



---

***Joint Informational Bulletin***

**DATE:** August 8, 2019

**FROM:** Adam Boehler  
Deputy Administrator and Director  
Center for Medicare and Medicaid Innovation

Calder Lynch, Acting Deputy Administrator and Director  
Center for Medicaid and CHIP Services

**SUBJECT: Medicaid Opportunities in the Emergency Triage, Treat, and Transport (ET3) Model**

This informational bulletin describes ways in which state Medicaid agencies can support the implementation of the Emergency Triage, Treat, and Transport (ET3) Model, a voluntary, five-year Center for Medicare and Medicaid Innovation (Innovation Center) payment model designed to reduce unnecessary transport to the Emergency Department (ED). Specifically, the ET3 Model will provide greater flexibility to ambulance care teams to address emergency health care needs of Medicare Fee-for-Service (FFS) beneficiaries following a 911 call, with the goal of improving quality of care to Medicare beneficiaries<sup>1</sup> and lowering costs to Medicare. Although ET3 is a Medicare payment model, the Innovation Center recognizes that Medicare-enrolled ambulance suppliers or hospital-based ambulance providers that participate in the model and implement the model interventions across multiple payers, including Medicaid, will be in the best position to achieve ET3's cost and quality goals. For states interested in replicating the flexibilities of this new model within their Medicaid program, this bulletin provides information for consideration when designing ET3-aligned interventions for ambulance care teams that address emergency health care needs of Medicaid beneficiaries. It also summarizes current studies, which suggest possible strategies states may want to consider in building effective payment approaches to avert unnecessary transport to the ED.

To incentivize multi-payer alignment in the ambulance services sector, and in recognition of Medicaid's role as a driver for state-based innovation in the unscheduled, emergency ambulance sector, the Innovation Center will provide an interactive ET3 Model Learning System with targeted learning opportunities for state Medicaid programs. These opportunities will provide states with a structured forum to address payment development and barriers to the implementation of ET3-aligned innovations, and is meant to further facilitate Medicaid incorporation in the multi-payer strategies submitted by ET3 applicants. To the extent possible, CMS also plans to evaluate ET3-aligned innovations implemented within Medicaid during the

---

<sup>1</sup>As designed by the Innovation Center, the model population for the ET3 Model is fee-for-service beneficiaries, including those dually-eligible for Medicare and Medicaid coverage.

course of the Model using available data sources such as T-MSIS data or data voluntarily provided by States. State Medicaid agencies that are interested in working with ET3 Model Participants to pilot multi-payer alignment in states or sub-state regions will be able to participate in ET3 Model Learning System activities, which may include: assistance with exploring and creating plans that may facilitate multi-payers alignment or other relevant needs; training to promote spread and scale; activities that address barriers to payment development and implementation; and peer-to-peer learning among states to encourage state-to-state knowledge transfer about model implementation in unique state environments. Details on how states can join the ET3 Model Learning System will be shared after Participant selection. If no Participants are selected in a given state, interested states will not be precluded from engaging in ET3 Model Learning System activities.

## Background on the ET3 Model

Currently, Medicare may pay for emergency ground ambulance services when individuals are transported to a limited number of covered destinations set forth in the regulations. This creates a perverse incentive to bring Medicare beneficiaries to high-acuity, high-cost settings (e.g., hospital emergency departments (EDs)), even when a lower-acuity, lower-cost setting may more appropriately meet an individual's needs. The ET3 Model aims to address these misaligned incentives by providing greater person-centered care options, encouraging appropriate utilization of services, and increasing efficiency in the emergency medical services system. The ET3 Model will test the following new Medicare payments to the Medicare-enrolled ambulance suppliers or hospital-based ambulance providers participating in the ET3 Model: 1) payment for unscheduled emergency ambulance transport of Medicare FFS beneficiaries to alternative destinations<sup>2</sup> not currently covered by Medicare; and, 2) payment for treatment in place<sup>3</sup> where appropriate, rendered by a qualified health care practitioner<sup>4</sup> either on-the-scene or via telehealth.

To ensure that these payment innovations achieve the model's goals, the ET3 Model was designed around three core features:

1. **Payments for emergency medical services (EMS) innovations.** ET3 Participants will be eligible for payments for 1) transporting Medicare FFS beneficiaries to alternative destinations approved in advance by CMS; and, 2) facilitating appropriate treatment in place at the scene or via telehealth. Participants who demonstrate high quality of care based on performance metrics described in the ET3 Request for Applications (RFA)<sup>5</sup> and finalized in the Model Participant Agreement may be eligible for an additional performance-based payment adjustment beginning no sooner than year three of the

---

<sup>2</sup> An alternative destination is destination to which model Participants may transport a beneficiary who meets medical necessity requirements, as an alternative to a hospital emergency department or other site traditionally covered by Medicare. Examples of allowable alternative destinations under the model may include: federally qualified health centers, physician offices, or urgent care centers.

<sup>3</sup> In the ET3 Model, treatment in place is a non-transport intervention facilitated by model Participants, which may include: (1) telehealth services rendered by a qualified health care practitioner located at a distant site or (2) in-person services rendered by a qualified health care practitioner at the scene of the emergency response.

<sup>4</sup> Qualified health care practitioner is a Medicare-enrolled health care practitioner who meets state, local, and professional requirements to render particular health care services to beneficiaries. Only qualified health care practitioners may provide treatment in place in the ET3 Model.

<sup>5</sup> The ET3 Request for Applications can be found at < <https://innovation.cms.gov/Files/x/et3-rfa-preview.pdf>>. Please note that this is only the PDF form of the RFA. The online portal where ambulance providers and suppliers will be able to apply to participate in the ET3 Model will become available later this summer (2019).

model. The model does not alter coverage or payment for Part B ambulance services that are not provided in connection with this model. A Medicare beneficiary who is eligible for the interventions available under the ET3 Model may elect to receive an intervention or may choose to be transported to a covered destination pursuant to existing state and local EMS protocols and Medicare requirements. All non-ambulance services furnished to ET3 Model beneficiaries will be furnished by Medicare-enrolled providers and suppliers, such as the alternative destination sites and qualified health care practitioners discussed below, who have been vetted and approved in advance by CMS to promote beneficiary safety and reduce program integrity risks.

2. **Multi-payer participation.** Participants will be chosen in part based on their ability to implement the ET3 Model interventions within the context of a multi-payer environment. In their responses to the ET3 RFA, each Applicant must set forth a feasible multi-payer alignment strategy within the context of its proposed plan for implementing the model interventions; or, explain how the Applicant would successfully implement the model interventions for Medicare FFS beneficiaries only. (See ET3 RFA Section VIII, Selection Criteria).
3. **Enhanced monitoring and enforcement.** While state Medicaid agencies may establish their own medical necessity criteria for ambulance services rendered to Medicaid beneficiaries, ambulance transportation is covered under Medicare Part B only to the extent that other means of transportation are contraindicated by the beneficiary's medical condition. In any case in which some means of transportation other than an ambulance could be used without endangering the individual's health, whether or not such other transportation is actually available, no payment may be made for ambulance services. Robust monitoring and enforcement will be designed to ensure that payment and services are consistent with applicable coverage policies, and that the model achieves its goals, including those related to saving lives by creating greater efficiencies in use of emergency transport.

In total, these innovations will help ensure Medicare FFS beneficiaries have access to a fuller scope of ambulance services, incur fewer out-of-pocket costs by facilitating lower-cost treatment in lower-acuity settings, and receive the most appropriate level of care at the right time and place. Available data also demonstrate that treatment in place and alternative destination programs have the potential to improve outcomes in costs, avert ED visits, and reduce time to discharge (see Appendix A Tables I and II). By allowing beneficiaries with lower-acuity needs the opportunity to access care in more appropriate settings, the ET3 Model could also allow EMS time and resources to more readily respond to and focus on high-acuity cases. Furthermore, the ET3 Model presents an opportunity to build accountability through monitoring of specific quality metrics and adverse events in a new system of EMS care delivery.

While the model population for ET3 Model is Medicare FFS beneficiaries, in areas where ET3 Participants are able to foster multi-payer participation, the anticipated outcomes of the ET3 model have the potential to accrue to a larger patient population that could include Medicaid beneficiaries and those who receive insurance coverage through commercial payers.

## **ET3 Model Payments**

In order for states to understand how they may wish to align their Medicaid payments with the ET3 Model, this section describes Medicare payments under the model. While all ET3 Model Participants are required to implement the alternative destination intervention; applicants who also propose to implement the optional treatment in place intervention have the opportunity to earn additional points towards their overall application score.

### ***Medicare Payment for Transport to Alternative Destinations***

A Participant that transports a Medicare beneficiary to an approved alternative destination through the model must bill for and will receive payment at a rate equivalent to the appropriate Medicare Part B ambulance fee schedule base rate for emergency Basic Life Support (BLS-E) ground ambulance (HCPCS code A0429) transport or emergency Advanced Life Support, Level 1 (ALS1-E) ground ambulance (HCPCS code A0427) transport in addition to mileage (HCPCS A0425). The appropriate payment rate is based on the existing Medicare definitions of BLS-E and ALS1-E services. In order to bill at the ALS1-E level, a Participant must render services that meet the Medicare definition of Advanced Life Support, including transportation by ground ambulance vehicle and the provision of medically necessary supplies and services including the provision of an ALS assessment by ALS personnel or at least one ALS intervention. Payment for transport to an alternative destination will include the same mileage rates and adjustments as current BLS-E or ALS1-E Medicare-covered transports to the ED. Aligning Participant payments with the BLS-E or ALS1-E base rate payment for transport to the ED will align incentives to promote interventions that most appropriately address beneficiary needs. Over the life of the model, payments will be updated annually to match the BLS-E and ALS1-E base rates in the Medicare Ambulance Fee Schedule (AFS).

An alternative destination site must have sufficient Medicare-enrolled physicians or other practitioners to meet the needs of Medicare FFS beneficiaries who require services through the model. An alternative destination site may be a Medicare-enrolled institutional provider; or, may be an entity that is not enrolled in Medicare but engages Medicare-enrolled qualified health care practitioners that have the capacity to render covered services to Medicare FFS beneficiaries.

### ***Payment for Treatment in Place***

A Participant that facilitates in-person treatment in place will be paid an amount equivalent to the BLS-E or ALS1-E base rate. In order to bill at the ALS1-E base rate, a Participant must provide medically necessary supplies and services and either an ALS assessment by ALS personnel or the provision of at least one ALS intervention.<sup>6</sup> A Participant that facilitates treatment in place via telehealth will be paid a modified telehealth originating site facility fee equivalent to the BLS-E or ALS1-E base rate, depending on the level of service provided. A Participant that facilitates in-person or telehealth treatment in place must separately bill Medicare using a model-specific code for an amount equal to the BLS-E base rate under HCPCS A0429 or, if the Participant meets the requirements for billing at an ALS1-E rate, under HCPCS A0427. Similar to the payments for

---

<sup>6</sup> 42 C.F.R. 414.605, Fee Schedule for Ambulance Services, Definitions.

transport to alternative destinations, aligning Participant payments for treatment in place with the appropriate BLS-E or ALS1-E base rate payment will align incentives to promote interventions that most appropriately address beneficiary needs. Over the life of the model, payments will be updated annually to match the emergency BLS-E or ALS1-E base rates in the Medicare AFS.

**Table 1. Example of Possible ET3 Payment Scenarios**

INTERVENTION	PAYMENT	
	Participant	Non-Participant Partner <sup>7</sup>
<b>Transport to Alternative Destination</b>	BLS-E <u>or</u> ALS1-E base rate + mileage and adjustments <sup>8</sup>	Medicare billed for services furnished under the applicable FFS rules. Payment amount depends on service rendered at the alternative destination site.
<b>Treatment in Place</b> (qualified health care practitioner, via Telehealth)	Payment equal to BLS-E or ALS1-E base rate = Telehealth originating site fee + modifier to equal BLS-E or ALS1-E base rate	Medicare billed under Physician Fee Schedule for telehealth services furnished  Payment = Medicare Physician Fee Schedule amount for furnished service
<b>Treatment in Place</b> (qualified health care practitioner, in-person )	Payment = BLS-E or ALS1-E base rate	Medicare billed under Physician Fee Schedule for services furnished  Payment = Medicare Physician Fee Schedule amount for furnished service

***Medicaid Coverage of Emergency Transportation Services***

Transportation to medical care is a mandatory assurance in the Medicaid program. Accordingly, 42 CFR §431.53 requires states to assure necessary transportation for beneficiaries to and from providers, as well as detail the methods that the state will use to meet this requirement. Federal law does not recognize emergency transportation services as distinct from the overall assurance of transportation in Medicaid. Additionally, federal Medicaid law and regulations do not specify that emergency transportation must be to an emergency department of a hospital. Due to this framework, states have the flexibility to structure emergency transportation services that would meet the goals of the ET3 Model. Below, we highlight a range of options for states wishing to use the provided evidence base and the ET3 Model framework to consider changes or enhancements to their EMS systems.

<sup>7</sup> A CMS-approved qualified health care practitioner or an alternative destination site that partners with the Participant to furnish services to a Medicare beneficiary through the ET3 Model, and has entered into a voluntary agreement with a Participant that satisfies all of the applicable requirements of the ET3 Model Participation Agreement.

<sup>8</sup> Adjustments include the geographic adjustment factor (§ 414.610(c)(4)), the rural adjustment factors (§ 414.610(c)(5)(i) and (ii)), and rural and urban add-ons (§ 414.610(c)(1)(ii)), and the multiple patient rule, if applicable (§ 414.610(c)(6)).

### ***Medicaid Flexibilities in Implementing the Goals of the ET3 Model***

State Medicaid agencies have considerable flexibility within federal guidelines to achieve the aims of the ET3 Model. The assurance of transportation requires transport of the Medicaid beneficiary to a covered service; thus, when considering implementation of the ET3 Model framework to provide treatment on scene (with no transport), states have the flexibility to recognize these professionals under various Medicaid coverage authorities. A number of states have used 1905(a)(6), services of other licensed practitioners, to recognize the professionals typically associated with the provision of emergency services rendered on scene. Other licensed practitioner services, defined at 42 CFR 440.60, are ‘... medical or remedial care or services, other than physicians’ services, provided by licensed practitioners within the scope of practices as defined under State law.’ For example, states could consider submitting a State Plan Amendment (SPA) recognizing licensed paramedics under 1905(a)(6) in order to provide payment for the treatment of services furnished on the scene when no transport takes place. In these instances, states should assess the type of professionals furnishing services and their qualifications to determine the appropriate coverage authorities.

A number of state Medicaid agencies have implemented or plan to implement ambulance service innovations, including opportunities to provide transport to alternative destinations or treatment in place similar to those in the ET3 Model, as well as additional EMS interventions beyond the scope of the ET3 Model. Examples of alternative destination locations include urgent care and freestanding behavioral and mental health facilities, group practices, ambulatory care settings, crisis centers, and community clinics. Generally, regulations for alternative destination or treatment in place policies differ among states. State regulations—such as those explicitly prohibiting alternative destinations, restricting to one or two explicit destinations, or those with vague or conflicting requirements—can make it difficult to establish and operate the ET3 Model framework. Thus, states electing to implement the aims of the ET3 Models should assess their state policies to determine to what extent changes to their policies are necessary.

Mandatory and optional benefits available through a state’s Medicaid plan must be offered within federal requirements for statewideness, comparability, and freedom of choice. Additionally, individual rules governing a Medicaid benefit must be followed. Depending on the state specific design, state Medicaid agencies may need to pursue SPAs for CMS approval or seek waivers of statewideness, comparability, and/or freedom of choice to implement new services aligned with the ET3 Model to receive federal payment for those services. States that have begun to develop the infrastructure and expertise necessary to innovate in the Medicaid ambulance space may be well-positioned to implement complementary multi-payer interventions outside the Medicare population.

Finally, states also have a variety of delivery system options for providing transportation services to Medicaid beneficiaries. States choosing to use a managed care plan to deliver benefits may have additional flexibilities than those afforded through the state plan. While managed care plans would still be required to follow applicable laws and regulations related to transportation, a managed care plan may be able to more easily pay for alternative destinations or on-site care even if those are not included in the Medicaid state plan. For example, a state may consider on-site care as an in-

lieu of service if it determines that the on-site care is an appropriate alternative service or setting to a Medicaid service covered under the managed care plan contract. A state that plan to utilize a managed care delivery system should discuss these options with CMS as well as its Medicaid managed care plans to determine how best to implement the ET3 Model within the state.

### ***Medicaid Payment for Emergency Transportation Services***

The scope of services offered through the ET3 Model are available only to Medicare FFS beneficiaries, including beneficiaries dually eligible for Medicare and Medicaid. States that choose to offer services aligned with the ET3 Model in their Medicaid programs must pay for such services, including treatment in place and transportation to an alternative destination, with Medicaid funds at the applicable federal medical assistance percentages.

States have considerable flexibility within broad federal guidelines in financing and paying for their Medicaid program. States can establish their own Medicaid provider payment rates within federal guidelines, and can pay typically for services through fee-for-service or managed care arrangements. States are responsible for setting rates to pay providers for furnishing health care services to Medicaid beneficiaries.

Whatever payment methodology a state elects to implement, once developed, states must describe it comprehensively in their Medicaid state plan. Typically state payment methodologies provide for a standard payment rate to all Medicaid providers on a per claim basis for services rendered to a Medicaid beneficiary, but there is flexibility in this as well. Federal guidelines require states to be prudent purchasers of health care services with states sharing in the responsibility to pay for a portion of Medicaid expenditures through non-federal funding sources. Accordingly, section 1902(a)(30)(A) of the Social Security Act requires states to have methods and procedures for the utilization of, and payment for, care and services available under the state plan to assure Medicaid payments for services are consistent with efficiency, economy, and quality of care. Further, these methods and procedures must be sufficient to enlist enough providers so that care and services are available under the plan at least to the extent that such care and services are available to the general population in the geographic area.

States have great flexibility in the Medicaid program, but implementing innovations aligned with the ET3 Model may require changes to state plan language, and we encourage states to discuss their ideas with CMS before implementation.

### ***State Medicaid Participation Assessment for ET3 Readiness***

Given the flexibilities described above, a state seeking alignment with the model should conduct an assessment that includes reviewing the operational environment for ambulance providers and their professionals.

The following questions should help a state determine which paths to pursue to align with the model.

1. Assess the state operational environment by reviewing state policies and regulations governing emergency ambulance services.

- a. *Do state policies/regulations prohibit emergency ambulance providers from transporting beneficiaries to alternative destinations?*

Transport to alternative destinations is a key service to test under the ET3 model. State policies/regulations that prescribe certain locations to which a beneficiary may be transported may need updating.

- b. *Do state policies/regulations prohibit emergency medical professionals from providing treatment without transportation?*

The ET3 Model Participants are required to implement the alternative destination intervention. Applicants may also implement treatment in place by a qualified health care practitioner as another alternative, when appropriate. Thus, states should review whether there are state specific policies/regulations that would prohibit or limit treatment in place from being implemented within their Medicaid programs.

- c. *Does the state need to establish new regulations or seek authority from their legislature?*

Depending on the state regulatory requirements and process, states may need to establish regulations in their state to make changes that will align with the model. States will need to conduct this analysis to permit either treatment in place (on scene and via telehealth) or transport to an alternative destination.

- d. *Does the state Medicaid program currently cover the HCPCs codes associated with this model?*

The codes identified in this model will be used in the evaluation of the model. States should review whether they currently cover these codes and to what extent changes are necessary, including changes to billing instructions, in order to align with the model.

2. Assess whether a state plan change is necessary for coverage/benefit alignment.

- a. *For transport to alternative destinations, does the existing state plan include language prohibiting the locations to which an emergency ambulance provider may transport beneficiaries?*

In some states, state plan language can limit how a service is furnished. States should review their current approved state plan pages for emergency transportation to determine if changes are necessary. If the approved state plan limits the destinations to which an emergency ambulance provider may transport beneficiaries, the state should submit a state plan amendment to revise their coverage policies. If the emergency transportation language does not prohibit transports to alternative destinations, no state plan submission is necessary.

- b. For treatment in place, does the state currently recognize the EMS professionals independently from an ambulance transport?*

Under the treatment in place intervention, the state must have state plan authority to cover/reimburse health care practitioners who provide care on the scene when no transport occurs. This assessment may require a state plan submission depending upon how the emergency professionals furnish care in the state and the existing descriptions in the approved state plan. Many states have licensure requirements for emergency professionals such as paramedics while other states require a combination of education and certification for emergency medical technicians (EMTs). This bulletin described a pathway for licensed paramedics but there are other paths for professionals who do not possess licensure.

- For example, in some states, EMTs are under the supervision of a physician who provides supervision of care on the scene. In this example, since the physician assumes professional responsibility, services provided by EMTs working under the supervision of a physician can be covered under the physician services benefit (42 CFR 440.50). No state plan submission would be necessary, as the physician benefit does not require identification of every professional working under their supervision.
- Alternatively, EMTs could operate under the supervision of a licensed paramedic, if the scope of practice as defined by state law for the licensed paramedic authorizes such supervision. This path would require that the other licensed practitioner benefit (42 CFR 440.60) described in the state plan include the services of a licensed paramedic and the individuals under the supervision of the paramedic.
- States may also consider the preventive services benefit to cover services furnished by unlicensed professionals. Preventive services are services recommended by a physician or other licensed practitioner of the healing arts that prevent disease, disability, and other health conditions or their progression, prolong life, and promote physical and mental health and efficiency. (42 CFR 440.130(c)) A state plan amendment is necessary to elect coverage of preventive services. Licensed as well as unlicensed professionals may furnish the services, and the state would include a summary of the qualifications of an unlicensed professional in the state plan amendment, such as the training, experience, and supervisory arrangements for the unlicensed professional.

3. Assess whether a state plan change is necessary for payment alignment.

*a. For transports to alternative destinations, is the current reimbursement provision for transportation specific with regard to the destination?*

- If not, and the state plan methodology allows for the rates paid via the ET3 model for Advanced Life Support and Basic Life Support, no state plan change will be necessary.
- If so, a state plan change may be necessary to: 1) authorize reimbursement for a transport to additional or alternative destinations, and 2) align the payment methodology with the rates paid via the ET3 model for Advanced Life Support and Basic Life Support.

*b. For treatment in place, does the state's Medicaid State plan include a reimbursement provision that allows for payment to Medicaid-enrolled EMS professionals?*

- If so, and the State plan methodology allows for the rates paid via the ET3 model for Advanced Life Support and Basic Life Support, no state plan change is needed.
- If not, a state plan change may be necessary to: 1) authorize payment to Medicaid-enrolled EMS professionals, and 2) align the payment methodology with the rates paid via the ET3 model for Advanced Life Support and Basic Life Support.

CMS acknowledges that ET3 model policies for Medicare payment require the treatment in place intervention be provided by a Medicare enrolled practitioner. Emergency medical technicians (EMTs) and paramedics do not meet this definition and are therefore unable to provide the treatment in place intervention under the Medicare model test. CMS also recognize that states have additional flexibilities in the Medicaid program. We defer to states to determine which practitioners are eligible to provide treatment in place interventions within their Medicaid programs based upon their state policies/regulations.

## **Appendix A: ET3 Model Evidence Base**

### ***Reduction in Inpatient Admissions***

- In a pilot focused on frequent EMS utilizers that tested transport to alternative destinations coupled with case management, one hospital experienced a 28% reduction in ED visits, along with a 9% reduction in hospitalizations.<sup>9</sup>
- The Innovation Center conducted additional analyses of the literature as well as analysis of 2017 Medicare FFS claims and determined an estimated range of potentially avoidable admissions of 7.5% to 12% if patients were transported to alternative destinations.

### ***Improvements in Ambulance Efficiency***

- Evidence from stakeholder feedback and pilots similar to ET3 interventions suggests the time from ambulance initiation to being back in service after treatment in place is less than half the time required for transport to an ED (39 minutes vs. 84 minutes, respectively).<sup>10</sup>
- Stakeholders estimate that transport to an alternative destination is somewhere in between these two estimates, but less than the transfer time at an ED.

---

<sup>9</sup> Tadrops AS, Castillo EM, Chan TC, Jensen AM, Watts K, Dunford JD. (2012) Effects of an Emergency Medical Services–based Resource Access Program on Frequent Users of Health Services, Prehospital Emergency Care, 16:4, 541-547

<sup>10</sup> Langabeer JR, Gonzalez M, Alqusairi D, et al. Telehealth-Enabled Emergency Medical Services Program Reduces Ambulance Transport to Urban Emergency Departments. West J Emerg Med. /2016;17(6):713-720.

**Table I. Alternative Destination Programs and Outcomes**

<b>Program Title or Study Author (Location)</b>	<b>Program Description</b>	<b>Available Outcomes</b>
<b>Mobile Health Care (Fort Worth, Texas)</b> <sup>11</sup>	<ul style="list-style-type: none"> <li>• Metropolitan Area EMS Authority in Fort Worth operates a range of EMS innovation in their community, including an Ambulance Transport Alternative (ATA) initiative.</li> <li>• Alternative destinations primarily include urgent care centers and community clinics.</li> <li>• To participate, alternative destinations must agree to receive individuals transported or referred within a certain timeframe and to provide follow up data on quality of care.</li> <li>• Upon identifying an individual eligible for transport to alternative destination and obtaining his or her consent, the EMS professionals discuss the patient’s complaint and the EMS team’s assessment with a provider at the alternate destination who then approves or denies transport based on clinical appropriateness.</li> </ul>	Individuals served under this program since its initiation in 2009 experienced a 55.6% reduction in ED use for the 12 months post-treatment compared to the 12 months pre-enrollment in the ATA.
<b>Nevada’s Regional Emergency Medical Services Authority (REMSA) – Funding through the Innovation Center’s HCIA program (Nevada)</b>	<ul style="list-style-type: none"> <li>• Operated an alternative destination program for three and a half years as part of a multi-pronged community health initiative called Ambulance Transport Alternatives (ATA).</li> <li>• Targeted ambulance episodes involving mental health, substance abuse, and urgent medical care complaints.</li> <li>• Roughly 1500 transports, or about 10% of all transports that paramedics deemed eligible, were successfully routed to an alternative destination.</li> <li>• 84% of ATA transports went to a detox center, 9% went to a mental health hospital, and 7% went to an urgent care center.</li> </ul>	Resulted in roughly 1,430 avoided ED visits. REMSA’s reported <sup>12</sup> savings estimated 1.8M in total. According to its HCIA evaluation, Medicare savings under this multi-payer model were estimated to be \$1.1M. <sup>13</sup>
<b>California’s Community</b>	<ul style="list-style-type: none"> <li>• Pilot focused on non ED-transport for individuals with mental health conditions.</li> </ul>	Averted ED visits saved an estimated \$330,000 over

<sup>11</sup> Data provided by organization directly to the Innovation Center.

<sup>12</sup> Regional Emergency Medical Services Authority. (2017). A model for better community healthcare: How one EMS system achieved the triple aim from a federal Health Care Innovation Award grant.

<sup>13</sup> Smith, L. R., Amico, P., Hoerger, T., Jacobs, S., Payne, J., & Renaud, J. (August 2017). Evaluation of the Health Care Innovation Awards: Community resource planning, prevention, and monitoring: Third annual report addendum. RTI International.

Program Title or Study Author (Location)	Program Description	Available Outcomes
<b>Paramedicine Pilot Program (CCPPP) – Mental health</b> <sup>14</sup> (California)	<ul style="list-style-type: none"> <li>• 301 of 311 individuals presenting with mental health conditions were successfully transported to a crisis center instead of the ED.</li> <li>• Notably, an additional 300 patients were eligible for transport to an alternative destination but did not participate due to funding and capacity issues at the alternative destination sites.</li> </ul>	the two and a half year model period.
<b>CCPPP – Substance Abuse</b> (California) <sup>15</sup>	<ul style="list-style-type: none"> <li>• CCPPP pilot focused on non-ED transport for individuals presenting with substance use served 730 patients over 13 months.</li> <li>• Only 2.4% of individuals initially transported to a sobering center were subsequently transferred to the ED.</li> </ul>	Averted ED visits resulted an estimated \$240,000 in savings.
<b>Seattle Alternative Destination Program</b> <sup>16</sup> (Seattle, Washington)	<ul style="list-style-type: none"> <li>• Under this year-long program, 18% of basic life support ambulance episodes were eligible for transport to an alternative destination.</li> <li>• Alternative destinations included urgent care centers, walk-in clinics, or office-based practices that accepted walk-in patients.</li> <li>• Eligibility criteria included a non-urgent presentation for a limited set of clinical conditions,<sup>17</sup> which were selected for ease of implementation and safety.</li> <li>• Limited operating hours at alternative destinations were a primary reason for lack of uptake, which occurred in roughly 45% of eligible cases.</li> </ul>	8% of the eligible episodes (or roughly 1.5% of all basic life support ambulance episodes) were transported to a non-ED medical clinic. Though uptake was limited, this represented a 5x increase compared to a matched historical control population. <sup>18</sup>
<b>Advanced Practice Paramedic Program</b>	<ul style="list-style-type: none"> <li>• Focused on alternative transport for cases of mental health or substance abuse.</li> <li>• Among episodes for which the service was called, 40% were eligible.</li> </ul>	Each psychiatric patient seen outside of the ED

<sup>14</sup> Coffman, J. M., Wides, C., Blash, L., Amah, G., Geyn, I., & Niedzwiecki, M. (July 11, 2018). Evaluation of California’s Community Paramedicine Pilot Program. Healthforce Center at University of California, San Francisco.

<sup>15</sup> Coffman, J. M., Wides, C., Blash, L., Amah, G., Geyn, I., & Niedzwiecki, M. (July 11, 2018). Evaluation of California’s Community Paramedicine Pilot Program. Healthforce Center at University of California, San Francisco.

<sup>16</sup> Schaefer, R. A., Rea, T. D., Plorde, M., Peiguss, K., Goldberg, P., & Murray, J. A. (2002). An emergency medical services program of alternate destination of patient care. *Prehospital Emergency Care*, 6(3), 309-314.

<sup>17</sup> These were minor trauma, a minor respiratory issue, noncardiac chest pain, undefined musculoskeletal pain, syncope, headache, an abdominal issue, or anxiety/grief.

<sup>18</sup> It is unclear why any patients in the control population were transported to locations other than the ED.

<b>Program Title or Study Author (Location)</b>	<b>Program Description</b>	<b>Available Outcomes</b>
<b>(North Carolina)</b> <sup>19</sup>	<ul style="list-style-type: none"> <li>63% of these patients (25% of the total) were then transported to the alternative setting.</li> </ul>	freed up 14 ED bed-hours. <sup>20</sup>
<b>Cheney, P. et. al.</b> <sup>21</sup> <b>(New Mexico)</b>	<ul style="list-style-type: none"> <li>Allowed transport of individuals with mental health needs to a Psychiatric Emergency Service rather than a hospital ED.</li> <li>Achieved in a 25% alternate transport rate for eligible patients.</li> </ul>	N/A
<b>Zeller, et. al.</b> <sup>22</sup> <b>(California)</b>	<ul style="list-style-type: none"> <li>Transported individuals with mental health concerns who passed medical clearance to a psychiatric emergency service</li> </ul>	Time to discharge eight hours less than estimated statewide average ED psychiatric time.

<sup>19</sup> Creed, J. O., Cyr, J. M., Owino, H., Box, S. E., Ives-Rublee, M., Sheitman, B. B.,... & Myers, J. B. (2018). Acute Crisis Care for Patients with Mental Health Crises: Initial Assessment of an Innovative Prehospital Alternative Destination Program in North Carolina. *Prehospital Emergency Care*, 22(5), 555-564.

<sup>20</sup> No Author. (March 1, 2014). Community paramedics fill gaps, take load off EDs. Relias Media.

<sup>21</sup> Cheney, P., Haddock, T., Sanchez, L., Ernst, A., & Weiss, S. (2008). Safety and compliance with an emergency medical service direct psychiatric center transport protocol. *The American Journal of Emergency Medicine*, 26(7), 750-756.

<sup>22</sup> Zeller, S., Calma, N., & Stone, A. (2014). Effects of a dedicated regional psychiatric emergency service on boarding of psychiatric patients in area emergency departments. *Western Journal of Emergency Medicine*, 15(1), 1-6.

**Table II. Treatment in Place Programs and Outcomes**

<b>Program Title or Study Author</b>	<b>Program Description</b>	<b>Available Outcomes</b>
<b>ETHAN program<sup>23</sup> (Houston, Texas)</b>	<ul style="list-style-type: none"> <li>Local EMS services allowed paramedics on scene to utilize telehealth triage for low-acuity patients.</li> <li>In 2015 the EMS system received 288,000 calls, with ETHAN utilized for over 5,500 cases (2%).</li> <li>Individuals received the following interventions:                             <ul style="list-style-type: none"> <li>18% provided ambulance transport to the ED</li> <li>59% received vouchers for taxi transport to the ED</li> <li>8% received vouchers for taxi transport to a clinic</li> <li>8% received a general referral or home care.</li> </ul> </li> </ul> <p>Substantial decrease in ambulance transport to the ED (18% vs 74% in matched controls).</p>	The median time each unit spent responding to each call under ETHAN was more than 40 minutes less than control.
<b>Morganti, KG et. al.<sup>24</sup> (Seattle, WA)</b>	<ul style="list-style-type: none"> <li>Program combined treatment in place with a taxi voucher program.</li> <li>Prior to providing taxi vouchers, field EMTs consulted with hospital physicians as part of their on-site triage.</li> <li>In six months, the program served 204 patients with physician-EMT agreement on triage occurring for over 90% of the cases.</li> </ul>	EMTs avoided 200 trips to the ED, saving an estimated \$750,000.
<b>Willings, JG (2018)<sup>25</sup></b>	<ul style="list-style-type: none"> <li>Provided treatment in place after falls among assisted living facility residents.</li> <li>Applying a non-transport protocol resulted in a 66% non-transport rate.</li> </ul>	99% of those not transported received the appropriate level of care.
<b>Krumperman, K et. al.<sup>26</sup></b>	<ul style="list-style-type: none"> <li>Treatment in place initiative implemented in a rural area</li> <li>1,512 treatments in place and 6,100 EMS transports occurred, corresponding to a treatment in place use rate of roughly 20%.</li> </ul>	N/A

<sup>23</sup> Langabeer, JR, Gonzalez, M, Alqusairi D, Champagne-Langabeer T, Jackson A, Mikhail J, Persse D. (2016) Telehealth-Enabled Emergency Medical Services Program Reduces Ambulance Transport to Urban Emergency Departments West J Emerg Med. 17(6): 713–720.

<sup>24</sup> Morganti, K. G., Alpert, A., Margolis, G., Wasserman, J., & Kellermann, A. L. (2014). The state of innovative emergency medical service programs in the United States. Prehospital Emergency Care, 18(1), 76-85.

<sup>25</sup> Williams, JG., Bachman, MW., Lyons, ZD., Currie, BB., Brown, AW., Cabanas, JG., Kronhaus, AK., Myers, J.B.. (2018). Improving decisions about transport to the emergency department for assisted living residents who fall. Annals of internal medicine, 168(3), 179-186.

<sup>26</sup> Krumperman, K., Weiss, S., & Fullerton, L. (2015). Two types of prehospital systems interventions that triage low-acuity patients to alternative sites of care. South Med J, 108(7), 381-386.

**Table III. Medical Triage Programs**

<b>Program Title or Study Author</b>	<b>Program Description</b>
<i>Measuring accuracy of triage</i>	
<b>Scott, G et. al.</b> <sup>27</sup>	<ul style="list-style-type: none"> <li>• Evaluated whether medical dispatchers could accurately identify low acuity cases appropriate for medical triage (as opposed to requiring ambulance transport).</li> <li>• Examined medical-related 911 calls and compared the triage level assigned by the dispatchers to the individuals’ severity level defined by vital signs taken by the EMS crew. Of roughly 20,000 cases identified by the medical dispatchers as the lowest severity, 89% did not have a single unstable vital sign and only 1% were transported with lights and siren (a proxy for severity).</li> </ul>
<i>Measuring utilization/uptake</i>	
<b>Murphy, ER et. al.</b> <sup>28</sup> (Texas)	<ul style="list-style-type: none"> <li>• 6% of all EMS calls were diverted to a medical triage line rather than initiation of an ambulance.</li> </ul>
<b>REMSA</b> <sup>29</sup> (Nevada)	<ul style="list-style-type: none"> <li>• Though the exact figure is unclear, numbers published by REMSA suggest that the medical triage program had roughly a 2.5% to 3% dispatcher transfer rate to the service.</li> </ul>
<b>Smith, JR et. al.</b> <sup>30</sup> (Seattle, WA)	<ul style="list-style-type: none"> <li>• Roughly 3.5% of all 911 callers were eligible for transfer to a medical triage line.</li> <li>• Given limited operating hours of the triage line, only one third of eligible callers were successfully transferred to the service.</li> </ul>

<sup>27</sup>Scott G, et al. Using on-scene EMS responders’ Assessment and Electronic Patient Care Records to Evaluate the Suitability of EMD-Triaged, Low-acuity Calls for Secondary Nurse Triage in 911 Centers. (Feb 2016). Prehospital and Disaster Medicine. Vol 31 Issue 1. Pp 46-57.

<sup>28</sup> Murphy, E. R., et al. (2017). 911 Triage: Implications of an Emergency Diversion Collaboration Effort. Perspectives on Social Work, 13(1), 23-29.

<sup>29</sup> Smith, L. R., Amico, P., Hoerger, T., Jacobs, S., Payne, J., & Renaud, J. (August 2017). Evaluation of the Health Care Innovation Awards: Community resource planning, prevention, and monitoring: Third annual report addendum. RTI International.

<sup>30</sup> Smith, W. R., Culley, L., Plorde, M., Murray, J. A., Hearne, T., Goldberg, P., & Eisenberg, M. (2001). Emergency medical services telephone referral program: An alternative approach to nonurgent 911 calls. Prehospital Emergency Care, 5(2), 174-180.

Program Title or Study Author	Program Description
<i>Triage level by age</i>	
<b>Richmond, N. J. and MedStar Mobile Healthcare<sup>31,32</sup> (Louisville, Kentucky and Fort Worth, Texas)</b>	<ul style="list-style-type: none"> <li>• Among medical triage calls from individuals over age 64: 68% were classified as needing emergency care as soon as possible, but not warranting emergency transport. Of those, 8% were advised to seek care within 1 to 4 hours. 8% triaged as only needing self or home-based care. The remainder were primarily classified as either needing care within a day or more or needing only routine care.</li> <li>• Despite these numbers, across all age groups, only slight more than a third of calls were safely triaged to lower acuity settings; the remainder were sent an ambulance.</li> <li>• Another analysis of these two programs over different periods of operations indicated that 25% of participating callers to the medical triage line ultimately pursued care in settings other than the ED with \$1,700 in savings per avoided ED visit.<sup>33</sup></li> <li>• The Fort Worth program indicates that since June 2012, of the 9,836 low-acuity callers referred to this program, roughly one third did not use an ambulance to the emergency department, resulting in \$3.8 million savings from avoided ambulance transport and emergency department expenditures (\$1,165 per enrolled patient).<sup>34</sup></li> </ul>

<sup>31</sup> Both programs directly connected patients to care and provided non-ambulance transport. For more information on the Louisville program see: Richmond, N. J. (2014, August 21). The Front Door to Care: EMS in Louisville Grows Beyond Simple 9-1-1 Response. *EMS World*. For more information on the Ft. Worth program see: [Fact Sheet](#)

<sup>32</sup> Fivaz, M. C., McQueen, J., Barron, T., Clawson, J., Scott, G., & Gardett, M. I. (2015). The distribution of recommended care levels by age, gender, and trauma vs medical classification within the emergency communication nurse system. *Ann Emerg Dispatch Response*, 3(1), 14-20.

<sup>33</sup> Gardett, I., Scott, et al. (2015). 911 Emergency communication nurse triage reduces EMS patient costs and directs patients to high-satisfaction alternative point of care. *Ann Emerg Dispatch Response*, 3, 8-13.

<sup>34</sup> Mobile Healthcare Programs – Overview. Medstar911. <http://www.medstar911.org/mobile-healthcare-programs>