across the Commonwealth.

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