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Abbreviated Analysis of California Senate Bill 1180: Emergency Medical Services

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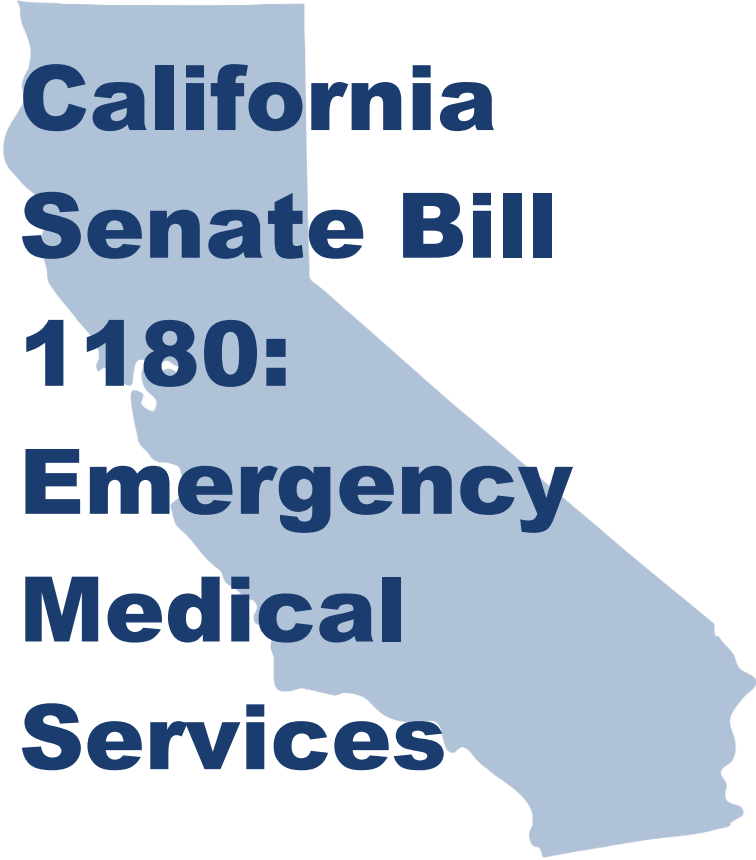
California Health Benefits Review Program

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Abbreviated Analysis



California Senate Bill 1180: Emergency Medical Services

Report to the 2023–2024
California State Legislature

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California Health Benefits Review
Program (CHBRP), Office of Research,
University of California, Berkeley

www.chbrp.org

Summary

The California Senate Committee on Health requested that the California Health Benefits Review Program (CHBRP)¹ conduct an evidence-based assessment of California Senate Bill 1180 relating to Emergency Medical Services (EMS). The bill has three major components:

- It would require a health care service plan contract or health insurance policy issued, amended, or renewed on or after January 1, 2025, to include coverage for services provided by a community paramedicine (CP) program, a triage to alternate destination (TAD) program, or a mobile integrated health (MIH) program.
- It (a) would require plans and policies to require an enrollee or insured who receives covered services from a noncontracting program to pay no more than the same cost-sharing amount they would pay for the same covered services received from a contracting program; and (b) specifies the reimbursement process for a noncontracting program.
- It specifies that services provided by a CP, TAD, or MIH program are to be covered by the Medi-Cal program. The Department of Health Care Services (DHCS) is to develop rates of reimbursement for services provided by CP, TAD, and MIH programs in consultation with these programs.

Background on Emergency Medical Services

An emerging area within the emergency medical services (EMS) field involves alternative models of care delivery that expand EMS professionals' scope of practice beyond responding to 911 calls and transporting patients to emergency departments (EDs). This may involve providing additional services such as nonemergency care and transporting patients to non-ED destinations. The specific programs may be developed and led by EMS agencies, fire departments, hospitals or health systems, insurers, or independent companies, and the services may be targeted to vulnerable populations such as seniors, individuals with chronic conditions, underserved communities, or those who frequently use emergency services.

Since 2015, California has begun some trials of these expanded community models of EMS, through a number of pilot projects across the state. These pilot projects intended to improve the efficiency and effectiveness of emergency medical and health care services by expanding the role of specially trained paramedics in the field. Of the 20 pilot projects launched in California between 2015 and 2020, five remain operational – one CP program and four TAD programs. In addition, CHBRP is aware of two MIH programs in California.

Policy Context

SB 1180 references Health and Safety Code (HSC) Section 1815² for a definition of a CP program and HSC Section 1819³ for a definition of a TAD program. Whereas MIH programs nationally may be run by various types of entities and are sometimes referred to

¹ Refer to CHBRP's full report for full citations and references.

² "Community paramedicine program" means a program developed by a local EMS agency and approved by the Emergency Medical Services Authority to provide community paramedicine services consisting of one or more of the program specialties described in this section under the direction of medical protocols developed by the local EMS agency that are consistent with the minimum medical protocols established by the authority. Community paramedicine services may consist of the following program specialties: (a) Providing directly observed therapy (DOT) to persons with tuberculosis in collaboration with a public health agency to ensure effective treatment of the tuberculosis and to prevent spread of the disease; (b) Providing case management services to frequent emergency medical services users in collaboration with, and by providing referral to, existing appropriate community resources.

³ "Triage to alternate destination program" means a program developed by a local EMS agency and approved by the Emergency Medical Services Authority to provide triage paramedic assessments consisting of one or more specialties described in this section operating under triage and assessment protocols developed

as MIH-CP, SB 1180 defines MIH programs more narrowly, requiring MIH programs to be based in fire departments only. This report uses the SB 1180 definition of MIH in the *Background* section, but in other sections, primarily uses the broader national definition found in the published literature.

The state EMS Authority (EMSA) requires that local EMS agencies apply for approval of CP and TAD programs. MIH programs are not subject to this process since they include staff who are licensed medical professionals.

In California, CP, TAD, and MIH programs have been and are currently funded by grants, public EMS or city/county government agencies, or private EMS agencies (and health care partner organizations), not through payments from health plans or policies, or the Medi-Cal program. CHBRP is not aware of any California health plans or policies that currently pay for services provided by existing CP, TAD, or MIH programs as defined in SB 1180.

Some state Medicaid programs cover community paramedicine services, as do some commercial insurers in other states. However, there is no standardized approach by insurers on how the services are delivered and covered, and coding for the covered services is not standardized between state Medicaid programs or insurers.

All 24.2 million enrollees who have commercial or California Public Employees' Retirement System (CalPERS) health insurance regulated by the Department of Managed Health Care (DMHC) and California Department of Insurance (CDI), as well as Medi-Cal beneficiaries enrolled in DMHC-regulated Medi-Cal managed care plans or county organized health system (COHS) plans would have health insurance subject to SB 1180.

by the local EMS agency that are consistent with the minimum triage and assessment protocols established by the authority. Triage paramedic assessments may consist of the following program specialties: (1) Providing care and comfort services to hospice patients in their homes in response to 911 calls by providing for the patient's and the family's immediate care needs, including grief support in collaboration with the patient's hospice agency until the hospice nurse arrives to treat the patient. This paragraph does not impact or alter existing authorities applicable to a licensed paramedic operating under the medical control policies adopted by a local

Medical Effectiveness

Overall, CHBRP found: (1) limited evidence that CP, TAD, and MIH programs are safe and effective; and (2) insufficient evidence that CP, TAD, and MIH programs impact clinical outcomes. Detailed summaries on the key questions are below:

- There is *limited* evidence based on two evaluation studies of pilot projects in California that TAD programs can safely and appropriately identify patients with behavioral health concerns for triage to an alternate mental health destination.
- There is *limited* evidence based on one evaluation study of pilot projects in California that patients who are acutely intoxicated but do not have acute medical or mental health needs can be safely and appropriately identified by TAD programs and then triaged to sobering centers.
- There is a *preponderance of* evidence from 15 studies that, for patients who frequently use EMS services, CP and MIH programs are effective at reducing hospitalizations and avoidable ED visits.
- There is *insufficient* evidence that, for patients who frequently use EMS services, CP and MIH programs are effective at improving clinical outcomes.
- There is *limited* evidence from four studies that a CP or MIH program with short-term follow-up for patients recently discharged from the hospital due to a chronic condition can improve post-hospital discharge outcomes. There is *limited evidence* from two studies that a CP or MIH program with short-term follow-up for patients

EMS agency medical director to treat and keep a hospice patient in the patient's current residence, or otherwise require transport to an acute care hospital in the absence of an approved triage to alternate destination hospice program; (2) Providing patients with advanced life support triage and assessment by a triage paramedic and transportation to an alternate destination facility, as defined in Section 1811; and (3) Providing transport services for patients who identify as veterans and desire transport to a local veterans administration emergency department for treatment, when appropriate.

recently discharged from the hospital can increase primary care visits.

- There is *insufficient* evidence based on one study that a CP program with directly observed therapy (DOT) for tuberculosis patients is as safe as usual care (public health-managed DOT program) and that a CP program that dispenses medications and observes tuberculosis patients taking the medications is more effective than usual care on medication adherence.
- There is *insufficient* evidence based on one study that a CP program with hospice services that collaborates with hospice agency nurses, patients, and family members reduces patient transports to the ED.

Cost

CHBRP estimates no measurable fiscal impact or significant utilization increase due to SB 1180 in the short term. CHBRP notes that: (1) the availability of CP, TAD, and MIH programs in California will likely remain low; (2) existing CP, TAD, and MIH programs have been largely reliant on grants, local EMS agency investments, and philanthropy; and (3) to be reimbursed for CP, TAD, and MIH services, programs will need to identify reimbursement codes and develop contracts with health plans and policies to establish services and reimbursement rates.

Public Health Impacts

CHBRP concludes that the passage of SB 1180 would have no measurable public health impact due to no measurable change in utilization in the first 12 months postmandate and insufficient evidence on clinical outcomes. Insufficient evidence is not evidence of no effect; rather the effect is unknown. Based on *limited* evidence that TAD programs safely and appropriately identified patients for triage to alternate destinations (e.g., sobering center, mental health crisis center), and that CP and MIH programs improved post-hospital discharge outcomes for patients recently discharged from the hospital due to a chronic condition, real changes in health status and outcomes could occur at the person-level for those enrollees receiving these services postmandate.

Long-Term Impacts

CHBRP assumes if SB 1180 were enacted, over time, there would be growth/expansion of existing CP, TAD, and MIH programs, as well as growth in new programs in areas of need. CHBRP assumes existing CP, TAD, and MIH programs and any CP or TAD programs in the review process queue at EMSA would likely be among the first programs to enter into contract negotiations with health plans and policies.

The ability of future CP, TAD, and MIH programs to be financially sustainable will be influenced by the fee schedules set for these services at the local levels. Other implementation challenges for CP, TAD, and MIH programs exist, including having sufficient capacity in sobering centers and mental health facilities across communities that can accommodate diverted patients from EDs and contracting with such centers.

Background on Emergency Medical Services

An emerging area within the emergency medical services (EMS) field involves alternative models of care delivery that expand EMS professionals' scope of practice beyond responding to 911 calls and transporting patients to emergency departments (EDs). This may involve providing additional services such as nonemergency care and transport to non-ED destinations. These services may be operated by ambulance services, fire departments, healthcare systems, community health centers, or public health agencies, and the services may be targeted to vulnerable populations such as seniors, individuals with chronic conditions, underserved communities, or those who frequently use emergency services.

Since 2015, California has developed and launched some trials of these expanded community models of EMS, through a number of pilot projects across the state. These pilot projects intended to improve the efficiency and effectiveness of emergency medical and health care services by expanding the role of specially trained paramedics in the field (Coffman and Blash, 2021).

The goals of these models are to improve patient outcomes and allow for more appropriate use of EMS and health care professionals (Kizer et al., 2013). They are not intended to duplicate or compete with other community health care services (Kizer et al., 2013). The structure of these models (as well as the laws describing scopes of practice, training requirements, and reimbursement policies), vary throughout the country and are contingent upon and highly influenced by state regulations and community needs and decision-making.

SB 1180 specifies three expansion models of EMS: community paramedicine (CP), triage to alternate destinations (TAD), and mobile integrated health (MIH). This *Background* section details the types of services offered by CP, TAD, and MIH programs in California, the organizational structure in which these programs are developed and authorized to operate, and the training and certification that paramedics must undergo.

A note on terminology: A group of EMS organizations (nationally) collaboratively agreed on a definition of mobile integrated healthcare–community paramedicine (MIH-CP) as “the provision of healthcare using patient-centered, mobile resources in the out-of-hospital environment. MIH is provided by a wide array of healthcare entities and practitioners that are administratively or clinically integrated with EMS agencies, while CP is one or more services provided by EMS agencies and practitioners that are administratively or clinically integrated with other healthcare entities” (NAEMT, 2024). SB 1180 defines MIH programs as “a fire department-based team of licensed healthcare practitioners, operating within their scope of practice, who provide mobile health services to support the emergency medical services system.” Because of these differences in definitions, there are some instances in the report, particularly where there is published literature on MIH programs, where CHBRP relies on the broader definition of MIH-CP that is used in the EMS field, rather than on the narrower definition of MIH programs in SB 1180.

Table 1 provides descriptions of each model identified by SB 1180, including types of services and practitioners involved.

Table 1. Models of EMS Care Delivery per SB 1180

	Community Paramedicine (CP)	Triage to Alternate Destination (TAD)	Mobile Integrated Health (MIH)
Description	A CP program utilizes the skills and expertise of specially trained paramedics to provide expanded and non-emergency healthcare services beyond traditional emergency medical response. Trained paramedics work collaboratively with other healthcare providers, community organizations, and social service agencies to address the health care needs of specific populations.	A TAD program involves paramedics transporting 911 callers who meet specific criteria to facilities better equipped to meet patient needs than emergency departments (EDs), such as mental health crisis centers or sobering centers.	An MIH program is defined as a fire department–based team of licensed health care practitioners, operating within their scope of practice, who provide mobile health services to support the emergency medical services system (e.g., the pairing of a firefighter paramedic with a nurse practitioner or physician assistant).
Types of providers	Local EMS agency (LEMSA)-approved community paramedics	LEMSA-approved triage paramedics	Fire department–based paramedics or emergency medical technicians (EMTs) paired with a licensed health care practitioner (e.g., a physician assistant, nurse practitioner, registered nurse).
Types of services	<ul style="list-style-type: none"> • Directly observed therapy (DOT) for persons with tuberculosis (i.e., dispense medications and observe patients taking them) in collaboration with a public health agency to ensure effective treatment of tuberculosis and prevent spread of the disease. • Case management services for frequent EMS users to identify needs that could be met more effectively outside of an ED, and assist patients in accessing primary care, mental health services, substance use disorder treatment, and other services, such as housing and food. • Short-term, home-based follow-up care adjacent to home health services for persons recently discharged from a hospital due to a serious health condition 	<ul style="list-style-type: none"> • Advanced life support triage and assessment and transportation to an alternate destination facility (e.g., a mental health facility for people who have mental health needs but no acute medical needs or a sobering center for people who are acutely intoxicated but do not have acute medical or mental health needs). • Transport services for patients who identify as veterans and desire transport to a local Veterans Administration ED for treatment, when appropriate. • Immediate care and comfort services to hospice patients and families in their homes in response to 911 calls, including grief support, in 	According to the bill author and sponsors, MIH programs conduct assessments and deliver initial treatment to patients in the field, evaluating whether transport to the ED is necessary. If it is determined that transport is not required, MIH teams may offer additional care, advice, or referrals for follow-up treatment as deemed appropriate, after which the patient is released at the scene.

Community Paramedicine (CP)	Triage to Alternate Destination (TAD)	Mobile Integrated Health (MIH)
(e.g., heart failure) to reduce their risk of readmission and improve their ability to manage their condition. ⁴	collaboration with the patient's hospice agency until the hospice nurse arrives to treat the patient and avoid transport to an ED.	

Source: California Health Benefits Review Program, 2024.

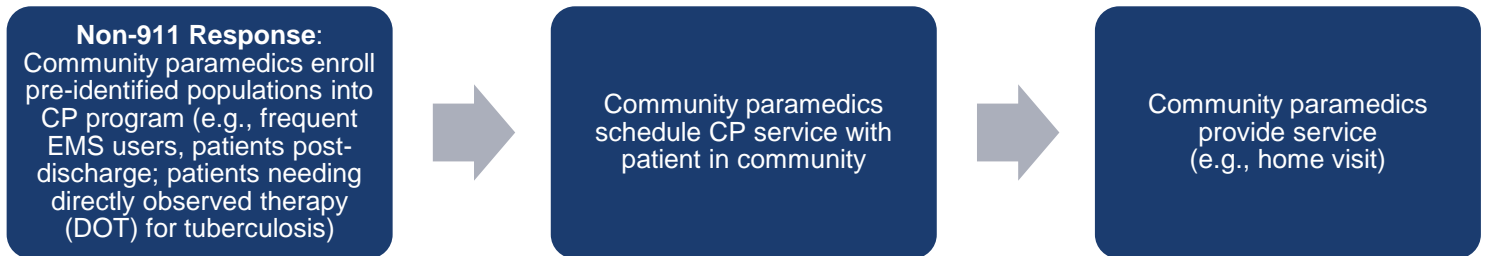
Note: Sources of information include: California Code of Regulations Title 22, Division 9, Chapter 5: Community Paramedicine and Triage to Alternate Destination (CCR, 2022); Health and Safety Code, Division 2.5. Chapter 13 (HSC, 2022); and EMSA CP and TAD Toolkits (EMSA, 2022a,c).

Pathways of Care for CP, TAD, and MIH Programs

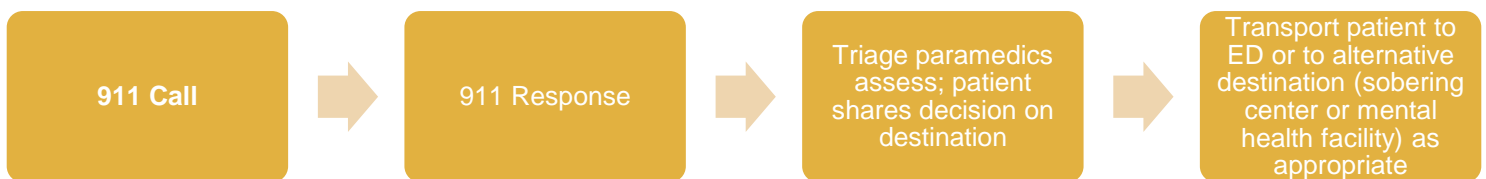
As described in Table 1, CP programs involve services provided by paramedics beyond traditional EMS services and are usually provided outside of response to 911 calls, such as home visits to people recently discharged from a hospital or case management services to frequent users of EMS services. In TAD and MIH programs, services are provided primarily when paramedics are responding to 911 calls. Potential pathways for each type of program are shown in Figure 1 below.

Figure 1. Pathways of CP, TAD, and MIH Services, by Program Type

CP Programs

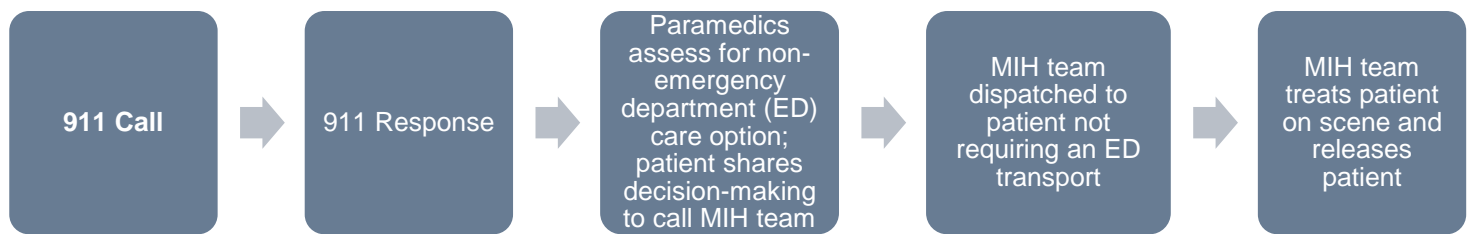


TAD Programs



⁴ Previously implemented pilot programs typically consisted of one or two in-person visits or calls within 72 hours of discharge while patients were waiting to obtain home health services. Services included clinical assessments and reviewing discharge instructions, performing medication reconciliation, and assisting with medication refills (Coffman and Blash, 2023).

MIH Programs



Requirements for Establishing Expansion Model Programs

The California Emergency Medical Services Authority (EMSA) is responsible for statewide coordination and leadership for planning, developing, and implementing local EMS systems and local trauma care systems in California. It also sets training standards and scope of practice for emergency services workers (e.g., paramedics, emergency medical technicians, mobile intensive care nurses, firefighters) among other duties (EMSA, 2024a).

There are 33 local EMS agencies (LEMSAs) that serve California's 58 counties. Among these, 26 LEMSAs hold jurisdiction over a single county, while 7 operate as multi-county regional LEMSAs. The state oversees the actions and compliance of these local agencies (EMSA, 2024a). The LEMSAs coordinate and contract with EMS transport entities (EMSA, 2022a,c).

Development and implementation of a CP or TAD program requires review and approval by EMSA. Because MIH programs involve licensed health care providers operating within their scope of practice, they do not require EMSA approval. A LEMSA opting to implement a CP or TAD program must submit a written request to the state EMSA, and the request must include:

- Identification of the community need and recommended solutions.
- All program medical protocols and policies, including, but not limited to, data collection, transport, patient safety, and quality assurance/improvement processes.
- Documentation for program service provider approval, including any written agreements.
- Curriculum for program-focused training of paramedics.

For CP programs, documentation outlining policies for collaboration with public health or community resource entities regarding directly observed therapy (DOT) and EMS high-utilizer programs must be submitted to EMSA for review and approval.

For TAD programs, documentation of alternate destination facility program partnership (e.g., interagency agreements), must also be included in the submission to EMSA.

EMSA has 30 days to approve or reject the application. All approved programs are valid for a 12-month period from the date of approval and are reviewed annually to ensure compliance (EMSA, 2022a,c).

In 2014, California sponsored a 6-year pilot project that implemented 10 CP and 10 TAD programs across the state. Many programs have since ended (Coffman and Blash, 2021). Currently, California has one active CP program and four active TAD programs (EMSA, 2024c). These are funded by grants, public EMS or city/county government agencies, or private EMS agencies (and health care partner organizations). Table 2 identifies the current CP and TAD programs by specialty and by LEMSA.

Table 2. EMSA Approved Community Paramedicine and Triage to Alternate Destination Programs in California

LEMSA	Program Specialty
Community Paramedicine Programs	
San Francisco EMS	Frequent EMS user
Triage to Alternate Destination Programs	
Central California EMSA	Alternate destination – mental health
Los Angeles County EMS	Alternate destination – mental health and sobering center
San Francisco EMS	Alternate destination – sobering center and Veteran’s Hospital
Stanislaus County EMS	Alternate destination – mental health, sobering center, and Veteran’s Hospital

Source: California Health Benefits Review Program, 2024.

Note: Sources of information include: CCEMSA, 2023; LA EMSA, 2023; SFDEM, 2023; Stanislaus EMSA, 2023. As of March 2024, no California LEMSAs have a CP program with (1) directly observed therapy (DOT) for tuberculosis patients or (2) short-term follow-up care for patients recently discharged from a hospital, and no California LEMSAs have a TAD hospice program.

CHBRP identified two MIH programs operated by fire departments – one each in Sacramento County and Los Angeles County.

- Sacramento Metropolitan Fire District launched its MIH pilot program in 2021 with funding from Sacramento County Public Health.
- The Los Angeles County Fire Department launched its MIH pilot program, known as the Advanced Provider Response Unit (APRU), in 2016 with funding from the city of Los Angeles and public-private partnerships.

These programs pair a firefighter/paramedic with a nurse practitioner or physician assistant to help frequent 911 callers with non-emergency issues. The teams assess, treat, and release patients in the field without the need for ambulance transport or an ED visit, and the LA program may also transport patients to alternate destinations (Habegger, 2023; Sanko and Eckstein, 2021).

CP, TAD, and MIH Provider Roles and Required Qualifications

Paramedics who intend to provide CP and TAD services must undergo program-specific training beyond the standard licensure requirements for paramedics in the state and must be accredited as a CP or TAD paramedic by the LEMSA. LEMSAs are responsible for identifying CP and TAD training programs, obtaining state EMSA approval of such programs, and establishing a process to verify the training and accreditation of paramedics for CP and TAD programs. Training programs must provide the minimum training and curriculum requirements as established by current law.⁵ The state EMSA also provides guidance on training and curriculum for program specialties, such as hospice, mental health, and substance use (EMSA, 2022a,c).

⁵ Cal. Code Regs. tit. 22 § 100189.

CP Programs

For CP programs, licensed paramedics can become CP-accredited by completing a LEMSA-approved CP course and passing the International Board of Specialty Certification (IBSC) Community Paramedic-C examination (EMSA, 2022a,c). The accreditation lasts for 2 years from the date of approval, and renewal requires 8 hours of CP-related continuing education or proof of active IBSC certification (EMSA, 2022a,c). Examples of CP training include:

- *San Francisco CP program*: training is operated by the San Francisco Fire Department (SFFD) and involves 6 weeks of didactic and clinical training (SFDEM, 2023; SFFD, 2023). The curriculum includes training on chronic diseases, hospice, and mental health/psychiatric emergencies (SFDEM, 2023).
- *California's Health Workforce Pilot Project*: CP programs used by the State of California Community Paramedic Education Taskforce core curriculum to train paramedics involved 96 hours of classroom-based and clinical hands-on instruction and training plus 56 hours of study outside the classroom (Coffman and Blash, 2023).

TAD Programs

For TAD programs, licensed paramedics can become TAD-accredited by completing a LEMSA-approved TAD course (EMSA, 2022a,c). The accreditation lasts for 2 years from the date of approval and renewal requires 4 hours of TAD-related continuing education (EMSA, 2022a,c). The training courses for current TAD programs in California range from 4-8 hours of training and are either operated by the LEMSA or a separate contractor. The curriculum includes training specific to mental health and substance use (CCEMSA, 2023; LA EMSA, 2023; SFDEM, 2023; Stanislaus EMSA, 2023).

MIH Programs

For MIH programs, there are no state or LEMSA training or accreditation requirements because the clinicians partnered with paramedics (e.g., nurses, physicians, physician assistants) already hold state licenses to provide advanced levels of care.

Financing of Expansion EMS Models

In California, CP, TAD, and MIH programs have been funded by foundation grants, public EMS or city/county government agencies, or private EMS agencies (and health care partner organizations). Currently, these models do not have a stable reimbursement mechanism in California. See the *Policy Context* section for more information about other state Medicaid programs and commercial health plans that reimburse for these types of services.

Policy Context

The California Senate Committee on Health has requested that the California Health Benefits Review Program (CHBRP)⁶ conduct an evidence-based assessment of the medical, financial, and public health impacts of SB 1180 Emergency Medical Services.

Bill-Specific Analysis of SB 1180, Emergency Medical Services

Bill Language

SB 1180 has three major components:

- It would require a health care service plan contract or health insurance policy issued, amended, or renewed on or after January 1, 2025, to include coverage for services provided by a community paramedicine (CP) program, a triage to alternate destination (TAD) program, or a mobile integrated health (MIH) program.
- It (a) would require plans and policies to require an enrollee or insured who receives covered services from a noncontracting program to pay no more than the same cost-sharing amount they would pay for the same covered services received from a contracting program; and (b) specifies the reimbursement process for a noncontracting program.
- It specifies that services provided by a CP, TAD, or MIH program are to be covered by the Medi-Cal program. DHCS is to develop rates of reimbursement for services provided by CP, TAD, and MIH programs in consultation with these programs.

The full text of SB 1180 can be found in Appendix A.

Relevant Populations

If enacted, SB 1180 would apply to the health insurance of approximately 24.2 million enrollees (63.6% of all Californians). This represents those who have commercial or California Public Employees' Retirement System (CalPERS) health insurance regulated by DMHC and CDI, as well as Medi-Cal beneficiaries enrolled in DMHC-regulated Medi-Cal managed care plans county or county organized health system (COHS) plans.

California Regulating Agencies

DMHC: California Department of Managed Health Care

CDI: California Department of Insurance

DHCS: Department of Health Care Services, which administers Medi-Cal

Analytic Approach and Key Assumptions

As noted in the *Background* section, there are varying definitions of CP and MIH, and the terms are sometimes used interchangeably. There is now a national definition of MIH-CP (NAEMT, 2024): “the provision of healthcare using patient-centered, mobile resources in the out-of-hospital environment. MIH is provided by a wide array of healthcare entities and practitioners that are administratively or clinically integrated with EMS agencies, while CP is one or more services provided by EMS agencies and practitioners that are administratively or clinically integrated with other healthcare entities.” MIH has been used as an umbrella term that refers to multiple types of services provided by emergency medical services (EMS) agencies that go beyond 911 call response and transportation of patients to the emergency department (ED), with

⁶ CHBRP's authorizing statute is available at www.chbrp.org/about/faqs.

some services provided by paramedics and some by other types of health care professionals such as nurse practitioners, registered nurses, or physician assistants (Coffman and Kwong, 2019). CP has been used to refer to MIH services provided by paramedics that are beyond these traditional EMS services (Coffman and Kwong, 2019). SB 1180 defines MIH as a fire department–based team of licensed health care practitioners who provide mobile health services to support the EMS system. By licensed health care practitioners, CHBRP assumes SB 1180 means providers such as physicians, nurses, or physician assistants (both MIH programs in California involve the pairing of a nurse practitioner or physician assistant with a paramedic). Because the definitions of CP and MIH differ in the published literature versus in SB 1180, this report specifies when each definition is used. The terminology for TAD programs in the published literature and SB 1180 is generally consistent, although some CP programs have a TAD component.

Of the three EMS models specified in SB 1180, CHBRP is aware of one CP program, four TAD programs, and two MIH programs in California (see the *Background* section for descriptions of these models). The CP and TAD programs are continuations of pilot programs that began operating in 2015; other pilot programs have been discontinued. The MIH programs began in 2016 (Los Angeles) and 2021 (Sacramento).

CP and TAD programs require that local EMS agencies apply for approval by the state’s EMS Authority (see *Background* section for more detail). MIH programs are not subject to this process since they include staff who are licensed medical professionals allowed to provide advanced levels of care.

In California, CP, TAD, and MIH programs have been and are currently funded by grants, public EMS or city/county government agencies, or private EMS agencies (and health care partner organizations), not through payments from health plans or policies, or the Medi-Cal program.

Interaction With Existing State and Federal Requirements

Health benefit mandates may interact and align with the following state and federal mandates or provisions.

California Policy Landscape

California law and regulations

State Oversight: At the state level, the Emergency Medical Services Authority (EMSA) enforces the statutes in the Emergency Medical Services Act, Health and Safety Code Division 2.5, and develops regulations in California Code of Regulations, Title 22, Division 9: Prehospital Emergency Medical Services, to implement those laws. The Authority also approves EMS plans submitted by the county’s local EMS agency (LEMSA) to ensure that they contribute to an organized statewide EMS system, comply with statute and regulations, and meet the needs of the persons served. In addition, the Authority licenses and disciplines paramedics, regulates training programs, and coordinates disaster preparedness. EMSA serves as the pass-through for federal funds, and administers the statewide poison control system (Narad et al., 1994).

County Oversight: California’s 33 LEMSAs (7 multicounty LEMSAs and 26 single-county LEMSAs) exercise the most direct authority over the day-to-day operation of the state’s emergency medical services. LEMSAs plan, implement, monitor, and evaluate local EMS systems and establish the roles and responsibilities of the various system participants in implementing the plan (Narad et al., 1994). LEMSAs also share responsibility with the state EMSA for regulating the local EMS workforce, emergency ground medical transport (EGMT) providers, and 911-receiving hospitals. LEMSAs set the maximum charges for ambulance transportation. LEMSAs also write and enforce contract terms with public and private EMS providers, issue ambulance licenses, and grant exclusive operating area (EOA) rights to EGMT providers. The LEMSAs perform other functions including disaster preparedness and certification of emergency medical technicians (EMSA, 2022b).

State Pilot Projects: In 2014, the state’s Office of Statewide Health Planning and Development (now the Department of Health Care Access and Information, or HCAI) approved Health Workforce Pilot Projects Program (HWPP) Application #173: Community Paramedicine, allowing the development and launch of CP pilot projects across the state. Over the past decade, 20 CP pilot projects were launched and evaluated by the Healthforce Center at UCSF (Coffman and Blash, 2021).

State Legislation: Three prior Assembly bills (AB 1544 and AB 767 relating to CP and TAD, and AB 716 relating to cost-sharing for ground ambulance providers), all of which became law, are relevant to SB 1180. AB 1544 (2019) established the Community Paramedicine or Triage to Alternate Destination Act of 2020, which authorized a LEMSA to develop a CP or TAD program, as defined, to provide specified CP services, and had a sunset date of January 1, 2024.⁷ AB 1544 also required EMSA to contract with an independent third party to prepare a final report on the results of the CP or TAD programs on or before April 1, 2023. AB 767 (2023) extended the Community Paramedicine or Triage to Alternate Destination Act of 2020 through January 1, 2031.⁸ The bill also expanded the allowable CP services program specialties to include providing short-term, post-discharge follow-up for persons recently discharged from a hospital due to a serious health condition, including collaboration with, and by providing referral to, home health services when eligible. AB 716 (2023) required that an enrollee or insured who receives covered services from a noncontracting ground ambulance provider pay no more than the same cost-sharing amount that the enrollee or insured would pay for the same covered services received from a contracting ground ambulance provider.⁹

Similar requirements in other states

Some state Medicaid programs cover CP, TAD, or MIH services, as do some commercial insurers in other states. There are two important caveats regarding this coverage:

- There is no standardized approach by insurers on how the services are delivered and covered; and
- Coding for the covered services is not standardized between state Medicaid programs or commercial insurers.

A 2019 report by Coffman and Kwong¹⁰ comparing CP programs across the nation stated that:

- In 14 states (Arizona, Colorado, Georgia, Idaho, Maine, Michigan, Minnesota, Nevada, North Carolina, Oregon, Texas, Utah, Wisconsin, and Wyoming), Medicaid reimburses for treatment without transport on 911 calls.
- In 7 states (Arizona, Georgia, Indiana, Minnesota, Nevada, North Dakota, and Wyoming), Medicaid reimburses CP services.
- In 12 states (Colorado, Connecticut, Kentucky, Maine, Michigan, Missouri, New Hampshire, New York, Ohio, Texas, Virginia, and Wisconsin), only commercial health plans reimburse CP services.
- In four states (Georgia, Indiana, Minnesota, and Nevada), both Medicaid and commercial health plans reimburse CP services.

Minnesota’s Medicaid program was the first one to cover CP services in 2012. Arizona’s Medicaid program has included coverage for CP services, which they refer to as “Treat and Refer” services, via a State Plan Amendment (SPA) since 2016.¹¹ They define a “Treat and Refer” interaction as “a healthcare event with an individual that accessed 9-1-1 or a similar emergency number, but whose illness or injury does not require ambulance transport to an emergency department, or other such facility.” To be eligible for payment, the interaction between EMS personnel and the patient “must include (1) documentation of an appropriate clinical and social evaluation, (2) a treatment/referral plan for accessing social, behavioral and/or healthcare services that address the patient’s immediate needs, (3) evidence of efforts to follow-

⁷ Cal. Health & Safety Code § 1800. 2022.

⁸ Cal. Health & Safety Code § 1800. 2023.

⁹ Cal. Health & Safety Code § 1371.56 and Cal. Ins. Code § 10126.66.

¹⁰ In the Coffman and Kwong (2019) report, the term community paramedicine (CP) includes CP and MIH programs.

¹¹ Arizona Health Care Cost Containment System. State Plan Amendment (SPA) Approval Letter 16-006, October 24, 2016. <https://www.azahcccs.gov/Resources/Downloads/MedicaidStatePlan/Amendments/2016/ApprovedSPA16-006.pdf>.

up with the patient to ascertain adherence with the treatment plan, and (4) documentation of efforts to assess customer satisfaction with the treat and refer visit.”¹²

Nevada’s Medicaid program also began reimbursing CP services in 2016, with a requirement that services be delivered according to a recipient-specific plan of care under the supervision of a Nevada-licensed primary care provider (PCP). Per the 2023 Medicaid Services Manual, the program reimburses for medically necessary CP services that are designed to provide health care services to the medically underserved. It states that CP services fill patient care gaps, prevent duplication of services, and improve the health care experience for the recipient, noting that prevention of unnecessary ambulance responses, emergency room visits, and hospital admissions and readmissions can result in cost reductions to the state.¹³ Examples of CP services covered by the Nevada Medicaid program are evaluation/health assessment; chronic disease prevention, monitoring, and education; medication compliance; vaccinations; laboratory specimen collection and point-of-care lab tests; hospital discharge follow-up care; and home safety assessments.

Federal Policy Landscape

Federal agencies funded and oversaw emergency medical services (EMS) systems until 1981 when the federal government turned this authority over to states and their counties. The federal Office of EMS, under the National Highway Traffic Safety Administration (NHTSA), currently provides guidance and leadership through data collection, publication of service guidelines, and convening stakeholders to define best practices in the EMS industry. Federal funding is provided through the Department of Health and Human Services (HHS) block grants, which states may choose to spend on EMS provision (Institute of Medicine, 2007).

Emergency medical services are not administered or overseen by any single U.S. federal department or agency. In addition to NHTSA’s Office of EMS, other federal departments that support and regulate EMS include Defense, HHS, Homeland Security, and the Federal Communications Commission.

Medicare

Medicare covers medically necessary ground ambulance services for its beneficiaries meeting certain conditions.¹⁴ Medicare pays ambulance providers: (1) a base rate that varies by the level of transport provided (e.g., basic life support vs. advanced life support level 1 or level 2) and whether the transport is emergency or nonemergency; and (2) a per-mile rate applied to the distance traveled with the patient. Both base and mileage payments are only made when a patient is transported to an emergency department or other eligible destination—in other words, Medicare does not pay for ambulance responses to calls for service that do not result in a patient transport.

Pending federal legislation

In 2021, the Centers for Medicare & Medicaid Services (CMS) introduced the Emergency Triage, Treat, and Transport (ET3) Model, which offered reimbursement to providers for: (1) treatment in place by a qualified EMS crew or by telehealth; and (2) ambulance transport to alternative destinations. However, by December 2023, the program was terminated by CMS due to lower-than-expected program participation. Subsequently, federal legislation S. 3236 “Emergency Medical Services Reimbursement for On-Scene Care and Support Act” was introduced in November 2023 allowing Medicare coverage of ambulance services that do not include transportation.

¹² Ibid.

¹³ 2023 Medicaid Services Manual - DHCFFP - State of Nevada. Accessed April 5, 2024, at https://dhcftp.nv.gov/uploadedFiles/dhcftpnv.gov/content/Resources/AdminSupport/Manuals/MSM/Medicaid_Services_Manual_Complete.pdf.

¹⁴ In addition to medical necessity, Medicare requires that: (a) transports are to the nearest appropriate facility given the patient’s condition; and (b) all other forms of transportation are contraindicated.

Medical Effectiveness

As discussed in the *Policy Context* section, SB 1180 would mandate coverage of services provided by a community paramedicine (CP) program, triage to alternate destination (TAD) program, or mobile integrated health (MIH) program. Additional information on coverage of services provided by these types of programs is included in the *Background* section. Because of differences between the SB 1180 definitions and other national definitions noted in the *Background* section, there are some instances in this review (particularly where there is published literature on MIH programs) where CHBRP relies on the broader definition of MIH-CP that is used in the EMS field. The medical effectiveness review summarizes available findings from evidence¹⁵ on CP, TAD, and MIH programs that include:

1. *Alternate Destination – Mental Health*: In response to 911 calls, offer people who have mental health needs but no acute medical needs transport directly to a mental health crisis center instead of to an emergency department (ED) with subsequent transfer to a mental health facility.
2. *Alternate Destination – Sobering Center*: In response to 911 calls, offer people who are acutely intoxicated, but do not have acute medical or mental health needs, transport directly to a sobering center for monitoring instead of to an ED.
3. *Frequent Emergency Medical Services (EMS) User*: Provide case management services to people who are frequent 911 callers and frequent visitors to EDs to identify needs that could be met more effectively outside of an ED, and assist patients in accessing primary care, mental health services, substance use disorder treatment, and other services, such as housing and food.
4. *Post-Discharge – Short-Term Follow-Up*: Provide short-term, home-based follow-up care to people recently discharged from a hospital due to a chronic condition (e.g., chronic obstructive pulmonary disease [COPD], heart failure) to reduce their risk of readmission and improve their ability to manage their condition.
5. *Directly Observed Therapy for Tuberculosis*: In collaboration with a public health agency, provide directly observed therapy (DOT) to people with tuberculosis (i.e., dispense medications and observe patients taking them) to ensure effective treatment of tuberculosis and prevent its spread.
6. *Hospice*: In response to 911 calls made by or on behalf of hospice patients, collaborate with hospice agency nurses, patients, and family members to treat patients in their homes, residential care facility, nursing home, or hospice facility, according to their wishes instead of transporting them to an ED.

Research Approach and Methods

The literature search was limited to studies published in the last five years, from 2018 to the present. A total of 12 studies were included in the medical effectiveness review for this report. The other articles were eliminated because they did not focus on the types of CP, TAD, or MIH programs that SB 1180 included, were of poor quality, or did not report findings from research studies. A more thorough description of the methods used to conduct the medical effectiveness review and the process used to grade the evidence for each outcome measure is presented in Appendix B.

¹⁵ Much of the discussion in this section is focused on reviews of available literature. However, as noted in the section on Implementing the Hierarchy of Evidence in the Medical Effectiveness Analysis and Research Approach document (posted at www.chbrp.org/about/analysis-methodology/medical-effectiveness-analysis), in the absence of fully applicable to the analysis peer-reviewed literature on well-designed randomized controlled trials (RCTs), CHBRP's hierarchy of evidence allows for the inclusion of other evidence.

The conclusions below are based on the best available evidence from peer-reviewed and grey literature.¹⁶ Unpublished studies are not reviewed because the results of such studies if they exist, cannot be obtained within the 60-day timeframe for CHBRP reports.

Key Questions

1. In patients with behavioral health concerns, what is the effect of TAD programs compared with usual care on safety, health care utilization, and health outcomes?
2. In patients who are acutely intoxicated but do not have an acute medical or mental health need, what is the effect of TAD programs compared with usual care on safety, health care utilization, and health outcomes?
3. In patients who frequently use EMS services, what is the effect of a CP or MIH program compared with usual care on safety, health care utilization, and health outcomes?
4. In patients recently discharged from the hospital due to a chronic condition, what is the effect of a CP or MIH program that includes short-term follow-up compared with usual care on safety, health care utilization, and health outcomes?
5. In patients with active tuberculosis, what is the effect of a CP program with DOT that dispenses medications and observes patients taking them compared with usual care on health outcomes?
6. In hospice patients, what is the effect of a CP program with hospice services that collaborates with hospice agency nurses, patients, and family members on preventing patient transportation to the ED that is not consistent with a hospice patient's wishes, compared with transportation to the ED without the patient or family discussion of the decision?

Methodological Considerations

The literature review did not discover any randomized controlled trials (RCTs) of CP, TAD, or MIH, programs. There are barriers to conducting RCTs of the effectiveness of these types of programs, resulting in a research base that is not as rigorous, which limits the certainty of conclusions drawn from the literature. All of the studies of the effectiveness of CP, TAD, and MIH programs were observational studies, some had a control group, and many used before and after implementation of the program to assess outcomes.

Outcomes Assessed

CHBRP reviewed studies that evaluated outcomes of interest including the safety and appropriateness of CP, TAD, and MIH programs and the effects on quality of life, health care utilization, ED visits, and clinical outcomes, where present in the literature.

Study Findings

The following section summarizes CHBRP's findings regarding the strength of evidence for the effectiveness of CP, TAD, and MIH services addressed by SB 1180. Each section is accompanied by a corresponding figure. The title of the figure indicates the test, treatment, or service for which evidence is summarized. The statement in the box above the figure

¹⁶ Grey literature consists of material that is not published commercially or indexed systematically in bibliographic databases. For more information on CHBRP's use of grey literature, visit www.chbrp.org/about/analysis-methodology/medical-effectiveness-analysis.

presents CHBRP's conclusion regarding the strength of evidence about the effect of a particular test, treatment, or service based on a specific relevant outcome and the number of studies on which CHBRP's conclusion is based. Definitions of CHBRP's grading scale terms are included in the box below, and more information is included in Appendix B.

The following terms are used to characterize the body of evidence regarding an outcome:

Clear and convincing evidence indicates that there are multiple studies of a treatment and that the large majority of studies are of high quality and consistently find that the treatment is either effective or not effective.

Preponderance of evidence indicates that the majority of the studies reviewed are consistent in their findings that treatment is either effective or not effective.

Limited evidence indicates that the studies have limited generalizability to the population of interest and/or the studies have a fatal flaw in research design or implementation.

Inconclusive evidence indicates that although some studies included in the medical effectiveness review find that a treatment is effective, a similar number of studies of equal quality suggest the treatment is not effective.

Insufficient evidence indicates that there is not enough evidence available to know whether or not a treatment is effective, either because there are too few studies of the treatment or because the available studies are not of high quality. It does not indicate that a treatment is not effective.

More information is available in Appendix B.

Findings on triage to alternate destination programs for patients with behavioral health concerns

In an unblinded, prospective, observational study, Mackey and Qiu (2019; 1,006 patients) reported that specially trained community paramedics in Stanislaus County, California, were able to screen and select patients experiencing an acute mental health crisis for transport directly to psychiatric treatment facilities rather than to the ED. Patients were evaluated using multiple algorithms and directed to either the ED or the mental health facility based upon this evaluation successfully and safely. Of the patients evaluated, 404 patients were taken to the ED; 326 patients were taken to a psychiatric facility but were then transported to a local ED, frequently because of a lack of available psychiatric beds at the facilities; and 276 patients were transported directly to and stayed at a psychiatric facility. Of the patients transported directly to a psychiatric facility, 10 were then taken to the ED within 6 hours, but none of the 10 were admitted to the hospital for a previously unidentified medical or traumatic condition.

In an evaluation of four pilot TAD programs in Stanislaus, Gilroy, Fresno, and Los Angeles that focused on behavioral health patients, Coffman and Blash (2023) reported that patients can safely and appropriately be triaged to an alternate mental health destination. Of the 8,332 patients enrolled in the TAD projects, 160 (2%) were transferred from a mental health crisis center to an ED within 6 hours of arrival at the crisis center. Of those transferred to an ED, 20 patients were admitted for inpatient medical care (none for a life-threatening condition), 40 patients were subsequently transferred back to the mental health crisis center or to an inpatient psychiatric facility, and 99 patients were discharged from an ED without hospital admission or transfer to a mental health facility.

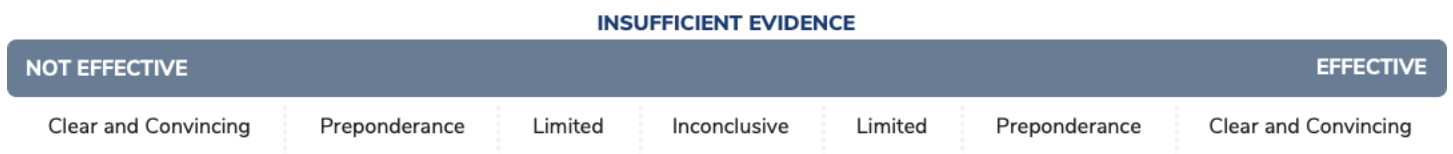
Summary of findings on the effectiveness of TAD programs for patients with behavioral health concerns: There is *limited* evidence based on two evaluation studies of pilot projects in California that patients with behavioral health concerns can safely and appropriately be triaged to an alternate mental health destination.

CHBRP did not find any evidence on clinical outcomes.

Figure 2. Safety and Appropriateness of a Triage to Alternate Destination Program for Patients With Behavioral Health Concerns



Figure 3. Effectiveness of a Triage to Alternate Destination Program for Patients With Behavioral Health Concerns on Clinical Outcomes



Findings on triage to alternate destination programs with triage to sobering centers for patients who are acutely intoxicated but do not have an acute medical or mental health need

In an evaluation of TAD programs, Coffman and Blash (2023) reported that 98.3% of patients enrolled in San Francisco’s Alternate Destination – Sobering Center project (3,906 patients) were treated safely and effectively at the sobering center. Of patients enrolled, 1.6% were transferred to an ED within six hours of admission to the sobering center and 0.1% were rerouted from the sobering center to an ED because registered nurses at the sobering center declined to accept them. Of the 64 patients transferred or rerouted, 12 patients were admitted to a hospital for inpatient medical care. The Los Angeles’ Alternate Destination – Sobering Center (96 patients) project reported that no patients enrolled in the pilot were transferred to an ED within six hours of admission.

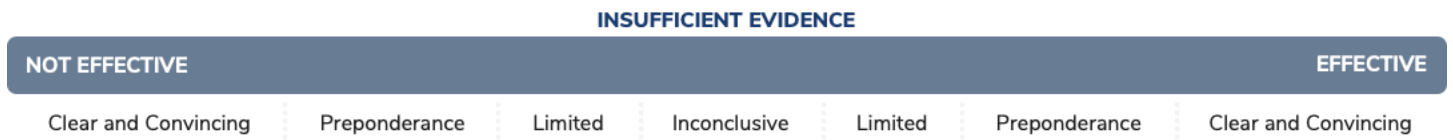
Summary of findings regarding the effectiveness of TAD programs with triage to sobering centers for patients who are acutely intoxicated but do not have an acute medical or mental health need: There is *limited* evidence based on one evaluation study of pilot projects in California that patients who are acutely intoxicated but do not have an acute medical or mental health need can be safely and appropriately identified by a TAD program and triaged to sobering centers.

CHBRP did not find any evidence on clinical outcomes.

Figure 4. Safety and Appropriateness of a Triage to Alternate Destination Program With Triage to Sobering Centers for Patients Who Are Acutely Intoxicated But Do Not Have an Acute Medical or Mental Health Need



Figure 5. Effectiveness of a Triage to Alternate Destination Program for Patients Who Are Acutely Intoxicated But Do Not Have an Acute Medical or Mental Health Need on Clinical Outcomes



Findings on the effectiveness of community paramedicine programs or mobile integrated health programs in patients who frequently use EMS services

Clinical Outcomes

A small retrospective pre-post evaluation (Nejtek et al., 2017; 64 patients) reported improved quality of life¹⁷ in patients who frequently used the ED for nonurgent or urgent care/primary care treatable conditions after the implementation of community paramedics delivering a MIH program. Specifically, 38% of those with mobility problems (n = 42) reported improvement, 58% of those with problems performing usual activities (n = 45) reported improvement, and 42% of patients with moderate to extreme pain or discomfort (n = 48) reported no pain or discomfort after program completion. The authors noted that because of the small convenience sample of eligible participants, these results are not generalizable to the greater population.

Utilization of Health Services

In a meta-analysis of 12 observational studies examining ED visits, Lurie et al. (2023) reported that MIH-CP interventions significantly reduced ED visits and hospitalizations. Compared with nonintervention, MIH-CP interventions reduced ED visits by 44% (9 studies; 5,553 patients) and were associated with a significant reduction of hospitalizations, compared with no intervention (5 studies; 937 patients; risk ratio for hospitalizations: 0.46, P < 0.001).

In a cluster randomized trial approach with a stepped wedge design¹⁸ of Medicaid beneficiaries who were high ED users assigned to a CP program (home visits over intervention study period) or usual care, Currier et al. (2023; 102 patients) reported decreases in the mean number of ED visits and avoidable ED visits¹⁹ for the study population compared to control. ED visits decreased by 16.1%, or 7.1 visits saved per 100 people, and avoidable ED visits decreased by 32%, or a reduction of 1.8 visits for every 100 people.

A 24-month retrospective cohort study in Toronto (Verma et al., 2018; 1,851 patients) comparing ED utilization 6 months before and after paramedic-initiated home care referrals were implemented reported that improved access to and use of

¹⁷ Agency for Healthcare Research and Quality use of the EuroQoL-5D-3L Health Questionnaire (EQ-5D-3L), the EMS provider's Critical Care Group chose this instrument to measure quality of life before and after participants completed the MIH program. The EQ-5D-3L is a two-part self-rating tool measuring activities of daily living (i.e., mobility, self-care, usual activities), somatic (i.e., pain & discomfort), psychological functioning (i.e., anxiety & depression), and overall health. Part one of the EQ-5D-3L utilizes qualitative self-report ratings rather than numeric scores. Part two of the EQ-5D-3L tool is a visual analogue scale (VAS) from 0 to 100 (i.e., 0 = worst health, 100 = the best health you can imagine) that participants rated their overall health.

¹⁸ Patients were clustered at the clinic level; the unit of randomization was the clinic. Clinic crossover was unidirectional from the control to the intervention condition. By the conclusion of the final sequence, all of the clinics received the CP intervention.

¹⁹ Emergency medicine use is the sum of ED visits per member per month. Avoidable ED visit is defined as "not requiring any diagnostic tests, procedures or medication" (Hsia and Niedzwiecki, 2017).

home care services were associated with significantly reduced 911 calls (10% reduction) and ambulance transports to an ED (7% reduction).

A small retrospective pre-post evaluation of a CP program (Nejtek et al., 2017; 64 patients) reported decreased ED transports ($p < 0.000$), ED admissions ($p < 0.000$), and inpatient hospital admissions ($p = 0.003$) at 9-month follow-up, compared to baseline.

Summary of findings regarding effectiveness of a CP program or MIH program in patients who frequently use EMS services:

There is *insufficient* evidence that a CP program or MIH program can improve clinical outcomes based on one small, observational study that reported improvement in quality of life (in terms of pain and mobility), when compared with usual care.

There is a *preponderance of* evidence, based on 15 observational studies, that CP programs, including MIH-CP interventions, are effective in reducing inappropriate utilization of health services including hospitalizations and avoidable ED visits.

Figure 6. Effectiveness of a Community Paramedicine Program or Mobile Integrated Health Program in Patients Who Frequently Use EMS Services on Clinical Outcomes

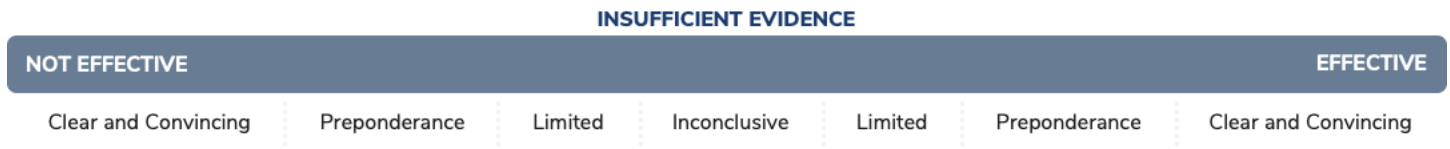


Figure 7. Effectiveness of a Community Paramedicine Program or Mobile Integrated Health Program in Patients Who Frequently Use EMS Services on the Utilization of Health Services



Findings on the effectiveness of community paramedicine programs or mobile integrated health programs with short-term follow-up for patients recently discharged from the hospital due to a chronic condition

In a retrospective observational study comparing 464 patients enrolled in an MIH-CP program in Baltimore to 5,530 propensity-matched controls receiving usual care, Gingold et al. (2021; 464 intervention subjects) reported a significantly higher rate of 30-day hospital observation stays (adjusted incidence RR = 1.78, 95% CI = [1.01, 3.14]) for patients enrolled in an MIH-CP program, no difference in 30-day hospital observation stays at 60 days, and no significant differences in 30-day inpatient readmission, excess days in acute care, or ED visits for participants in the MIH-CP program compared to controls.

In a pilot observational study with a control group (43 CP and 40 controls), to evaluate the impact of the MIH-CP program²⁰ on medication adherence among patients with CHF and/or COPD, Sokan et al. (2022) reported that medication adherence was not statistically significantly different among patients enrolled in the MIH-CP program compared with controls during the first 30 days post-discharge nor after 30 days post-discharge.

An observational prospective cohort study by Ulintz et al. (2023) on older adults (84 CP, 83 physician home visit) compared patients evaluated by a community paramedic with telemedicine provided by a primary care physician to those evaluated by an in-person physician home visit for urgent needs. The authors reported that patients evaluated by a community paramedic were seen sooner, used acute care similarly to patients evaluated by a physician home visit, had 29% more primary care visits, and had shorter wait times for urgent evaluations (1 vs. 5 days; $p < 0.001$) without increasing acute care use or 30-day readmissions.

In a matched cohort study to quantify the impact of a 30-day CP intervention on all-cause hospital readmissions and ED visits at 30, 120, and 210 days post-hospital discharge in patients with congestive heart failure (CHF), acute myocardial infarction (AMI), and COPD, Burnett et al. (2023; 78 CP intervention and 78 controls) reported that patients in the CP intervention group had significantly fewer (40.7% fewer) ED visits at 210 days follow-up, significantly fewer hospital readmissions at 120 days (34.6% vs. 64.1%) and 210 days (43.6% vs. 75.6%) after discharge, and significantly more follow-up clinic visits in the first 30 days (92.3% vs. 75.6%); patients had fewer, but not significantly different, follow-up clinic visits at 120 or 210 days).

Summary of findings regarding effectiveness of a CP program or MIH program with short-term follow-up for patients recently discharged from the hospital due to a chronic condition:

There is *limited* evidence from four studies that a CP or MIH program with short-term follow-up for patients recently discharged from the hospital due to a chronic condition (e.g., COPD, heart failure) can improve post-hospital discharge outcomes.

There is also *limited* evidence from two studies that a CP or MIH program with short-term follow-up for patients recently discharged from the hospital can increase primary care visits.

Figure 8. Effectiveness of a Community Paramedicine Program or Mobile Integrated Health Program With Short-Term Follow-Up for Patients Recently Discharged From the Hospital Due to a Chronic Condition on Post-Hospital Discharge Outcomes and Primary Care Visits



Findings on the effectiveness of community paramedicine programs with directly observed therapy for tuberculosis patients

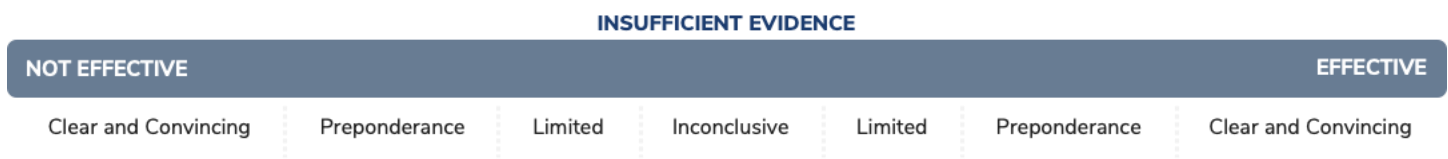
In an observational evaluation report of a CP DOT pilot program in Ventura County, California (58 patients), Coffman and Blash (2023) reported no evidence of harm to patients or any greater frequency of side effects or symptoms beyond those typically associated with taking TB medications. Additionally, people with TB who received DOT from community paramedics were more likely to receive all doses of TB medications prescribed by the TB clinic physician than people who

²⁰ Program used EMS providers to deliver in-home care with the multidisciplinary support of pharmacists, medical doctors, nurses, and community health workers (CHWs) to assist patients with complex medical conditions and needs during the transition period.

received DOT exclusively from the TB clinic’s staff, measured by the cumulative percentage of times a scheduled DOT was not completed throughout the 6-year study (0.06% of doses vs. 7.9% of doses).

Summary of findings regarding effectiveness of a CP program with DOT for tuberculosis patients on safety and medication adherence: There is *insufficient* evidence that a CP program with directly observed therapy (DOT) for tuberculosis patients is as safe as usual care (public health–managed DOT program) and that a CP program that dispenses medications and observes tuberculosis patients taking the medications is more effective than usual care on medication adherence based on one small evaluation study without a control group.

Figure 9. Effectiveness of a Community Paramedicine Program With Directly Observed Therapy for Tuberculosis Patients on Safety and Medication Adherence



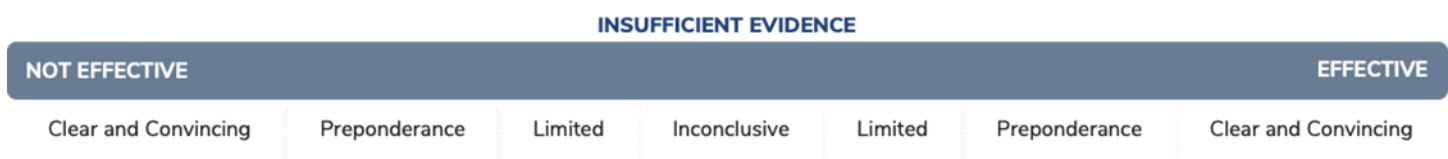
Findings on the effectiveness of community paramedicine programs with hospice services that collaborate with hospice agency nurses, patients, and family members on patient transports to the emergency department

An important part of hospice care is to provide medical, psychological, and any other support to persons dying from a terminal illness. This care is usually in a patient’s home, a residential care facility, a nursing home, or an inpatient hospice facility. Sometimes hospice patients, family members, or other caregivers contact 911 instead of the hospice if they think there is a medical need or emergency, leading to unnecessary transportation to an ED. In addition, insurers may revoke hospice benefits if the patient receives treatment for their terminal illness that is incompatible with hospice comfort care. Staying at home and avoiding hospitalizations/ED visits is a major goal for hospice patients.

CHBRP found one observational time series study that evaluated the effectiveness of a CP program with hospice services. Breyre et al. (2022; 523 hospice patients) reported a significant reduction in avoidable transports to the ED for hospice patients. During the first, second, and third year after project implementation, the percentage of hospice patients transported to the ED decreased to 36.2%, 33.2%, and 24.8%, respectively, compared to 80.3% in the 6 months prior to project implementation, an absolute risk reduction of 46.6% (95% confidence interval: 38.53% to 54.72%). Of hospice patients transported, the most common reason for transport was fall/trauma.

Summary of findings on the effectiveness of a CP program with hospice services that collaborates with hospice agency nurses, patients, and family members on patient transports to the ED: There is insufficient evidence based on one study that a CP program with hospice services that collaborates with hospice agency nurses, patients, and family members reduces patient transports to the ED.

Figure 10. Findings on the Effectiveness of a Community Paramedicine Program With Hospice Services That Collaborates With Hospice Agency Nurses, Patients, and Family Members on Patient Transports to the ED



Summary of Findings

Overall, CHBRP found: (1) *limited* evidence that CP, TAD, and MIH programs are safe and effective; and (2) *insufficient* evidence that CP, TAD, and MIH programs impact clinical outcomes.

There is *limited* evidence based on two evaluation studies of pilot projects in California that TAD programs can safely and appropriately identify patients with behavioral health concerns for triage to an alternate mental health destination.

There is *limited* evidence based on one evaluation study of pilot projects in California that patients who are acutely intoxicated but do not have acute medical or mental health needs can be safely and appropriately identified by TAD programs and then triaged to sobering centers.

There is *a preponderance of* evidence from 15 studies that, for patients who frequently use EMS services, CP and MIH programs are effective at reducing hospitalizations and avoidable ED visits.

There is *insufficient* evidence that, for patients who frequently use EMS services, CP and MIH programs are effective at improving clinical outcomes.

There is *limited* evidence from four studies that a CP or MIH program with short-term follow-up for patients recently discharged from the hospital due to a chronic condition can improve post-hospital discharge outcomes and *limited* evidence from two studies that a CP or MIH program with short-term follow-up for patients recently discharged from the hospital can increase primary care visits.

There is *insufficient* evidence based on one study that a CP program with DOT for tuberculosis patients is as safe as usual care (public health–managed DOT program) and that a CP program that dispenses medications and observes tuberculosis patients taking the medications is more effective than usual care on medication adherence.

There is *insufficient* evidence based on one study that a CP program with hospice services that collaborates with hospice agency nurses, patients, and family members reduces patient transports to the ED.

Benefit Coverage, Cost, and Utilization Impacts

CHBRP estimates no measurable fiscal impact or significant utilization increase due to SB 1180 in the short term.²¹ CHBRP notes that: (1) the availability of community paramedicine (CP), triage to alternate destination (TAD), and mobile integrated health (MIH) programs in California will likely remain low (see the *Background* section for more on the programs in California at baseline); (2) existing CP, TAD, and MIH programs have been largely reliant on grants and local public or private agency investments; and (3) to be reimbursed for CP, TAD, and MIH services, programs will need to develop contracts with health plans and policies with regard to services and reimbursement rates.

Approach

As discussed in the *Background* section, the development of CP, TAD, and MIH programs in California has historically come from grants or from public or private EMS agencies (and health care partner organizations) interested in developing these programs. These programs often target specific health issues or populations. In the evaluation of California's CP pilot programs, Coffman and Blash (2021) found that some CP and TAD programs used in-kind contributions of supplies and labor to operate the programs in the state. In a national survey of community paramedics, the lack of sustainable reimbursement models was cited as a primary concern for these programs (Okoh et al., 2023). CHBRP assumed baseline benefit coverage of CP, TAD, and MIH to be nonexistent based on the known funding sources for existing CP, TAD, and MIH programs and an actuarial review of claims data.²² The costs following the enactment of SB 1180 would be a function of the increased supply or number of programs available and the increased utilization of the services provided by these programs.

Populations Served: CP, TAD, and MIH programs are not one-size-fits-all, but rather are tailored based on community needs and available partner services. The few programs CHBRP found to be currently active in California are illustrative of that community-tailored fit across various LEMSAs (see the *Background* section), thus the populations served by these programs at baseline represent a small proportion of the 24.2 million enrollees who have health insurance subject to SB 1180 (see *Policy Context* section). CHBRP found no publicly available utilization reports for these active programs. Based on the findings from Coffman and Blash's (2021) pilot program evaluation, a large proportion of enrollees in future CP, TAD, and MIH programs may be Medi-Cal beneficiaries.

Services: Service components in CP and MIH programs that potentially could be reimbursed by health plans and policies include: (1) transport; and (2) medical procedures and services. Transport services are coded using Healthcare Common Procedure Coding System (HCPCS), whereas medical services are coded using Current Procedural Terminology (CPT). This distinction is important in that EMS service providers are only reimbursed for transport HCPCS codes. They are reimbursed for medical procedure or service CPT codes *only* if contracts are in place with health plans and policies to allow trained EMS transport providers to be reimbursed for medical procedures and services as part of a CP program. This restriction likely limits insurer reimbursement of these services when provided by EMS. This is different from the MIH program wherein medical providers such as nurse practitioners or physician assistants can be reimbursed for medical procedures and services they provide as part of their MIH involvement.

²¹ However, CHBRP estimates SB 1180 may have impacts beyond the first 12 months of implementation; see the *Long-Term Impacts* section for a description.

²² Anthem BlueCross BlueShield announced that in 2018, it would begin paying for treatment without transport for Healthcare Common Procedure Coding System (HCPCS) A0998-coded 9-1-1 responses. However, based on CHBRP's awareness of two current MIH programs funded by grants or public-private partnerships in California and on an analysis of claims data for this code, as well as knowledge of funding for the current one CP and four TAD programs in California, CHBRP assumed there is no baseline benefit coverage.

CHBRP found no single, established list of service codes for CP and MIH. Instead, CHBRP found examples of negotiated and approved reimbursable HCPCS and CPT codes, which vary from program to program across the country. CP and MIH programs must enter into contract negotiations with health plans and policies with regard to their services and reimbursement rates for the covered codes. Unlike CP and MIH programs where treatment occurs primarily in the community, TAD programs involve an assessment and transportation to a facility other than the emergency department (ED). As with services provided by CP and MIH programs, transportation reimbursement for TAD must be arranged through contracts with health plans and policies.

Based on peer-reviewed studies described in the *Medical Effectiveness* section on reductions in inappropriate utilization of health services including hospitalizations and ED visits, it is possible that increased utilization of CP, TAD, and MIH programs could lead to cost savings due to reductions in avoidable ED visits and hospitalizations in the long term. In their study on the Los Angeles Fire Department (LAFD) Mobile Integrated Health Care Unit (known as Advanced Provider Response Unit, or APRU), Sanko and Eckstein (2021) compared the costs of traditional 911 EMS transport to an ED to the costs of their EMS advanced practice providers (APPs) and MIH transport to alternate destination programs. The traditional EMS transport to ED cost in 2021 was estimated to be a total of \$4,071 (\$2,071 from the ED charge and \$2,000 for EMS). The EMS APP treatment-in-place program cost \$1,030 for the on-scene providers. For the MIH transport to alternate destination program, the total cost was \$1,230 (\$1,030 for the MIH telehealth provider and \$200 for the urgent care alternate destination). Thus, there could be cost savings to health plans and policies postmandate in the long term if programs are able to serve patient needs and are scaled in a cost-effective way.

CHBRP estimates no measurable fiscal impact or expected utilization increase due to SB 1180 in the short term. However, CHBRP estimates SB 1180 may have impacts beyond the first 12 months of implementation; see the *Long-Term Impacts* section for a description.

Public Health Impacts

As discussed in the *Policy Context* section, SB 1180 would mandate coverage of services provided by a community paramedicine (CP) program, triage to alternate destination (TAD) program, or mobile integrated health (MIH) program.

This section estimates the short-term impact of SB 1180 on enrollee access to CP, TAD, and MIH programs and subsequent related outcomes.

Estimated Public Health Outcomes

As presented in the *Medical Effectiveness* section, CHBRP found: (1) *limited* evidence that CP, TAD, and MIH programs are safe and effective; and (2) *insufficient* evidence that CP, TAD, and MIH programs impact clinical outcomes.

As presented in the *Cost* section, CHBRP estimates no measurable fiscal impact or utilization increase due to SB 1180 in the short term. CHBRP notes that the availability of CP, TAD, and MIH programs in California will likely remain low until reimbursement codes are identified; CP, TAD, and MIH programs are developed (and approved); and programs develop contracts with health plans and policies that establish reimbursement rates for agreed upon services.

CHBRP concludes that the passage of SB 1180 would have no measurable public health impact due to no measurable change in utilization in the first 12 months postmandate and insufficient evidence on clinical outcomes. Insufficient evidence is not evidence of no effect; rather the effect is unknown. Based on *limited* evidence that TAD programs safely and appropriately identified patients for triage to alternate destinations (e.g., sobering center, mental health crisis center), and that CP and MIH programs improved post-hospital discharge outcomes for patients recently discharged from the hospital due to a chronic condition, real changes in health status and outcomes could occur at the person-level for those enrollees receiving these services postmandate.

Long-Term Impacts

CHBRP assumes if SB 1180 were enacted, over time, there would be growth/expansion of existing CP, TAD, and MIH programs as well as growth in new programs in areas of need. CHBRP assumes existing CP, TAD, and MIH programs and any CP or TAD programs in the review process queue at EMSA would likely be among the first programs to enter into contract negotiations with health plans and policies. Per the San Diego EMS agency website, they have submitted applications for CP and TAD programs that are in the review queue at EMSA at baseline. CHBRP is not aware of any other applications pending review, but there may be a small number. The ability of future CP, TAD, and MIH programs to be financially sustainable will be influenced by the fee schedules for these services set at the local levels.

Based on peer-reviewed studies described in the *Medical Effectiveness* section, it is possible that increased utilization of CP, TAD, and MIH programs in the state could lead to cost savings due to reductions in avoidable ED visits and hospitalizations. As noted in the *Cost* section, there could be cost savings to health plans and policies postmandate in the long term if programs are able to serve patient needs and are scaled in a cost-effective way. However, programs will need to develop contracts with health plans and policies with regard to services and reimbursement rates. Other implementation challenges for CP, TAD, and MIH programs exist, including having sufficient capacity in sobering centers and mental health facilities across communities that can accommodate patients diverted from EDs and contracting with such centers. CHBRP acknowledges that although challenges in establishing administrative systems and processes are not insurmountable, they will necessitate time and investment from multiple stakeholders before any of the models can be expanded to serve the intended populations identified by local entities.

Appendix A. Text of Bill Analyzed

On February 15, 2024, the California Senate Committee on Health requested that CHBRP analyze SB 1180 as introduced on February 14, 2024.

SENATE BILL**NO. 1180****Introduced by Senator Ashby****February 14, 2024**

An act to add Section 1371.51 to the Health and Safety Code, to add Section 10126.61 to the Insurance Code, and to add Section 14132.13 to the Welfare and Institutions Code, relating to health care coverage.

LEGISLATIVE COUNSEL'S DIGEST

SB 1180, as introduced, Ashby. Health care coverage: emergency medical services.

Existing law, the Knox-Keene Health Care Service Plan Act of 1975, provides for the licensure and regulation of health care service plans by the Department of Managed Health Care and makes a willful violation of the act a crime. Existing law also provides for the regulation of health insurers by the Department of Insurance. Existing law requires health care service plan contracts and health insurance policies to provide coverage for certain services and treatments, including medical transportation services. Existing law provides for the Medi-Cal program, administered by the State Department of Health Care Services and under which qualified low-income individuals receive health care services, including emergency medical transport. The Medi-Cal program is, in part, governed and funded by federal Medicaid program provisions.

Existing law, until January 1, 2031, authorizes a local emergency medical services (EMS) agency to develop a community paramedicine or triage to alternate destination program that, among other things, provides case management services to frequent EMS users and triage paramedic assessments.

This bill would require a health care service plan contract or health insurance policy issued, amended, or renewed on or after January 1, 2025, to include coverage for services provided by a community paramedicine program, a triage to alternate destination program, and a mobile integrated health program. The bill would require those plans and policies to require an enrollee or insured who receives covered services from a noncontracting program to pay no more than the same cost-sharing amount they would pay for the same covered services received from a contracting program. The bill would specify the reimbursement process and amount for a noncontracting program. Because a willful violation of these provisions by a health care service plan would be a crime, the bill would impose a state-mandated local program. The bill would also make services provided by these programs covered benefits under the Medi-Cal program.

The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that no reimbursement is required by this act for a specified reason.

Vote: majority Appropriation: no Fiscal Committee: yes Local Program: yes

THE PEOPLE OF THE STATE OF CALIFORNIA DO ENACT AS FOLLOWS:

SECTION 1. Section 1371.51 is added to the Health and Safety Code, to read:

1371.51. (a) A health care service plan contract issued, amended, or renewed on or after January 1, 2025, shall include coverage for services provided by a community paramedicine program, triage to alternate destination program, or mobile integrated health program.

(b) (1) A health care service plan contract issued, amended, or renewed on or after January 1, 2025, shall require an enrollee who receives covered services from a noncontracting community paramedicine program, triage to alternate destination program, or mobile integrated health program to pay no more than the same cost-sharing amount that the enrollee would pay for the same covered services received from a contracting community paramedicine program, triage to alternate destination program, or mobile integrated health program.

(2) Reimbursement for a noncontracting community paramedicine program, triage to alternate destination program, or mobile integrated health program shall follow the same process as described in Section 1371.56.

(c) For purposes of this section:

(1) “Community paramedicine program” means a program defined in Section 1815.

(2) “Mobile integrated health program” means a fire department-based team of licensed health care practitioners, operating within their scope of practice, who provide mobile health services to support the emergency medical services system.

(3) “Triage to alternate destination program” means a program defined in Section 1819.

SEC. 2. Section 10126.61 is added to the Insurance Code, to read:

10126.61. (a) A health insurance policy issued, amended, or renewed on or after January 1, 2025, shall include coverage for services provided by a community paramedicine program, triage to alternate destination program, or mobile integrated health program.

(b) (1) A health insurance policy issued, amended, or renewed on or after January 1, 2025, shall require an insured who receives covered services from a noncontracting community paramedicine program, triage to alternate destination program, or mobile integrated health program to pay no more than the same cost-sharing amount that the insured would pay for the same covered services received from a contracting community paramedicine program, triage to alternate destination program, or mobile integrated health program.

(2) Reimbursement for a noncontracting community paramedicine program, triage to alternate destination program, or mobile integrated health program shall follow the same process as described in Section 10126.66.

(c) For purposes of this section:

(1) “Community paramedicine program” means a program defined in Section 1815 of the Health and Safety Code.

(2) “Mobile integrated health program” means a fire department-based team of licensed health care practitioners, operating within their scope of practice, who provide mobile health services to support the emergency medical services system.

(3) “Triage to alternate destination program” means a program defined in Section 1819 of the Health and Safety Code.

SEC. 3. Section 14132.13 is added to the Welfare and Institutions Code, to read:

14132.13.(a) Services provided by a community paramedicine program, triage to alternate destination program, or mobile integrated health program are covered benefits under the Medi-Cal program.

(b) The department shall develop rates of reimbursement for services provided by a community paramedicine program, triage to alternate destination program, or mobile integrated health program in consultation with community paramedicine programs, triage to alternate destination programs, and mobile integrated health programs.

(c) For purposes of this section:

(1) “Community paramedicine program” means a program defined in Section 1815 of the Health and Safety Code.

(2) “Mobile integrated health program” means a fire department-based team of licensed health care practitioners, operating within their scope of practice, who provide mobile health services to support the emergency medical services system.

(3) “Triage to alternate destination program” means a program defined in Section 1819 of the Health and Safety Code.

SEC. 4. No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution because the only costs that may be incurred by a local agency or school district will be incurred because this act creates a new crime or infraction, eliminates a crime or infraction, or changes the penalty for a crime or infraction, within the meaning of Section 17556 of the Government Code, or changes the definition of a crime within the meaning of Section 6 of Article XIII B of the California Constitution.

Appendix B. Literature review specifications

This appendix describes methods used in the literature review conducted for this report. A discussion of CHBRP’s system for medical effectiveness grading evidence, as well as lists of MeSH Terms, publication types, and keywords, follows.

Studies of the effects of CP and alternate to alternate destination services addressed by SB 1180 were identified through searches of were identified through searches of PubMed, the Cochrane Library, Web of Science, the Cumulative Index of Nursing and Allied Health Literature (CINAHL), and PsycINFO. Websites maintained by the following organizations were also searched: the Agency for Healthcare Research and Quality (AHRQ), the National Institute for Health and Clinical Excellence (NICE), U.S. Preventive Services Task Force (USPSTF), World Health Organization (WHO), and the Scottish Intercollegiate Guideline Network. The search was limited to abstracts of studies published in English. The search was limited to studies published from 2018 to present. The literature on the medical effectiveness of CP and alternate to alternate destination services did not include any randomized controlled trials. The majority of the papers returned were case reports, observational studies with no control group, or evaluations.

Reviewers screened the title and abstract of each citation retrieved by the literature search to determine eligibility for inclusion. The reviewers acquired the full text of articles that were deemed eligible for inclusion in the review and reapplied the initial eligibility criteria.

Medical Effectiveness Review

A total of 12 studies were included in the medical effectiveness review for SB 1180.

Medical Effectiveness Evidence Grading System

In making a “call” for each outcome measure, the medical effectiveness lead and the content expert consider the number of studies as well the strength of the evidence. Further information about the criteria CHBRP uses to evaluate evidence of medical effectiveness can be found in CHBRP’s *Medical Effectiveness Analysis Research Approach*.²³ To grade the evidence for each outcome measured, the team uses a grading system that has the following categories:

- Research design;
- Statistical significance;
- Direction of effect;
- Size of effect; and
- Generalizability of findings.

The grading system also contains an overall conclusion that encompasses findings in these five domains. The conclusion is a statement that captures the strength and consistency of the evidence of an intervention’s effect on an outcome. The following terms are used to characterize the body of evidence regarding an outcome:

- *Clear and convincing evidence;*
- *Preponderance of evidence;*
- *Limited evidence;*

²³ Available at: http://chbrp.com/analysis_methodology/medical_effectiveness_analysis.php.
Current as of April 15, 2024

- *Inconclusive evidence*; and
- *Insufficient evidence*.

A grade of *clear and convincing evidence* indicates that there are multiple studies of a treatment and that the large majority of studies are of high quality and consistently find that the treatment is either effective or not effective.

A grade of *preponderance of evidence* indicates that the majority of the studies reviewed are consistent in their findings that treatment is either effective or not effective.

A grade of *limited evidence* indicates that the studies had limited generalizability to the population of interest and/or the studies had a fatal flaw in research design or implementation.

A grade of *inconclusive evidence* indicates that although some studies included in the medical effectiveness review find that a treatment is effective, a similar number of studies of equal quality suggest the treatment is not effective.

A grade of *insufficient evidence* indicates that there is not enough evidence available to know whether or not a treatment is effective, either because there are too few studies of the treatment or because the available studies are not of high quality. It does not indicate that a treatment is not effective.

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About CHBRP

The California Health Benefits Review Program (CHBRP) was established in 2002. As per its authorizing statute, CHBRP provides the California Legislature with independent analysis of the medical, financial, and public health impacts of proposed health insurance benefit-related legislation. The state funds CHBRP through an annual assessment on health plans and insurers in California.

A group of faculty, researchers, and staff complete the analysis that informs California Health Benefits Review Program (CHBRP) reports. The CHBRP **Faculty Task Force** comprises rotating senior faculty from University of California (UC) campuses. In addition to these representatives, there are other ongoing researchers and analysts who are **Task Force Contributors** to CHBRP from UC that conduct much of the analysis. The **CHBRP staff** works with Task Force members in preparing parts of the analysis, and manages external communications, including those with the California Legislature. As required by CHBRP's authorizing legislation, UC contracts with a certified actuary, **Milliman**, to assist in assessing the financial impact of each legislative proposal mandating or repealing a health insurance benefit. The **National Advisory Council** provides expert reviews of draft analyses and offers general guidance on the program to CHBRP staff and the Faculty Task Force. Information on CHBRP's analysis methodology, authorizing statute, as well as all CHBRP reports and other publications, are available at www.chbrp.org.

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Aimee Moulin, MD, and Margaret Fix, MPH, all of the University of California, Davis prepared the medical effectiveness analysis. Megan Van Noord, MS, of the University of California, Davis conducted the literature search. Dominique Ritley, MPH, Bethney Bonilla-Herrera, MA, and Katrine Padilla, MPP, all of the University of California, Davis, prepared the public health impact analysis. Riti Shimkhada, PhD, of the University of California, Los Angeles, prepared the cost impact analysis. Karen Shore, PhD, CHBRP contractor, prepared the Policy Context and synthesized the individual sections into a single report. A subcommittee of CHBRP's National Advisory Council (see previous page of this report) and a member(s) of the CHBRP Faculty Task Force, Elizabeth Magnan, MD, PhD, of the University of California, Davis, and Jack Needleman, PhD, of the University of California, Los Angeles, reviewed the analysis for its accuracy, completeness, clarity, and responsiveness to the Legislature's request.

CHBRP assumes full responsibility for the report and the accuracy of its contents. All CHBRP bill analyses and other publications are available at www.chbrp.org.

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Please direct any questions concerning this document to: California Health Benefits Review Program; MC 3116; Berkeley, CA 94720-3116, info@chbrp.org, or www.chbrp.org

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