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# 2020

## Stroke Advisory Board Legislative Report

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January - December 2020

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Approved by Colorado Stroke Advisory Board on 11/17/2020

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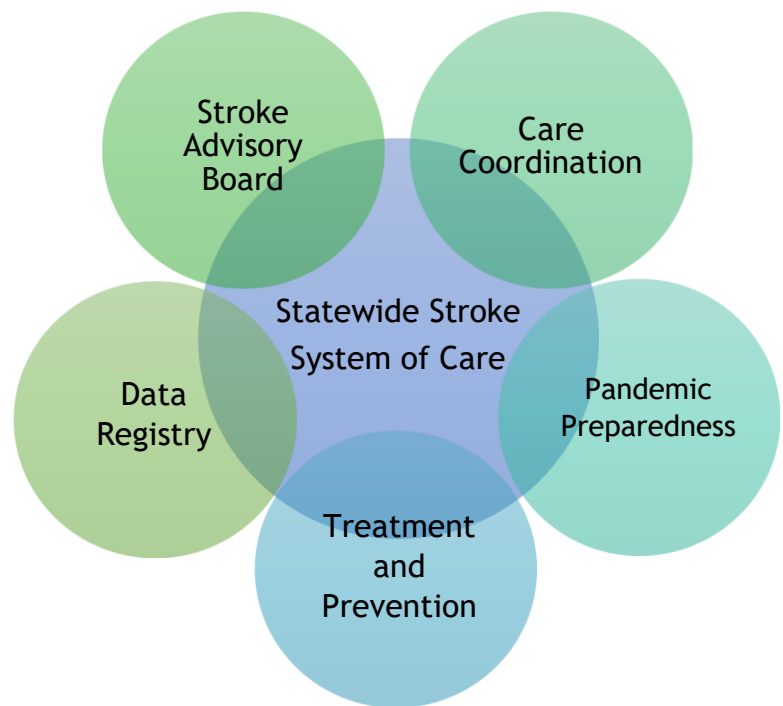
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# Background

The Stroke Advisory Board is a governor-appointed board that makes recommendations to the legislature each January on how to improve stroke care in Colorado. 25-3-115 C.R.S originally created the Board in 2013. However, in June of 2020 house bill 20-1397 withdrew the Board's administrative support provided by the Colorado Department of Public Health and Environment, creating the need to develop a new platform for the Board to function. This transition does make it more difficult for the Board to meet its directives and decreases its ability to collaborate and impact care in communities.

The Board recommends a statewide system of care for stroke that addresses local, regional and statewide resources that support the full continuum of care which includes prevention, acute treatment and rehabilitation.

The Board's recommendation for a statewide system includes five elements, each essential to its overall function. The proposed model for a statewide system of care is comprehensive and customized to meet Colorado's unique needs. It has the potential to obtain better care outcomes, be more cost effective, and be more beneficial to Colorado's citizens than other existing statewide systems of care for stroke. This report contains the Board's recommendations and addresses legislative implications.



## Priorities for 2021

- ☐ Restore administrative resources for the Board and the stroke system of care.
- ☐ Develop a platform for a voluntary system of care facilitated that incorporates support for facilities that are not nationally certified as stroke centers.
- ☐ Get feedback, refine, and disseminate EMS and hospital toolkits.
- ☐ Develop recommendations for non-stroke centers and disadvantaged counties to meet evidence-based guidelines for intravascular and endovascular therapy treatment goals.
- ☐ Develop a statewide system of collecting stroke data with a mechanism for data-driven quality improvement.
- ☐ Improved public messaging on seeking treatment for serious health conditions such as stroke even during a pandemic.

# Background

On May 24, 2013, Gov. John Hickenlooper signed 25-3-115, C.R.S. into law and it was revised in May 2018 to extend the Stroke Advisory Board until Sept. 1, 2028. This legislation formed and instructed the Stroke Advisory Board to make recommendations to improve stroke care in Colorado and specifically address the following issues:

- Creation of a state database or registry consisting of data on stroke care
- Public access to aggregated data
- Treatment and prevention of stroke using evidence-based practice
- Rural and urban care coordination
- Whether stroke designation is necessary to ensure quality care

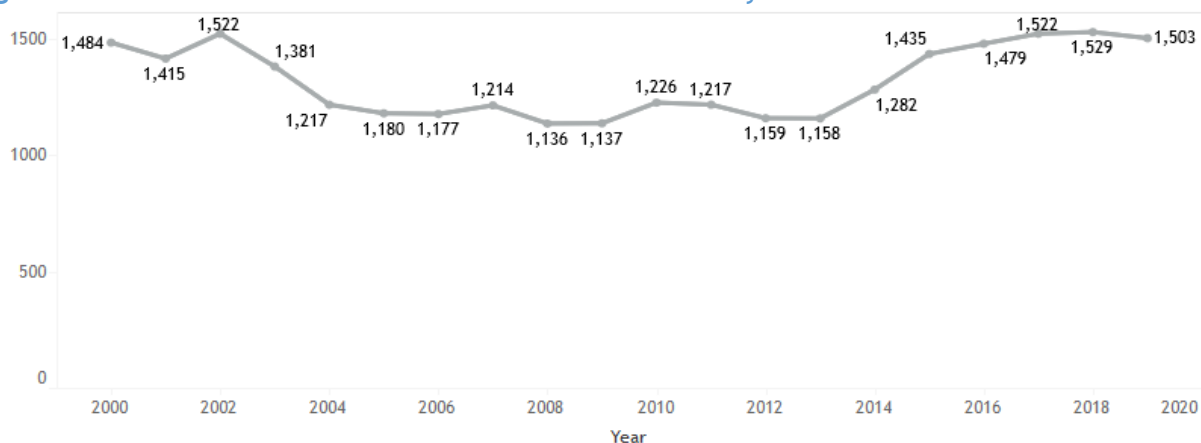
The Board is made up of 18 governor-appointed members and one ex-officio member from the Colorado Department of Public Health and Environment. The legislation for the Board is, located in Appendix 6. Board members who contributed to this annual report are listed in Appendix 4.

In May 2017, the legislature adopted Senate Joint Resolution 17-027, located in Appendix 5, which recognized the need to expand access to effective stroke care through education and support for providers. The Board found that the resolution aligned with the legislation that directs its works.

Board meetings were facilitated by the Colorado Department of Public Health and Environment. On June 30, 2020, Gov. Jared Polis signed revised 25-3-115, C.R.S., absolving the Department from providing any financial or administrative support related to operations of the Board. This has hampered the ability of the Board to work effectively and continue its mandate to improve stroke care in Colorado.

Stroke continues to be a problem in Colorado representing 1,503 deaths in 2019 (figure 1) and was the leading cause of long-term disability. National guidelines for acute stroke care are changing rapidly.<sup>1</sup> The Board continues to work diligently to adapt these standards to Colorado by developing recommendations to improve both the quality of and access to stroke care.

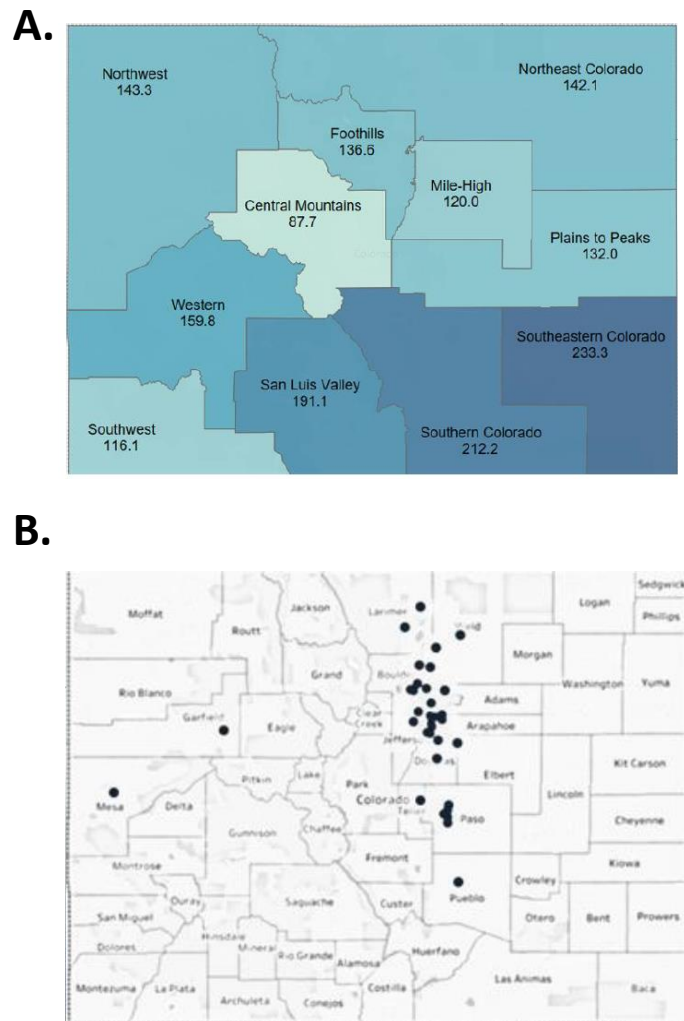
**Figure 1. Number of Deaths from Cerebrovascular Disease by Year from 2000 to 2019 in Colorado**



# Introduction

Acute stroke treatment is time-sensitive and requires early recognition, intervention and rehabilitation to improve outcomes. Approximately 2 million neurons die every minute the brain is deprived of oxygen. The goal of acute stroke treatment is to restore blood flow to vulnerable and dying areas of the brain. Every 10 minutes of faster administration of an intravenous clot busting medication translates to 2 more weeks of disability free life.<sup>2</sup> The majority of strokes that result in moderate to severe disability or death are due to large vessel occlusions. For these patients, every 10 minutes of faster clot retrieval by an interventionalist results in 40 days more of disability free life.<sup>3</sup> These facts reinforce the age-old truth for stroke, *time is brain and minutes matter*.

In Colorado, as in the United States, stroke is the 5<sup>th</sup> leading cause of death, as of January 2020, and the overwhelming cause of long-term disability. Colorado experiences a relatively lower stroke incidence compared to the average across the United States. Additionally, race and income disparities contribute to higher stroke incidence and mortality rates. In Colorado, disparities in the Southeastern part of the state causes disproportionately more strokes. (Figure 2 A). This problem is aggravated by the concentration of acute stroke centers along the front range, which translates to longer treatment times in those counties where the stroke incidence is highest (Figure 2 B). The coordination of and access to acute stroke care in these rural counties is critically important.

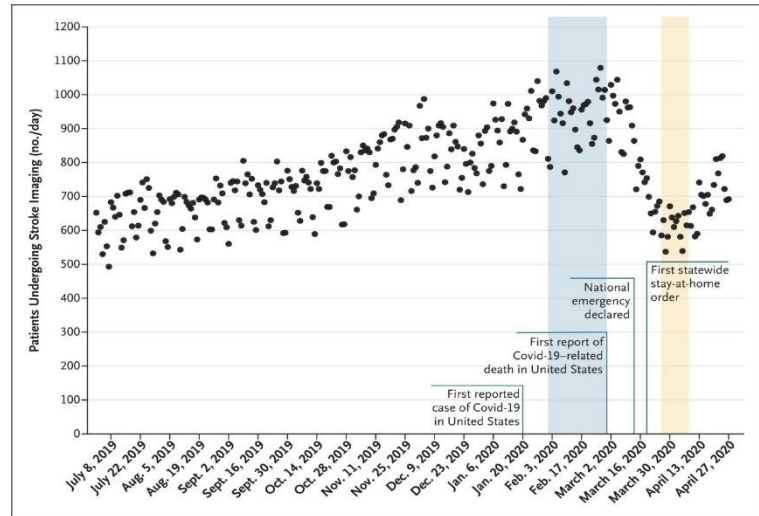


**Figure 2.** A: Rate of Colorado residents diagnosed with ischemic stroke per 100,000 by RETACs. B: Location of Primary and Comprehensive stroke centers in Colorado

# Introduction

The COVID-19 pandemic in 2020 brought unprecedented challenges to Colorado as it did for the entire nation. At the onset of the pandemic, the number of people seeking care for acute stroke plummeted as residents stayed home for fear of contracting COVID-19. Figure 3 shows a rapid decline in national trends of obtaining acute stroke imaging, which is a hallmark of acute stroke evaluations<sup>4</sup>. More patients delaying care for stroke, undoubtedly translates to increased disability and mortality. During the pandemic, it also became clear that COVID-19 itself posed an increased risk for the development of strokes. National attention ignited when a single medical center in New York saw five cases of large vessel occlusions in young adults over a span of 2 weeks, all of whom tested positive for COVID-19. Since then, numerous studies have characterized increased risk of stroke in COVID-19 patients as they develop a proclivity to form blood clots. The Center for Disease Control has called for public health efforts reinforcing the importance of timely care for acute health conditions.

This report outlines the foundation and infrastructure of a voluntarily driven system of care for stroke that focuses on delivering the best possible care to each person affected by stroke in Colorado.



**Figure 3.** Daily Counts of Unique Patients Who Underwent Neuroimaging for Stroke in the United States, July 2019 - April 2020. (Adapted from Kansagra et al. 2020)

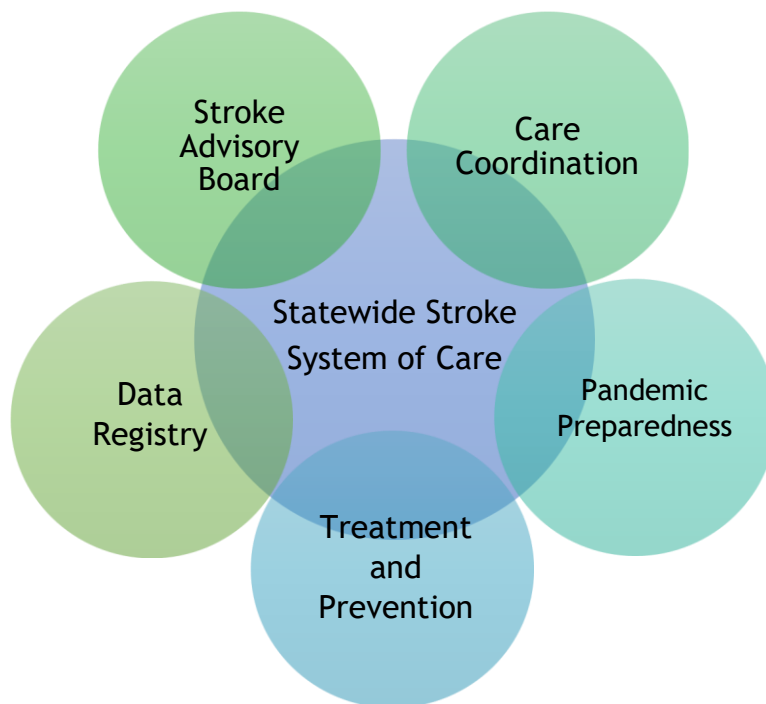
## References

1. Powers WJ, Rabinstein AA, Ackerson T, et al. Guidelines for the Early Management of Patients With Acute Ischemic Stroke: 2019 Update to the 2018 Guidelines for the Early Management of Acute Ischemic Stroke: A Guideline for Healthcare Professionals From the American Heart Association/American Stroke Association. *Stroke* 2019;50:e344-e418.
2. Meretoja A, Keshtkaran M, Saver JL, et al. Stroke thrombolysis: save a minute, save a day. *Stroke* 2014;45:1053-1058.
3. Meretoja A, Keshtkaran M, Tatlisumak T, Donnan GA, Churilov L. Endovascular therapy for ischemic stroke: Save a minute-save a week. *Neurology* 2017;88:2123-2127.
4. Kansagra AP, Goyal MS, Hamilton S, Albers GW. Collateral Effect of Covid-19 on Stroke Evaluation in the United States. *N Engl J Med* 2020;383:400-401.

# Statewide Stroke Systems of Care

Currently, there is no formal statewide system of care for stroke in Colorado. The Board recommends the Colorado Department of Public Health and Environment (the Department) facilitate a formal and voluntary system of care that incorporates support for facilities that are not nationally certified as a stroke center. The Board will continue to develop a plan and process for a voluntary system of care.

The Board recommends that administrative support be restored and the board be granted a more active role in supporting a formal and voluntary system of care for stroke.

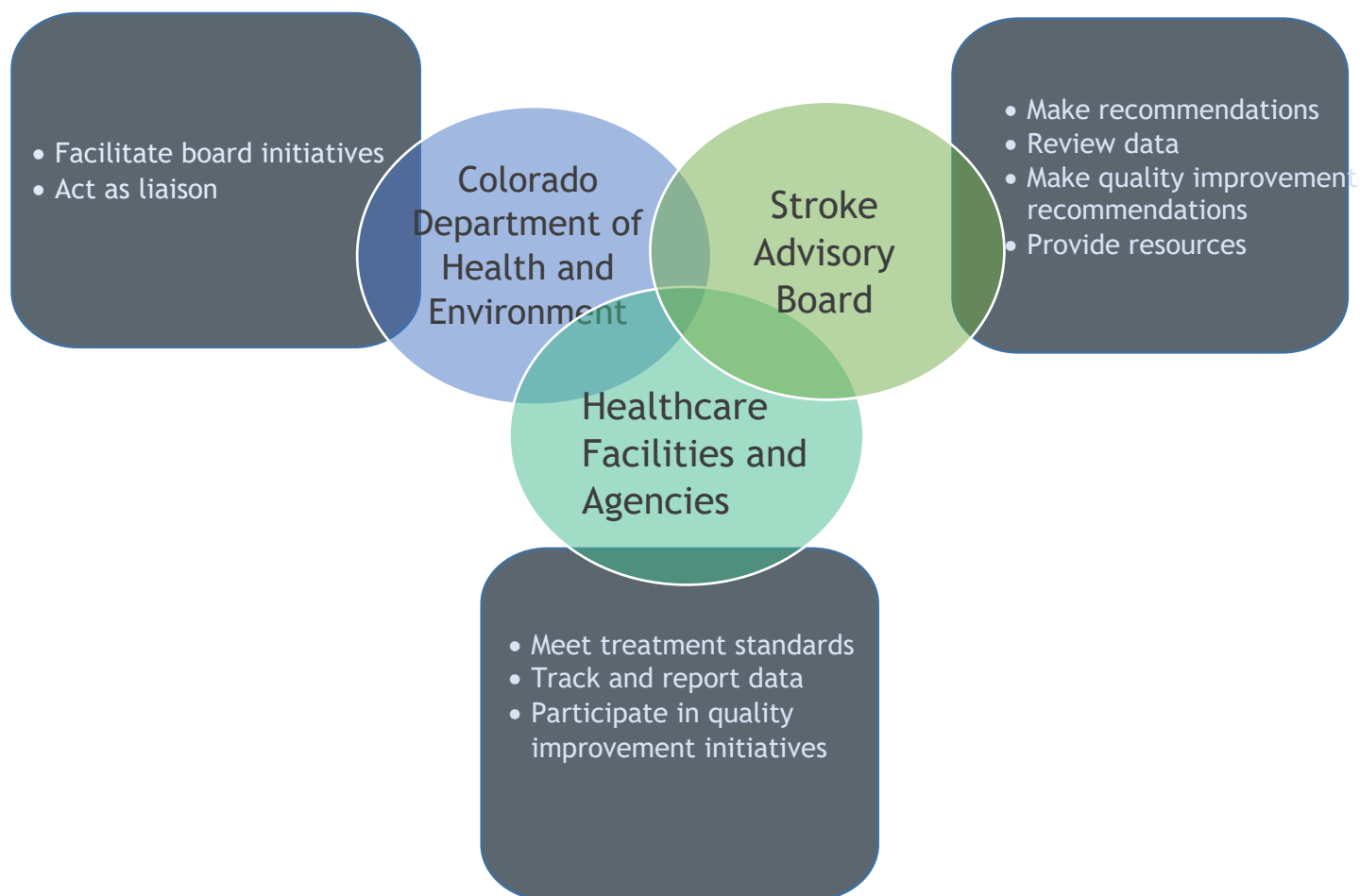


| Recommendations for a Statewide System of Care for Stroke  | Legislative Implications   |
|--|--|
| A statewide system of stroke care that is voluntary and incorporates facilities that are not nationally certified as a stroke center, and is facilitated by the Department for neutrality and equitability. The structure would include the following components.  |  |
| Implement the recommendations outlined in the Care Coordination section of this report to address the full continuum of care involving facilities, agencies, the Stroke Advisory Board and the Department to improve care at the local, regional and statewide level. This recommendation does not change the responsibility or autonomy that RETACs, EMS or facilities have over the services they provide. | None   |
| Permission and financial support to develop and disseminate toolkits, education and technical assistance to help support best practices across Colorado's communities.   | Legislation would be required to reinstate financial support.  |
| Permission to evaluate aggregate data and develop system improvement recommendations. (Requires authorizing legislation to acquire and evaluate data).   | Legislation required to acquire and evaluated data   |
| Implement a process for data collection, analysis and reporting as detailed in the Data section of this report for the purpose of statewide quality improvement. Without stroke specific data, it will be difficult to make further data-driven and evidence-based recommendations to improve stroke care that is tailored to Colorado.  | The Department would need to be granted statutory authority and resources to receive, review and report out on data. |

## Future Priorities

- Develop a platform for a voluntary system of care facilitated by the Department.
- Develop a plan that engages participation from all facilities providing stroke care.

# Statewide Stroke Systems of Care



This diagram illustrates the recommended collaborative interaction between facilities, agencies, the Department and the Stroke Advisory Board. This model is similar to other states that facilitate a system and utilize an advisory board for subject matter expertise.

# Stroke Advisory Board

In June of 2020, the Board was made aware of legislative changes that removed financial support of the Board from the state's budget via House Bill 20-1397 (Appendix 6). This change meant that the support from Colorado Department of Public Health and Environment (the Department) would no longer be provided. All board members serve voluntarily after receiving their appointment from the Governor and rely heavily on administrative support and neutral facilitation from the Department to continue to serve Colorado's needs and improve stroke care. The impact of this time critical condition has on Coloradans cannot be overstated and it is crucial that this system of care continue its work to advance care across the state.

| Recommendations for the Stroke Advisory Board   | Legislative Implications  |
|---|---|
| Restore and expand financial support for the Board and the stroke system of care.   |   |
| <p><b>The scope of the impact of HB 20-1397 includes the following:</b></p> <ul style="list-style-type: none"> <li>• Removal of the Board website that was used to provide public information and act as a resource for providers, agencies, and facilities to access the Board's recommendations and topics of interest.</li> <li>• Removal of the collaborative platform on a state-housed Google Drive that allowed members and public parties to participate in the Board's work and making work transparent, accessible, and efficient.</li> <li>• The Department support provided facilitation, a neutral platform for physical and virtual meeting space, supported collaboration, and accomplished engagement with various stakeholder groups.</li> <li>• The Department has also previously provided key navigation through government processes to ensure the Board's ability to achieve deliverables assigned in statute including membership and annual report submission to the legislature.</li> <li>• The restoration of administrative resources for the Board would mean that the very limited time that the members of the volunteer Board have available will be focused on substantive, statewide stroke system of care changes instead of also being burdened with the administrative duties.</li> </ul> | <p>Legislation would be required to restore administrative resources.</p> |
| <p><b>Change the membership of the Stroke Advisory Board to:</b></p>  |   |
| <ul style="list-style-type: none"> <li>• Edit the primary care physician seat to include advanced practice practitioners and remove the Board certification listed because currently, there are no board certifications that match the description in the legislation.</li> <li>• Change the second national stroke association representative to representative from a Regional Medical Director's group.</li> <li>• Change the representative of a statewide association of physicians to a medical insurer or payer.</li> </ul>  | <p>Legislation would be required to modify the membership.</p>            |

# Stroke Advisory Board

## Authority be granted for the Board to aggregate data and disseminated best practices.

|   |  |
|---|--|
| <p>The Board is already instructed to gather information and make recommendations for treatment standards. The Board also recognizes the need to make these evidence-based recommendations available to facilities, agencies, and all of Colorado and will do so by:</p> <ul style="list-style-type: none"><li>• Finalizing and disseminating toolkits for facilities, agencies and the community setting with standards for prevention and treatment.</li><li>• Sharing existing resources that facilities, agencies, regions and community partners can use to meet the evidence-based recommendations.</li></ul> | None   |
| <p>The Board recommends it have access to aggregate case data for the purpose of providing data-driven recommendations, statewide and national benchmarking, and the ability to perform quality improvement initiatives.</p>  | Enabling legislation and administrative resources would be required to gather, analyze, and develop reports for the Board's review and action. |

## Future Priorities

- Restore administrative resources for the Board and the stroke system of care.
- Revise Board membership to include representation of Advanced Practice Practitioner.

# Care Coordination

The Board recognizes gaps in the continuum of care and the need for statewide initiatives to meet unique challenges in rural and urban areas. The following recommendations address needs and challenges in each of Colorado's Regional Emergency Medical and Trauma Advisory Councils (RETACs).

| Recommendations for Care Coordination  | Legislative Implications |
|--|--------------------------|
| The following recommendations are to improve care coordination between the prehospital and hospital settings.  |                          |
| Toolkits to help EMS and hospitals meet evidence-based prevention and treatment guidelines and performance improvement initiatives in the community, prehospital, hospital and recovery settings. <ul style="list-style-type: none"><li>• Toolkits provide guidance across the continuum of care and each toolkit is specific to a target audience including the community, EMS, hospital, and recovery settings.</li><li>• Toolkits have guidance for the target audience on topics including primary prevention, secondary prevention, stroke identification, stroke patient transport, acute treatment, rehabilitation, and emotional support for stroke survivors and caregivers.</li><li>• These toolkits include the Board's recommendations for best practices to identify stroke, transport patients, evidence-based treatment guidelines, recovery, secondary prevention, data participation and quality improvement initiatives. Please refer the toolkits in the appendix for specific treatment recommendations.</li></ul> | None                     |
| The following recommendations are to improve coordination between facilities.  |                          |
| <ul style="list-style-type: none"><li>• Edit the EMResource platform to include certified stroke centers, treatment capabilities and capacity.</li><li>• Continue development and reimbursement for HIPAA compliant and cost-effective communication methods to improve access to care. These currently include web conference sessions, telehealth, telestroke, PACS, and phone consultation.</li><li>• Improve access to quality care with improved reimbursement for inpatient and outpatient rehabilitation, restorative and adaptive rehabilitation, patient-centered rehabilitation care plans, and traveling providers serving rural areas.</li></ul>   | None                     |

## Future Priorities

- Continue engaging with the prehospital community and RETACS for feedback by attending meetings and conferences.
- Refine and disseminate EMS and hospital toolkits.
- Develop a plan to communicate stroke capability services to EMS.

# Prevention and Treatment

The Board is taking an innovative approach to address prevention with consistent messaging in different settings. The Board has included how to identify stroke, maximize recovery and prevent subsequent strokes or other complications from stroke as a part of its prevention initiatives. The Board is partnering with other organizations to stress the recognition of stroke symptoms and expeditious access to stroke care.

Each year, the Board revises the recommended treatment standards to align with evidence-based guidelines. Facilities that are nationally certified meet or exceed the recommended standards. In 2020, the Board developed a hospital toolkit to provide templates, guidance and resources to help facilities, agencies and regions meet the Board's evidence-based recommendations. The toolkits are designed to disseminate evidence-based treatment standards to achieve facility and state-level performance improvement. The Board works to develop recommendations that are reasonable, helpful and effective for facilities with varying stroke treatment capabilities in all of Colorado's diverse areas. The prehospital toolkit can be found in Appendix 2 and the hospital toolkit is available in Appendix 3.

| Recommendations for Prevention and Treatment   | Legislative implications   |
|--|--|
| The Board recommends consistent messaging to the general public in the community, hospital and recovery setting.   |  |
| Public education messaging for stroke should focus on survival rates and the importance of timely treatment for stroke. <ul style="list-style-type: none"> <li>Public messaging should help identify stroke using the Balance, Eyes, Face, Arm, Speech, Time (BE FAST) assessment or similar tool and call 911 when a stroke is suspected.</li> <li>Emphasize the importance of seeking care immediately for sudden onset of stroke symptoms, even during a pandemic.</li> </ul>   | None   |
| The hospital toolkit should help the following types of facilities meet evidence-based treatment guidelines. <ul style="list-style-type: none"> <li>Facilities that do not have intravenous thrombolytic capabilities (also known as alteplase, tPA, tenecteplase or clot dissolving medication).</li> <li>Facilities that can treat acute ischemic stroke with intravenous thrombolytic therapy but do not provide inpatient care for stroke patients.</li> <li>Facilities that can treat and admit acute ischemic stroke patients.</li> <li>Facilities that provide endovascular therapy.</li> </ul> | None   |
| The Stroke Advisory Board should be available to provide assistance with resources for education, training and performance improvement related to stroke assessments, triage, transport, treatment, recovery and prevention.   | Legislation is not required but would be beneficial to add these components to the scope of the Board's work. This board's main charge is to make recommendations to the legislature and it does not include an advisory role to the Department. |

## Future Priorities

- Standardize public education for recognition of stroke symptoms and seeking immediate care.
- Explore evidence-based guidelines for intravenous thrombolytic therapy treatment rate goals.
- Explore evidence-based guidelines for endovascular therapy treatment rate goals.

# Data Registry

Meaningful data reporting and analysis are essential for quality improvement. The Board has reviewed claims data from hospital discharge data and found it is insufficient for system-level performance improvement. The Board did review data in the EMS dataset that is increasingly helpful. Education to improve data reliability will be incorporated into the toolkits. The remaining barriers include access to stroke-specific data, linking hospital and EMS data, and obtaining functional outcomes data. To address the above barriers to accessing data, the Board recommends department support for development and implementation of facility and system level performance improvement in Colorado.

| Recommendations for a Data Registry   | Legislative implications  |
|---|---|
| <p>The Board recommends a statewide system of support with a mechanism for data-driven quality improvement. This requires the Department to gain access to stroke data. With access to data, any facility could request assistance and the Department could then provide facility and patient blinded data for the Board to review and develop recommendations. In order to perform quality improvement, the Board recommends the Department have access to analyze and develop reports with the recommended prehospital, hospital and rehabilitation data.</p>   |   |
| <p>The Board recommends that facilities performing endovascular therapy procedures report to a national registry that includes metrics on stroke-specific endovascular procedures for the purpose of evidence-based practice compliance tracking at the facility level. The Board recommends the Department obtain a super-user account to access aggregated data for the purpose of statewide benchmarking and quality improvement.</p>  | <p>The Department would need to be granted statutory authority and resources to access data, create reports, and provide reports for the Board to review.</p> |
| <p>The Board recommends that nationally certified stroke centers report to a national stroke registry and that the Department be granted a super-user account to this registry for the purpose of statewide benchmarking and quality improvement. The Board estimates a super-user account would cost \$5,700 annually.</p>   |   |
| <p>The Board recommends facilities that are not nationally certified as a stroke center to internally track stroke data for quality improvement purposes using the data template as a guide (Appendix 1).</p> <ol style="list-style-type: none"><li>1. The Board encourages these facilities to participate in collaborative groups, such as the stroke coordinators group, for the purpose of benchmarking and quality improvement locally and regionally.</li><li>2. Eventually, the Board supports development of a secure state repository for this data to be analyzed and reported out to facilities, and aggregate reporting to the SAB, for statewide benchmarking and quality improvement.</li></ol> |   |

## Future Priorities

- Request and review reports from the Get With The Guidelines GWTG-Stroke registry.
- Determine sources for desired data and a process for data collection, analysis and reporting.
- Consider telemedicine participants as a unique group for benchmarking.

## Public access to data

Legislation instructs the Board to address whether access to data would be appropriate or beneficial. The Board acknowledges that health literacy is a barrier to risk factor management, recognition of stroke and appropriate response to stroke. As the Board reviews additional information, the Board will consider what information would be appropriate for public reporting. Information that would be appropriate for public reporting should be in language that is understandable to the general public and have evidence that public reporting of the information improves risk factor management, stroke identification, timely activation of 911, and recovery from stroke.

# Pandemic Preparedness

## COVID-19 and Stroke

In 2020, a global pandemic caused by COVID-19 drastically changed life in Colorado as well as the rest of the world. COVID-19 is primarily a respiratory illness with the virus largely transmitted through respiratory droplets from person to person. Common symptoms of COVID-19 include fever, cough, shortness of breath, difficulty breathing, fatigue, headache, nasal congestion, muscle aches, body aches, sore throat, loss of taste or smell, nausea, vomiting, or diarrhea. Disease severity is believed to increase with age and in patients with underlying medical conditions such as heart disease, diabetes, and lung disease.<sup>1</sup>

As of the writing of this report in December 2020, Colorado has more than 160,000 confirmed cases of COVID-19 with more than 2600 deaths.<sup>2</sup>

## Is COVID-19 a Risk Factor for Stroke?

While COVID-19 is seen primarily as a respiratory illness, it has been shown to affect other parts of the body including the cardiovascular system. It is possible that COVID-19 may increase the risk of stroke.

A retrospective cohort study from two academic hospitals in New York City noted that patients with COVID-19 were more likely than patients with influenza to have acute ischemic stroke, affecting 1.6% of patients infected with COVID-19 compared to 0.2% of those with influenza.<sup>3</sup>

Similarly, a case series from March to April 2020 of patients in New York City identified 5 patients younger than 50 years of age with large vessel ischemic stroke associated with COVID-19.<sup>4</sup>

These studies suggest that infection with COVID-19 may independently increase the risk of ischemic stroke due to such factors as increased clotting tendency and inflammation. However, more data is needed on the relative risk of stroke and the effect that COVID-19 has on cardiovascular function overall. This insight will require data collection on the association of COVID-19 and stroke throughout the United States. The Board recommends aggregate data surveillance from stroke centers in Colorado to better understand the association between COVID-19 and stroke in Colorado.

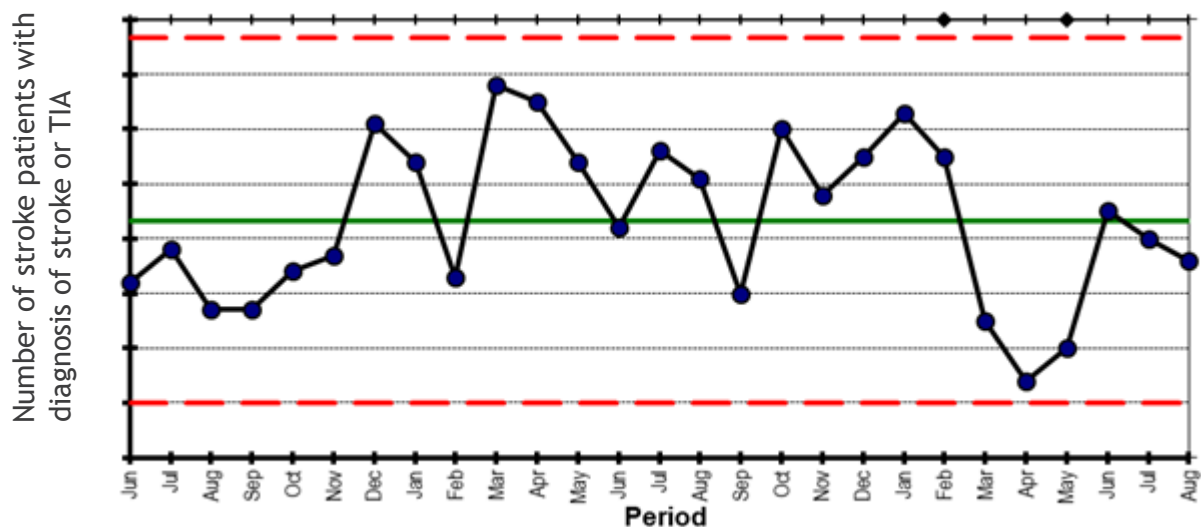
## Stroke Treatment in a Pandemic

Preliminary data from centers across the United States noted a decrease in presentation to emergency departments with acute symptoms of stroke during the initial surge of COVID-19 cases. In one center in Ohio, there was a 30% decrease in acute stroke presentations in March and April 2020. The cause of this decline was not clear to researchers, but they theorized that it may be connected with fear of exposure to the virus in hospitals where the cases were rising.<sup>5</sup>

Similarly, preliminary data from centers in Colorado indicates a decrease in patients presenting to the hospital for stroke during the first surge of the virus. The graph below demonstrates volume of stroke diagnosis in 16 Colorado hospitals from June 2018 to August 2020. Between March and May 2020, there was a statistically significant drop (more than two standard deviations) in the total volume of stroke diagnoses from these hospitals.

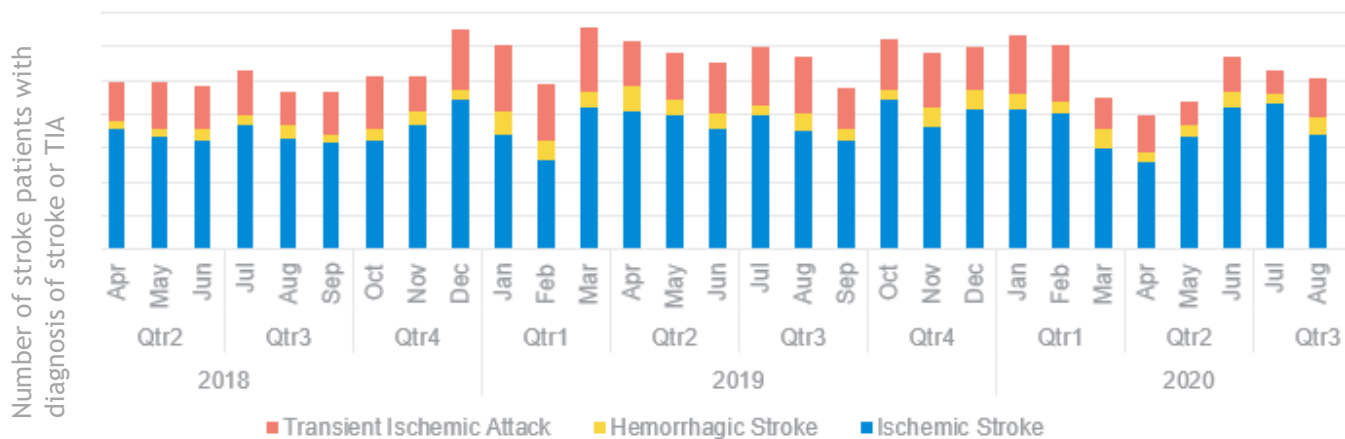
# Pandemic Preparedness

Number of patients diagnosed with stroke or transient ischemic attack by month, 2019-2020



In the same hospitals, April 2020 saw the lowest presentation of patients with either a diagnosis of ischemic stroke or transient ischemic attack in a two year period.

Number of ischemic stroke, hemorrhagic, and transient ischemic attacks by quarter, 2018-2020



Upon recognition of a preliminary drop in presentations for stroke, the Board partnered with community and government stakeholders such as the Colorado Hospital Association and the Department to increase awareness of stroke during the COVID-19 pandemic. Public messaging was conducted informing Colorado residents not to ignore serious health conditions such as stroke and not to fear going to the hospital for a serious illness.

Ongoing surveillance is necessary to monitor stroke volume during the current COVID-19 pandemic. Further interventions and public education may be necessary if stroke volume again declines with surges in COVID-19 case.

For responses to pandemics in the future, the Board recommends early and frequent public messaging that encourages the general public to seek medical treatment for serious, acute health conditions, such as stroke. The Board also encourage future state pandemic task forces to proactively monitor volumes of

# Pandemic Preparedness

acute cardiovascular conditions, such as stroke and acute myocardial infarctions. Sudden drops in volumes of acute health conditions, could signal public apprehension in seeking care and lead to adverse outcomes.

Another potential area of impact of the pandemic on stroke treatment that is not fully understood is shortages of personal protective equipment (PPE). Ensuring that healthcare workers have rapid access to PPE may prevent delays in recognition and highly time-sensitive treatment of stroke.

Further investigation is also needed regarding the impact of COVID-19 on the utilization of skilled nursing facilities and rehabilitation centers for stroke recovery. These facilities play a critical role in helping to provide the care needed to help patients with stroke return to their prior living situation and to provide care needed in patients who no longer require acute medical care. During the initial surge of COVID-19 cases, availability of space in these facilities was limited which may have led to longer lengths of stay in acute care hospitals, occupying valuable inpatient beds. More coordination to facilitate transitions of care could help free up much needed bed space in acute care hospitals during a pandemic.

## Future Priorities

- Increased data gathering and surveillance of the incidence of COVID-19 and stroke, as well as the overall impact on stroke care in Colorado hospitals
- Improved public messaging on seeking treatment for serious health conditions such as stroke even during a pandemic
- Ensuring appropriate personal protective equipment in a pandemic for all healthcare workers in Colorado so that this is not a barrier to treating stroke
- Continuous surveillance of stroke volumes to ensure patients with stroke are seeking care.
- Improving transitions of care to skilled nursing and rehab facilities to free up valuable inpatient bed space at acute care hospitals.

## References

1. <https://www.cdc.gov/coronavirus/2019-ncov/hcp/non-us-settings/overview>
2. <https://covid19.colorado.gov/data>
3. Merkler AE, Parikh NS, Mir S, et al. Risk of Ischemic Stroke in Patients With Coronavirus Disease 2019 (COVID-19) vs Patients With Influenza. *JAMA Neurol*. Published online July 02, 2020.
4. Oxley TJ, Mocco J, Majidi S, et al. Large-Vessel Stroke as a Presenting Feature of Covid-19 in the Young. *N Engl J Med*. 2020;382(20):e60.
5. Uchino K, Kolikonda MK, Brown D, et al. Decline in Stroke Presentations During COVID-19 Surge. *Stroke*

# Appendix 1: Stroke Data Measures

**PURPOSE:** A stroke database is a tool for facilities to track stroke alerts and stroke patients who present to the facility. It helps to monitor stroke care aligned with national best practices and identify areas for performance improvement.

## POPULATION OF INTEREST:

### Inclusion Criteria:

1. Any suspected acute stroke or stroke alert.
2. Patients who present for treatment related to an acute stroke including: TIA, or stroke (including ischemic stroke, intracerebral hemorrhage and subarachnoid hemorrhage) at participating acute care facilities.

### Exclusion Criteria:

1. No clinical indication of acute stroke or TIA
2. History of TIA or stroke not related to this encounter
3. Newborns

Any stroke alert or suspected stroke patient should be logged in this database. Patients that report having or may have a history of stroke should not be entered. This is intended to capture patients that present to this facility for treatment related to an acute stroke.

| Recommended stroke metrics         | Definition   |
|------------------------------------|--|
| Unique stroke incident #           | This is a facility defined tracking number for each stroke visit. This number is unique to a stroke incident, not a patient. |
| Patient identifier                 | The facility defined identification code for a patient.  |
| Stroke alert type                  | Information on whether there was notification of a potential stroke patient prior to hospital arrival                        |
| EMS stroke scale                   | Stroke scale EMS used to assess the patient. (e.g. FAST ED, VANS, etc)   |
| EMS stroke scale score             | Results of the stroke severity assessment  |
| EMS last known well date           | Date the patient is most recently reported as being well, without potential stroke symptoms                                  |
| EMS last known well time           | Time the patient is most recently reported as being well, without stroke symptoms  |
| Hospital Arrival Date              | Date patient arrived at the facility   |
| Hospital Arrival Time              | The type of Trauma Team activation that occurred at the Trauma Center of Record.   |
| Arrival Mode                       | How the patient was transported to the facility  |
| Hospital last known well date      | Date the patient is most recently reported as being well, without potential stroke symptoms                                  |
| Hospital last known well time      | Time the patient was last well, without stroke, best estimate  |
| Final diagnosis type               | Final determination of type of stroke (e.g. ischemic, intracerebral hemorrhage, etc)   |
| Reason for no thrombolytic therapy | Provide a reason that thrombolytic therapy was not administered.   |

# Appendix 1: Stroke Data Measures

|   |  |
|---|--|
| <b>Thrombolytic therapy administered</b>              | Provide information on what treatment was provided.  |
| <b>Thrombolytic date</b>                              | Date thrombolytics were administered.  |
| <b>Thrombolytic time</b>                              | Time thrombolytics were administered.  |
| <b>Door to thrombolytics time in minutes</b>          | The amount of time it took to provide thrombolytic treatment from when the patient arrived at the hospital.                      |
| <b>Symptom onset to thrombolytics time in minutes</b> | Time from symptoms onset started until thrombolytics were given  |
| <b>Thrombolytic complications</b>                     | Complications from thrombolytic administration   |
| <b>Transfer reason</b>                                | Reason patient transferred to another facility.  |
| <b>Transfer date</b>                                  | Date patient left this facility.   |
| <b>Transfer time</b>                                  | Time patient left this facility.   |
| <b>Modified Rankin score</b>                          | Patient functional score when the patient left this facility, may be estimated based on therapy, nursing or provider assessments |
| <b>Patient discharge disposition</b>                  | Where the patient was discharged to.   |

## Appendix 2: EMS toolkit

[Stroke triage and transport plans](#). The Board is available to provide additional guidance and recommends each Regional Emergency Medical and Trauma Advisory Council (RETAC) and agency develop plans that address the following.

- Stroke assessment tool- Current recommendation is [BE FAST \(Balance Eyes Face Arms Speech Time\)](#) and consider sudden, severe headache with unknown cause.
  - If an ischemic stroke (including Large Vessel Occlusion LVO) is suspected, the patient may be a candidate for thrombolytic therapy if the time from symptom onset is less than 4.5 hours
  - Hospitals should provide urgent diagnostic testing including CT and/or MRI tests
  - Stroke assessment implementation plan
  - Stroke assessment competency for providers annually
  - Evaluate the stroke assessment annually to determine if the selected assessment is still appropriate
- LVO screening tool if the stroke assessment is positive. The Board does not recommend a specific assessment at this time but does recommend the following:
  - If a large vessel occlusion is suspected, the patient may be a candidate for thrombectomy if time from symptom onset is less than 24 hours
  - If time from symptom onset is more than 24 hours, the patient should be treated at the closest, most appropriate facility
  - An LVO assessment tool should be selected with EMS, hospital and RETAC input
  - Once an assessment is selected, a quality improvement project utilizing EMS and hospital data should assess the selected tool's success based on sensitivity and specificity
  - Once the tool earns EMS and hospital endorsement, a collaborative implementation plan with EMS, hospitals and RETACs should include:
    - EMS and hospital provider education with pre/post competency testing
    - Annual competency testing for providers
    - Annual evaluation to determine if the tool is still appropriate
- Notification from the field of a stroke alert based on prehospital provider assessment and clinical judgement should include:
  - Last known well date and time
  - Contact information for a witness, family member or friend for consent and history
- Defined patient transport criteria for:
  - Ground/air transportation
  - Criteria for when lights and sirens are appropriate
  - Patient transport plans that avoid unnecessary bypass and multiple transfers

## Appendix 2: EMS toolkit

The Board encourages EMS personnel to report the following information in the Patient Care Report (PCR) into discrete National EMS Information System (NEMSIS) fields and not into narrative fields:

| Field name                      | NEMSIS field code                   | Recommended selection           |
|---------------------------------|-------------------------------------|---------------------------------|
| Provider impression             | eSituation e.11, e.12               | CVA/Stroke                      |
| Stroke screening tool and score | eVital.30, eVitals 29               | FAST or BE FAST (not available) |
| Stroke alert from the field     | eDisposition.25                     | Yes/No                          |
| Last known well date/time       | eSituation.18                       |                                 |
| Symptom onset date/time         | eSituation.01                       |                                 |
| Stroke severity tool and score  | eVitals.30- available in NEMSIS 3.5 | FAST ED                         |

To improve care coordination and quality improvement, the Board recommends EMS and hospitals work together to:

- Recommended quality improvement initiatives for when stroke is suspected:
  1. CVA/Stroke is selected for provider primary impression
  2. Stroke assessment is performed
  3. Stroke score is documented
  4. Hospital is alerted and the alert is documented in the PCR
- Educate hospital and EMS providers together on stroke pathophysiology
- Timely reporting (as agreed by EMS and hospitals) of [EMS stroke metrics](#) to the hospital
- Hospitals are encouraged to use Hospital Hub to access EMS data
- Timely [feedback to EMS](#) (as agreed by EMS and hospitals) on each stroke patient

## Appendix 3: Hospital toolkit

The Board has developed the following evidence-based recommendations and is developing a toolkit to provide additional guidance to meet the current recommendations.

To improve care coordination, the Board recommends EMS and hospitals work together on the following initiatives.

- EMS to report recommended metrics in the PCR to hospitals (see EMS toolkit)
- Hospitals to provide feedback to EMS
- EMS may choose to enter records directly into the state Imagetrend Elite platform or import the records from a vendor, which will cause some delay
- Hospitals can view information as soon as it enters the Imagetrend platform, Contact [Scott.beckley@state.co.us](mailto:Scott.beckley@state.co.us) for more information
- Report timely information as agreed between EMS and hospitals

The following example of a feedback template is available as a reference for the purpose of education and quality improvement.

Date:

EMS Agency:

Dear EMS provider, thank you for participating in the Stroke Alert Program at [FACILITY NAME] Your patient [PATIENT GENDER AND BIRTHDATE] was brought to the Emergency Department on [DATEOF EVENT] with symptoms of a possible stroke. EMS report feedback, clinical findings and ultimate diagnoses were as follows:

|  |   |
|--|---|
| EMS: Prehospital notification                  | [YES OR NO]   |
| EMS: Accurate last known well time provided    | [VALIDATE EMS LKW TIME OR PROVIDE FEEDBACK ON ACTUAL TIME]  |
| EMS: Family/friend contact for consent/history | [YES OR NO]   |
| EMS: Stroke assessment tool utilized           | [CPSS or FAST ED or other LVO screening tool]   |
| Facility: Initial NIHSS                        | [ACTUAL SCORE]  |
| Facility: Diagnosis and interventions          | [INCLUDES DOOR TO NEEDLE (tPA) AND DOOR TO SKIN PUNCTURE TIMES TIMES, IF APPLICABLE OR SIMPLY TREATED/NOT TREATED. IF NOT TREATED, GIVE REASON] |
| Facility: Discharge disposition                | [HOME, SNF, REHAB, ETC.]  |
| EMS and Facility: Best Practices               | [FEEDBACK AND SHARING OF GOOD INFORMATION]  |

What went well?

Any educational opportunities identified?

The Emergency Medicine services at [FACILITY NAME] wish to thank you for transporting your patient to us, it is our goal to provide excellent treatment to all of our patients. We value the trust you place in our hearts. If you have any further questions about this case, please do not hesitate to contact your EMS Liaison, [CONTACT INFORMATION]

Sincerely,

Stroke coordinator

# Appendix 3: Hospital toolkit

## For facilities that do not have IV thrombolytic capabilities:

- ❑ Provide community education to recognize stroke using BE FAST and call 911:
  - BE FAST education materials ([BE FAST public video](#))
  - Common and controllable risk factors for stroke
    - ✓ Diet
    - ✓ Smoking
    - ✓ Diabetes
    - ✓ Physical inactivity
    - ✓ Overweight (obesity)
    - ✓ Substance use (drugs, alcohol, marijuana)
    - ✓ Transient Ischemic Attack (TIA)
    - ✓ High blood pressure (hypertension)
    - ✓ High cholesterol (hyperlipidemia)
    - ✓ Heart disease including irregular heart rhythm (atrial fibrillation)
- ❑ Educate staff to recognize signs and symptoms of stroke:
  - [BE FAST education materials](#)  
[Competency checklist](#) (create link to downloadable pdf)  
Implementation, annual evaluation, yearly competency
  - An LVO assessment tool should be selected with EMS, hospital and RETAC input. Once an assessment is selected, a quality improvement project utilizing EMS and hospital data should assess the selected tool's success based on sensitivity and specificity. If the tool earns EMS and hospital endorsement, a collaborative implementation plan with EMS, hospitals and RETACs should include:
    - ✓ EMS and hospital provider education with pre/post competency testing
    - ✓ annual competency testing for providers
    - ✓ annual evaluation to determine if the tool is still appropriate.
- ❑ Plan for rapid patient transfer to defined higher level of care (120 min. goal)
  - Receiving facility contact and consult information
  - Provide the following to the receiving facility:
    - ✓ Medical History
    - ✓ Medications
    - ✓ Last Known Well time
    - ✓ CT images by electronic file or disc
    - ✓ Labs
    - ✓ Contact information for a patient representative
- ❑ Promote a standardized stroke assessment tool for staff, such as the [NIHSS](#)
- ❑ Have a Performance improvement plan for stroke that includes tracking the following applicable performance improvement measures:
  - ✓ Door to CT
  - ✓ Door in/Door out < 120 minutes

# Appendix 3: Hospital toolkit

**For facilities that can treat acute ischemic stroke with IV thrombolytic therapy but do not provide inpatient care for stroke patients:**

- ❑ Provide community education to recognize stroke using [BE FAST](#) and call 911
- ❑ Educate staff to recognize signs and symptoms of stroke ([BE FAST](#))
- ❑ Promote a standardized stroke assessment tool for staff, such as the [NIHSS](#)
- ❑ Have a Stroke transfer guideline that includes destination options and contact information for a patient representative
- ❑ Have a treatment plan for stroke patients including:
  - Stroke services scope of care
  - Stroke alert guideline
    - ✓ alerts within the facility-defined IV thrombolytic treatment window
    - ✓ alerts outside the facility-defined IV thrombolytic treatment window
    - ✓ process for expedited arrival to brain imaging, interpretation, treatment
  - Stroke treatment algorithm
  - [Thrombolytic therapy guideline](#) with thrombolytic therapy readily available
  - Order sets
  - Plan for access to expert consultation (i.e., in person, by phone, by telestroke, etc.)
- Have a performance improvement plan including:
  - Sharing stroke metrics with tertiary facility
  - Document and track follow-up from tertiary facility
  - Data collection and analysis, [see data template](#)
  - EMS feedback, [see feedback template](#)
  - Create and use gap analyses
  - Recommended performance improvement projects:
    - ✓ Door to CT
    - ✓ Door to IV thrombolytic therapy time consistent with national best-practices
    - ✓ Door in/Door out < 120 minutes

# Appendix 3: Hospital toolkit

## For facilities that treat and may either admit or transfer ischemic stroke patients:

- ☐ Provide community education to recognize stroke using the [BE FAST](#) and call 911
- ☐ Educate staff to recognize signs and symptoms of stroke ([BE FAST](#))
- ☐ Promote [NIHSS](#) as the standardized stroke assessment tool for staff
- ☐ Have a stroke transfer guideline that includes destination options and contact information for a patient representative
- ☐ Have a treatment plan for stroke patients that includes:
  - ✓ Multidisciplinary care plan to address current impairment, outline expected progression through rehabilitation and recommendations for treatment after discharge that address physical, emotional, and psychosocial factors
  - ✓ Documented physical, occupation and speech therapy evaluations to determine impairments and rehabilitative needs of stroke survivors
  - ✓ Plan of care which includes engagement of the stroke survivor, family and caregiver(s) into the care team as early as possible
  - ✓ Documentation of a needs assessment or scheduled home needs assessment prior to discharge
  - ✓ Progressive education plan specific to activities of daily living (i.e., wheelchairs, splints, orthotics, etc.)
  - ✓ Stroke alert guideline
    - alerts within the facility-defined IV thrombolytic treatment window
    - alerts outside the facility-defined IV thrombolytic treatment window
    - process for expedited arrival to brain imaging, interpretation, treatment
    - Stroke treatment algorithm
  - ✓ [Alteplase guideline](#) with alteplase readily available
  - ✓ Order sets
  - ✓ Care coordination plan for access to expert consultation (in person, by phone, by telestroke, etc.)
- ☐ Discharge plan that includes patient and caregiver education:
  - The stroke continuum of care, current functional status using (Rankin score is recommended) and the next goal
  - Rehabilitation progression expectations
  - PCP follow-up post-acute stroke follow-up appointment.
  - Monitor and address mental and emotional health issues
  - Caregiver assistance, self-care and support
  - Referrals for appropriate resources in the stroke survivor's community
  - Secondary impairment and disability (Fall prevention, swallow dysfunction, etc.)
  - Information about [BE FAST](#) and importance of calling 911
  - Common and controllable risk factors for stroke
    - ✓ Diet
    - ✓ Smoking
    - ✓ Diabetes
    - ✓ Physical inactivity
    - ✓ Overweight (obesity)
    - ✓ Transient Ischemic Attack (TIA)
    - ✓ High blood pressure (hypertension)
    - ✓ High cholesterol (hyperlipidemia)
    - ✓ Blood thinner medications (anticoagulation)
    - ✓ Heart disease including irregular heart rhythm (atrial fibrillation)
    - ✓ Substance use (drugs, alcohol, marijuana)
- ☐ Performance improvement plan including:
  - Data recommendation participation in a national registry or [data template](#).

## Appendix 3: Hospital toolkit

- Formal [EMS feedback](#) on stroke patient outcomes, agreed upon by the hospital, EMS and RETAC
- Share stroke metrics with tertiary facility
- Document and track follow-up information from tertiary facility
- Create and use gap analyses
- Recommended performance improvement projects:
  - ✓ Door to CT
  - ✓ Door to IV thrombolytic therapy time consistent with national best-practices
  - ✓ Door in/Door out < 120 minutes

# Appendix 3: Hospital toolkit

## For facilities that provide endovascular services, all previous criteria apply:

- ☐ Provide community education to recognize stroke using the [BE FAST](#) and call 911
- ☐ Educate staff and EMS to recognize signs and symptoms of stroke ([BE FAST](#))
- ☐ Provide [NIHSS](#) certification for hospital professionals
- ☐ Have a Stroke transfer guideline that includes destination options and patient representative contact information (e.g., a family member).
- ☐ Have a treatment plan for stroke patients that includes:
  - Stroke services scope of care including:
    - ✓ Multidisciplinary care plan to address current impairment, outline expected progression through rehabilitation and recommendations for treatment after discharge that address physical, emotional, and psychosocial factors.
    - ✓ Perform physical, occupation and speech therapy evaluations to determine impairments and rehabilitative needs of stroke survivors.
    - ✓ Incorporate the stroke survivor, family and caregiver(s) into the care team as early as possible.
    - ✓ Perform or schedule a needs assessment of the home before discharge.
    - ✓ Provision of equipment and proper use education to increase independence in Activities of Daily Living and decrease further impairment (i.e., wheelchairs, splints, orthotics, etc.)
    - ✓ Plan for access to expert consultation (in person, by phone, by telestroke, etc.) endovascular services platform (schedule, staffing, equipment, education)
    - ✓ Ensure 24/7/365 capability or a plan to communicate with EMS and partner hospitals of availability schedule and any schedule changes
  - Stroke alert guideline addressing rapid assessment of:
    - ✓ Stroke alerts within the facility-defined IV thrombolytic treatment window
    - ✓ Stroke alerts outside the facility-defined IV thrombolytic treatment window
    - ✓ Process for expedited arrival to brain imaging, interpretation, treatment
  - Stroke treatment algorithm(s) visually describing the processes
  - [Thrombolytic therapy guideline](#) with thrombolytic therapy readily available
  - Order sets for reliable treatment of ischemic and hemorrhagic strokes
  - Plan for access to expert consultation (i.e., in person, by phone, by telestroke, etc.)
- ☐ Have a Discharge plan that includes patient and caregiver education:
  - Stroke continuum of care, current functional status using (Rankin score is recommended) and the next goal.
  - Rehabilitation progression expectations
  - PCP post-acute stroke follow-up appointment.
  - Monitor and address mental and emotional health issues.
  - Caregiver burden, self-care and support.
  - Referrals for appropriate resources in the stroke survivor's community.
  - Secondary impairment and disability (Fall prevention, swallow dysfunction, etc.)
  - [BE FAST](#) and call 911
  - Common and controllable risk factors for stroke:
    - ✓ Diet
    - ✓ Smoking
    - ✓ Diabetes
    - ✓ Physical inactivity
    - ✓ Overweight (obesity)
    - ✓ Transient Ischemic Attack (TIA)
    - ✓ High blood pressure (hypertension)
    - ✓ High cholesterol (hyperlipidemia)
    - ✓ Blood thinner medications (anticoagulation)
    - ✓ Heart disease including irregular heart rhythm (atrial fibrillation)

## Appendix 3: Hospital toolkit

- ✓ Substance use (drugs, alcohol, marijuana)
- Have a performance improvement plan
  - Data recommendation: national registry including endovascular therapy metrics
  - Formal [EMS feedback](#) on stroke patient outcomes, agreed upon by the hospital, EMS and RETAC
  - Share stroke metrics with tertiary facility
  - Document and track follow-up information from tertiary facility
  - Create and use gap analyses
  - Recommended performance improvement projects:
    - ✓ Door to IV thrombolytic therapy time consistent with national best-practices
    - ✓ Door-to-recanalization time that is consistent with national best-practices

# Appendix 4: Stroke Advisory Board Membership

## Governor Appointed Board Members:

### Matthew Angelidis, MD

Colorado Springs  
Term expires 08-01-23  
Statewide association of emergency physicians

### Benjamin Atchie, DO

Denver  
Term expires 08-01-23  
Interventional neuroradiologist

### Jeff Beckman, MD

Golden  
Term expires 08-01-22  
CDPHE designee - ex officio

### David Case, MD

Greenwood Village  
Term expires 08-01-23  
Assistant professor, neurosurgery

### Christy Casper, AG-ACNP

Centennial  
Resigned 05-01-20  
Expert in stroke database management

### Carolyn Condreay, PT, DPT

Parker  
Term expires 08-01-23  
Rep of stroke rehab facility

### Robert Enguidanos, MD

Windsor  
Term expires 08-01-22  
Primary care physician

### Joseph Foecking, PT

Colorado Springs  
Term expired 08-01-20  
Stroke rehabilitation facility

### Donald Frei Jr., MD

Denver  
Term expired 08-01-20  
Interventional neuroradiologist

### Kayla Garriott, MS, OTR/L, C/NDT

Lone Tree  
Term expires 08-01-23  
Occupational therapist involved in stroke care

### Danielle Hagedorn, BSN, MBA, CPHQ

Longmont  
Term Expires 08-01-23  
Expert in stroke database management

### Kathryn Henneman, OTR/L

Loveland  
Term expired 08-01-20  
Occupational therapist involved in stroke care

### Kerri Jeppson, RN

Golden  
Term expires 08-01-22  
RN involved in stroke care

### Emily Jones

Evergreen  
Resigned 07-01-20  
National cardiovascular association

### Brian Kaiser, DO

Fort Collins  
Term expires 08-01-23  
Statewide association of physicians

### Michelle Leppert, MD, MBA, Chair

Englewood  
Term expires 08-01-22  
Board-certified in vascular neurology

### Heather Morris

Stratton  
Term expires 08-01-23  
Rural hospital administrator

### Rick Morris OD, FCOVD

Golden  
Term expires 08-01-20  
Member of the public who has suffered a stroke

### Shaye Moskowitz, MD

Colorado Springs  
Resigned 01-01-20  
Board-certified neurosurgeon

### Chris Mulberry, NR-P

Henderson  
Term expires 08-01-22  
Emergency medical service provider

# Appendix 4: Stroke Advisory Board Membership

## Sharon Poisson, MD, MAS

Denver

Term expires 08-01-23

National stroke association

## Vijay Subbarao, MD, FAAC

Cherry Hills Village

Term expires 08-01-23

National cardiovascular association

## Paul Sykes, MD

Lyons

Term expired 08-01-20

Statewide association of physicians

## Brian Thomas, MBA

Denver

Term expires 08-01-22

Urban area hospital administrator

## Wesley Reynolds, MD, FAAN, Co Chair

Denver

Term expires 08-01-21

Rural area board-certified neurologist

## Diane Rossi MacKay, MSN, RN, CPHQ

Evergreen

Term expires 08-01-23

Statewide hospital association

## John Savage, CMPE, PMP

Aurora

Term expired 08-01-23

Caregiver of a person who has suffered a stroke

## Richard Smith, MD

Denver

Term expired 08-01-20

Resident and member of a stroke association

## Acknowledgements:

*Non-voting members who have contributed to this report*

## Elizabeth Boland

MPH Candidate

Colorado School of Public Health

Term expires 08-01-21

Administrative Liaison

## Deepa Trivedi

MPH Candidate

Colorado School of Public Health

Term expires 08-01-21

Administrative Liaison

## Eileen Brown

Emergent Systems of Care Specialist

Colorado Department of Health and Environment

## Flannery O'Neil, MPH

Quality, Outcomes Research & Analytics

American Heart Association

2017



## SENATE JOINT RESOLUTION 17-027

BY SENATOR(S) Guzman and Tate, Aguilar, Baumgardner, Cooke, Coram, Court, Crowder, Donovan, Fenberg, Fields, Garcia, Gardner, Hill, Holbert, Jahn, Jones, Kagan, Kefalas, Kerr, Lambert, Lundberg, Marble, Martinez Humenik, Merrifield, Moreno, Neville T., Priola, Scott, Smallwood, Sonnenberg, Todd, Zenzinger, Grantham;  
also REPRESENTATIVE(S) Duran and Beckman, Arndt, Becker J., Becker K., Benavidez, Bridges, Buck, Buckner, Carver, Catlin, Coleman, Covarrubias, Danielson, Esgar, Everett, Exum, Foote, Garnett, Ginal, Gray, Hamner, Hansen, Herod, Hooton, Humphrey, Jackson, Kennedy, Kraft-Tharp, Landgraf, Lawrence, Lebsock, Lee, Leonard, Lewis, Liston, Lontine, Lundeen, McKean, McLachlan, Melton, Michaelson Jenet, Mitsch Bush, Navarro, Neville P., Nordberg, Pabon, Pettersen, Rankin, Ransom, Rosenthal, Saine, Salazar, Sias, Singer, Thurlow, Valdez, Van Winkle, Weissman, Willett, Williams D., Wilson, Winter, Wist, Young.

### CONCERNING RECOGNITION OF THE NEED TO EXPAND ACCESS TO EFFECTIVE TREATMENT FOR STROKE PATIENTS.

WHEREAS, Strokes are a leading cause of death and long-term disability in the United States, costing more than 130,000 lives annually, including an average of 1,600 victims in Colorado alone; and

WHEREAS, A stroke can affect anyone at any age and at any time and can have devastating long-term effects if the victim is not treated immediately; and

WHEREAS, A stroke occurs when blood flow to an area of the brain is blocked by a clot or aneurysm, but certain specialized care has been proven to give stroke patients an excellent chance of survival and even full recovery; and

WHEREAS, Advancements in medical innovation have produced revolutionary treatments such as the tissue plasminogen activator and

# Appendix 5: Senate Joint Resolution

neuroendovascular surgery in which highly trained stroke surgeons, in conjunction with neurologists, treat patients suffering from a severe form of ischemic stroke by removing or dissolving the blood clot and ensuring the patients' survival while greatly reducing long-term disabilities; and

WHEREAS, When emergency medical technicians (EMTs) and other first responders are properly trained to assess stroke severity and then transport stroke patients to neuroendovascular-ready stroke centers capable of performing a mechanical thrombectomy twenty-four hours per day, seven days per week, 365 days per year (24/7/365), stroke patients who undergo neuroendovascular surgery can live up to five years longer than patients who do not receive this specialized treatment, while also saving up to up to \$23,000 over their lifetime from shorter hospital stays and fewer required therapies; and

WHEREAS, Only an estimated 10% of those stroke victims who would benefit from this specialized care are currently being properly assessed, triaged, and transported to these specialized 24/7/365 neuroendovascular-ready stroke centers to receive this lifesaving treatment; now, therefore,

*Be It Resolved by the Senate of the Seventy-first General Assembly of the State of Colorado, the House of Representatives concurring herein:*

That we, the Colorado General Assembly:

(1) Hereby recognize and applaud the significant progress being made by Colorado's medical community, including physicians, nurses, EMTs, and hospitals, to embrace new, effective treatments for stroke victims, including specialized care that involves the performance of neuroendovascular surgery;

(2) Continue our support of improvements for the emergency medical response time and transport of stroke victims for appropriate medical care because we believe this type of care is an urgent priority and recognize that further efforts are needed to improve these services;

(3) Strongly encourage the Department of Public Health and Environment to provide EMTs and first responders with the tools needed

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## Appendix 5: Senate Joint Resolution

for the proper pre-hospital assessment and triage of stroke patients, which may include education about identifying stroke patients who may have an emergent large vessel occlusion that would necessitate transport to 24/7/365 neuroendovascular-ready stroke centers and for which geographic considerations can be designated by regional emergency medical services entities; and

(4) Encourage EMTs and other first responders to receive the proper education and training for the assessment and triage of stroke patients, along with being familiarized with 24/7/365 neuroendovascular-ready stroke centers and the Colorado Community College System to incorporate such education and training curricula into its existing program for the education and training of EMTs and other first responders so that this needed education and training is readily available.

*Be It Further Resolved,* That copies of this Joint Resolution be sent to Dr. Larry Wolk, Executive Director and Chief Medical Officer of the Colorado Department of Public Health and Environment; the nine members of the Colorado Community College System's State Board for

## Appendix 5: Senate Joint Resolution

Community Colleges and Occupational Education; Governor John Hickenlooper; and Colorado's Congressional delegation.



Kevin J. Grantham  
PRESIDENT OF  
THE SENATE



Crisanta Duran  
SPEAKER OF THE HOUSE  
OF REPRESENTATIVES



Effie Ameen  
SECRETARY OF  
THE SENATE



Marilyn Eddins  
CHIEF CLERK OF THE HOUSE  
OF REPRESENTATIVES

# Appendix 6: Stroke Advisory Board Legislation

NOTE: The governor signed this measure on 5/24/2013.



SENATE BILL 13-225

BY SENATOR(S) Giron, Guzman, Aguilar, Newell, Nicholson, Carroll, Heath, Kefalas, Todd, Morse;  
also REPRESENTATIVE(S) Ginal and Primavera, Schafer, Fields, Garcia, Hamner, Hulinghorst, Kraft-Tharp, Labuda, Rosenthal, Ryden, Vigil, Young.

CONCERNING THE DEVELOPMENT OF A SYSTEM TO IMPROVE QUALITY OF CARE TO PATIENTS SUFFERING SPECIFIED ACUTE INCIDENTS, AND, IN CONNECTION THEREWITH, MAKING AN APPROPRIATION.

*Be it enacted by the General Assembly of the State of Colorado:*

**SECTION 1.** In Colorado Revised Statutes, add 25-3-114, 25-3-115, and 25-3-116 as follows:

**25-3-114. STEMI task force - creation - membership - duties - report - repeal.** (1) (a) THERE IS HEREBY CREATED IN THE DEPARTMENT THE STEMI TASK FORCE. NO LATER THAN AUGUST 1, 2013, THE GOVERNOR SHALL APPOINT FIFTEEN MEMBERS TO THE TASK FORCE AS FOLLOWS:

(I) ONE MEMBER WHO IS A COLORADO RESIDENT REPRESENTING A NATIONAL ASSOCIATION WHOSE GOAL IS TO ELIMINATE CARDIOVASCULAR DISEASE AND STROKE;

# Appendix 6: Stroke Advisory Board Legislation

(II) ONE MEMBER WHO IS A CARDIOLOGIST PRACTICING IN THIS STATE;

(III) ONE MEMBER WHO IS AN INTERVENTIONAL CARDIOLOGIST PRACTICING IN THE WESTERN SLOPE AREA OF THE STATE;

(IV) ONE MEMBER WHO IS AN INTERVENTIONAL CARDIOLOGIST PRACTICING IN THE FRONT RANGE AREA OF THE STATE;

(V) ONE MEMBER REPRESENTING A STATEWIDE ASSOCIATION OF CARDIOLOGISTS;

(VI) ONE MEMBER REPRESENTING A STATEWIDE ASSOCIATION OF PHYSICIANS;

(VII) ONE MEMBER REPRESENTING A STATEWIDE HOSPITAL ASSOCIATION;

(VIII) ONE MEMBER REPRESENTING AN EMERGENCY PHYSICIANS ASSOCIATION;

(IX) ONE MEMBER WHO IS AN EMERGENCY MEDICAL SERVICE PROVIDER, AS DEFINED IN SECTION 25-3.5-103 (8);

(X) ONE MEMBER WHO IS A REGISTERED NURSE INVOLVED IN CARDIAC CARE;

(XI) ONE HOSPITAL ADMINISTRATOR FROM A HOSPITAL LOCATED IN A RURAL AREA OF THE STATE;

(XII) ONE HOSPITAL ADMINISTRATOR FROM A HOSPITAL LOCATED IN AN URBAN AREA OF THE STATE;

(XIII) ONE MEMBER OF THE PUBLIC WHO HAS SUFFERED A STEMI HEART ATTACK; AND

(XIV) TWO MEMBERS WITH EXPERTISE IN CARDIOVASCULAR DATA REGISTRIES, ONE OF WHOM IS A CARDIOLOGIST.

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## Appendix 6: Stroke Advisory Board Legislation

(b) THE EXECUTIVE DIRECTOR OF THE DEPARTMENT OR THE EXECUTIVE DIRECTOR'S DESIGNEE SHALL SERVE AS AN EX OFFICIO MEMBER OF THE TASK FORCE.

(c) MEMBERS OF THE TASK FORCE SERVE WITHOUT COMPENSATION AND ARE NOT ENTITLED TO REIMBURSEMENT OF EXPENSES INCURRED IN SERVING ON OR PERFORMING DUTIES OF THE TASK FORCE.

(2) (a) THE TASK FORCE SHALL STUDY AND MAKE RECOMMENDATIONS FOR DEVELOPING A STATEWIDE PLAN TO IMPROVE QUALITY OF CARE TO STEMI PATIENTS. IN CONDUCTING THE STUDY, THE TASK FORCE SHALL EXPLORE THE FOLLOWING ISSUES, WITHOUT LIMITATION:

(I) CREATION OF A STATE DATABASE OR REGISTRY CONSISTING OF DATA ON STEMI CARE THAT MIRRORS THE DATA HOSPITALS SUBMIT TO NATIONALLY RECOGNIZED ORGANIZATIONS;

(II) ACCESS TO AGGREGATED STEMI DATA, WHICH MUST EXCLUDE ANY IDENTIFYING OR CONFIDENTIAL INFORMATION ABOUT THE REPORTING HOSPITAL OR PATIENTS TREATED BY THE HOSPITAL, FROM A STATE DATABASE THAT MAY BE DEVELOPED OR FROM A NATIONALLY RECOGNIZED ORGANIZATION;

(III) A PLAN THAT WOULD ENCOURAGE RURAL AND URBAN HOSPITALS TO COORDINATE SERVICES FOR THE NECESSARY REFERRAL OR RECEIPT OF PATIENTS REQUIRING STEMI CARE IN THE STATE; AND

(IV) THE CRITERIA USED BY NATIONALLY RECOGNIZED BODIES FOR DESIGNATING A HOSPITAL IN STEMI CARE AND WHETHER A DESIGNATION IS APPROPRIATE OR NEEDED TO ASSURE ACCESS TO THE BEST QUALITY CARE FOR COLORADO RESIDENTS WITH STEMI EVENTS.

(b) BY JANUARY 31, 2014, THE TASK FORCE SHALL SUBMIT AN INITIAL REPORT, AND BY JULY 31, 2015, THE TASK FORCE SHALL SUBMIT ITS FINAL REPORT, SPECIFYING ITS FINDINGS AND RECOMMENDATIONS TO THE HEALTH AND HUMAN SERVICES COMMITTEE OF THE SENATE, THE HEALTH, INSURANCE, AND ENVIRONMENT COMMITTEE OF THE HOUSE OF REPRESENTATIVES, OR THEIR SUCCESSOR COMMITTEES, AND THE DEPARTMENT. THE TASK FORCE SHALL INCLUDE IN ITS REPORTS A RECOMMENDATION ON WHETHER A DESIGNATION OF A HOSPITAL IN STEMI

## Appendix 6: Stroke Advisory Board Legislation

CARE IS APPROPRIATE OR NEEDED TO ASSURE ACCESS TO THE BEST QUALITY CARE FOR COLORADO RESIDENTS WITH STEMI EVENTS.

(3) THE DEPARTMENT MAY ACCEPT AND EXPEND, SUBJECT TO APPROPRIATION BY THE GENERAL ASSEMBLY, GIFTS, GRANTS, AND DONATIONS TO PAY THE DIRECT EXPENSES OF THE DEPARTMENT IN ASSISTING AND STAFFING THE TASK FORCE. THE DEPARTMENT SHALL TRANSMIT ANY MONETARY GIFTS, GRANTS, OR DONATIONS IT RECEIVES TO THE STATE TREASURER FOR DEPOSIT IN THE HEALTH FACILITIES GENERAL LICENSURE CASH FUND, AND THOSE MONEYS MAY BE USED ONLY TO PAY THE DIRECT EXPENSES OF THE DEPARTMENT.

(4) AS USED IN THIS SECTION, UNLESS THE CONTEXT OTHERWISE REQUIRES:

(a) "DEPARTMENT" MEANS THE DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT.

(b) "STEMI" MEANS ST-ELEVATION MYOCARDIAL INFARCTION.

(5) THIS SECTION IS REPEALED, EFFECTIVE AUGUST 1, 2015.

**25-3-115. Stroke advisory board - creation - membership - duties - report - repeal.** (1) (a) THERE IS HEREBY CREATED IN THE DEPARTMENT THE STROKE ADVISORY BOARD, THE PURPOSE OF WHICH IS TO EVALUATE POTENTIAL STRATEGIES FOR STROKE PREVENTION AND TREATMENT AND DEVELOP A STATEWIDE NEEDS ASSESSMENT IDENTIFYING RELEVANT RESOURCES. NO LATER THAN AUGUST 1, 2013, THE GOVERNOR SHALL APPOINT EIGHTEEN MEMBERS TO THE STROKE ADVISORY BOARD AS FOLLOWS:

(I) SIX PHYSICIANS WHO ARE ACTIVELY INVOLVED IN STROKE CARE AND WHO SATISFY THE FOLLOWING CRITERIA: ONE PHYSICIAN WHO IS BOARD-CERTIFIED IN PRIMARY CARE; ONE PHYSICIAN WHO IS BOARD-CERTIFIED IN VASCULAR NEUROLOGY; ONE PHYSICIAN WHO IS PRIVILEGED AND ACTIVELY PRACTICING INTERVENTIONAL NEURORADIOLOGY; ONE PHYSICIAN WHO IS BOARD-CERTIFIED IN NEUROSURGERY; ONE PHYSICIAN REPRESENTING A STATEWIDE CHAPTER OF EMERGENCY PHYSICIANS; AND ONE PHYSICIAN WHO IS A BOARD-CERTIFIED NEUROLOGIST SERVING PATIENTS IN A RURAL AREA OF THE STATE;

## Appendix 6: Stroke Advisory Board Legislation

(II) ONE MEMBER REPRESENTING A STATEWIDE ASSOCIATION OF PHYSICIANS;

(III) ONE MEMBER REPRESENTING A STATEWIDE HOSPITAL ASSOCIATION;

(IV) ONE MEMBER WHO IS AN EMERGENCY MEDICAL SERVICE PROVIDER, AS DEFINED IN SECTION 25-3.5-103 (8);

(V) ONE MEMBER WHO IS A REGISTERED NURSE INVOLVED IN STROKE CARE;

(VI) ONE HOSPITAL ADMINISTRATOR FROM A HOSPITAL LOCATED IN A RURAL AREA OF THE STATE;

(VII) ONE HOSPITAL ADMINISTRATOR FROM A HOSPITAL LOCATED IN AN URBAN AREA OF THE STATE;

(VIII) ONE REPRESENTATIVE FROM A STROKE REHABILITATION FACILITY;

(IX) ONE MEMBER WHO IS A COLORADO RESIDENT REPRESENTING A NATIONAL ASSOCIATION WHOSE GOAL IS TO ELIMINATE CARDIOVASCULAR DISEASE AND STROKE;

(X) ONE MEMBER WHO IS A COLORADO RESIDENT REPRESENTING A NATIONAL STROKE ASSOCIATION;

(XI) ONE MEMBER WHO IS A PHYSICAL OR OCCUPATIONAL THERAPIST ACTIVELY INVOLVED IN STROKE CARE;

(XII) ONE MEMBER OF THE PUBLIC WHO HAS SUFFERED A STROKE OR IS THE CAREGIVER OF A PERSON WHO HAS SUFFERED A STROKE; AND

(XIII) ONE MEMBER WHO IS AN EXPERT IN STROKE DATABASE MANAGEMENT.

(b) THE EXECUTIVE DIRECTOR OF THE DEPARTMENT OR THE EXECUTIVE DIRECTOR'S DESIGNEE SHALL SERVE AS AN EX OFFICIO MEMBER OF THE STROKE ADVISORY BOARD.

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## Appendix 6: Stroke Advisory Board Legislation

(c) MEMBERS OF THE STROKE ADVISORY BOARD SERVE WITHOUT COMPENSATION AND ARE NOT ENTITLED TO REIMBURSEMENT OF EXPENSES INCURRED IN SERVING ON OR PERFORMING DUTIES OF THE ADVISORY BOARD.

(2) (a) THE STROKE ADVISORY BOARD SHALL STUDY AND MAKE RECOMMENDATIONS FOR DEVELOPING A STATEWIDE PLAN TO IMPROVE QUALITY OF CARE FOR STROKE PATIENTS. IN CONDUCTING THE STUDY, THE STROKE ADVISORY BOARD SHALL EXPLORE THE FOLLOWING ISSUES, WITHOUT LIMITATION:

(I) CREATION OF A STATE DATABASE OR REGISTRY CONSISTING OF DATA ON STROKE CARE THAT MIRRORS THE DATA HOSPITALS SUBMIT TO NATIONALLY RECOGNIZED ORGANIZATIONS;

(II) ACCESS TO AGGREGATED STROKE DATA, WHICH MUST EXCLUDE ANY IDENTIFYING OR CONFIDENTIAL INFORMATION ABOUT THE REPORTING HOSPITAL OR PATIENTS TREATED BY THE HOSPITAL, FROM A STATE DATABASE THAT MAY BE DEVELOPED OR FROM A NATIONALLY RECOGNIZED ORGANIZATION BY THE ADVISORY BOARD, BY ANY PERSON WHO SUBMITS A WRITTEN REQUEST FOR THE DATA;

(III) EVALUATION OF CURRENTLY AVAILABLE STROKE TREATMENTS AND THE DEVELOPMENT OF RECOMMENDATIONS, BASED ON MEDICAL EVIDENCE, FOR WAYS TO IMPROVE STROKE PREVENTION AND TREATMENT;

(IV) A PLAN THAT WOULD ENCOURAGE RURAL AND URBAN HOSPITALS TO COORDINATE SERVICES FOR THE NECESSARY REFERRAL OR RECEIPT OF PATIENTS REQUIRING STROKE CARE IN THE STATE; AND

(V) THE CRITERIA USED BY NATIONALLY RECOGNIZED BODIES FOR DESIGNATING A HOSPITAL IN STROKE CARE AND WHETHER A DESIGNATION IS APPROPRIATE OR NEEDED TO ASSURE ACCESS TO THE BEST QUALITY CARE FOR COLORADO RESIDENTS WITH STROKE EVENTS.

(b) BY JANUARY 31, 2014, AND BY EACH JANUARY 1 THEREAFTER, THE STROKE ADVISORY BOARD SHALL SUBMIT A REPORT SPECIFYING ITS FINDINGS AND RECOMMENDATIONS TO THE HEALTH AND HUMAN SERVICES COMMITTEE OF THE SENATE, THE HEALTH, INSURANCE, AND ENVIRONMENT COMMITTEE OF THE HOUSE OF REPRESENTATIVES, OR THEIR SUCCESSOR COMMITTEES, AND THE DEPARTMENT. THE STROKE ADVISORY BOARD SHALL

## Appendix 6: Stroke Advisory Board Legislation

INCLUDE IN ITS REPORT A RECOMMENDATION ON WHETHER A DESIGNATION OF A HOSPITAL IN STROKE CARE IS APPROPRIATE OR NEEDED TO ASSURE ACCESS TO THE BEST QUALITY CARE FOR COLORADO RESIDENTS WITH STROKE EVENTS.

(3) THE DEPARTMENT MAY ACCEPT AND EXPEND, SUBJECT TO APPROPRIATION BY THE GENERAL ASSEMBLY, GIFTS, GRANTS, AND DONATIONS TO PAY THE DIRECT EXPENSES OF THE DEPARTMENT IN ASSISTING AND STAFFING THE STROKE ADVISORY BOARD. THE DEPARTMENT SHALL TRANSMIT ANY MONETARY GIFTS, GRANTS, OR DONATIONS IT RECEIVES TO THE STATE TREASURER FOR DEPOSIT IN THE HEALTH FACILITIES GENERAL LICENSURE CASH FUND, AND THOSE MONEYS MAY BE USED ONLY TO PAY THE DIRECT EXPENSES OF THE DEPARTMENT.

(4) AS USED IN THIS SECTION, UNLESS THE CONTEXT OTHERWISE REQUIRES, "DEPARTMENT" MEANS THE DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT.

(5) THIS SECTION IS REPEALED, EFFECTIVE SEPTEMBER 1, 2018. PRIOR TO THE REPEAL, THE DEPARTMENT OF REGULATORY AGENCIES SHALL REVIEW THE FUNCTIONS OF THE STROKE ADVISORY BOARD IN ACCORDANCE WITH SECTION 2-3-1203, C.R.S.

**25-3-116. Department recognition of national certification - suspension or revocation of recognition - definitions.** (1) A HOSPITAL THAT HAS AN ACCREDITATION, CERTIFICATION, OR DESIGNATION IN STROKE OR STEMI CARE FROM A NATIONALLY RECOGNIZED ACCREDITING BODY, INCLUDING BUT NOT LIMITED TO A CERTIFICATION AS A COMPREHENSIVE STROKE CENTER OR PRIMARY STROKE CENTER BY THE JOINT COMMISSION ON ACCREDITATION OF HEALTH CARE ORGANIZATIONS AND PROGRAMS OR ITS SUCCESSOR ORGANIZATION OR AN ACCREDITATION AS A STEMI RECEIVING CENTER OR STEMI REFERRAL CENTER BY THE SOCIETY FOR CARDIOVASCULAR PATIENT CARE OR ITS SUCCESSOR ORGANIZATION, MAY SEND INFORMATION AND SUPPORTING DOCUMENTATION TO THE DEPARTMENT. THE DEPARTMENT SHALL MAKE A HOSPITAL'S NATIONAL ACCREDITATION, CERTIFICATION, OR DESIGNATION AVAILABLE TO THE PUBLIC IN A MANNER DETERMINED BY THE DEPARTMENT.

(2) THE DEPARTMENT SHALL DEEM A HOSPITAL THAT IS CURRENTLY ACCREDITED, CERTIFIED, OR DESIGNATED BY A NATIONALLY RECOGNIZED

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## Appendix 6: Stroke Advisory Board Legislation

ACCREDITING BODY AS SATISFYING THE REQUIREMENTS FOR RECOGNITION AND PUBLICATION BY THE DEPARTMENT. THE DEPARTMENT MAY SUSPEND OR REVOKE A RECOGNITION AND PUBLICATION OF A HOSPITAL'S ACCREDITATION, CERTIFICATION, OR DESIGNATION IF THE DEPARTMENT DETERMINES, AFTER NOTICE AND HEARING IN ACCORDANCE WITH THE "STATE ADMINISTRATIVE PROCEDURE ACT", ARTICLE 4 OF TITLE 24, C.R.S., THAT THE HOSPITAL NO LONGER HOLDS AN ACTIVE ACCREDITATION, CERTIFICATION, OR DESIGNATION FROM A NATIONALLY RECOGNIZED CERTIFYING BODY.

(3) WHETHER A HOSPITAL ATTAINS A NATIONAL ACCREDITATION, CERTIFICATION, OR DESIGNATION IN STROKE OR STEMI CARE HAS NO BEARING ON, OR CONNECTION WITH, THE LICENSING OR CERTIFICATION OF THE HOSPITAL BY THE DEPARTMENT PURSUANT TO SECTION 25-1.5-103 (1) (a).

(4) AS USED IN THIS SECTION, UNLESS THE CONTEXT OTHERWISE REQUIRES:

(a) "DEPARTMENT" MEANS THE DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT.

(b) "STEMI" MEANS ST-ELEVATION MYOCARDIAL INFARCTION.

**SECTION 2.** In Colorado Revised Statutes, 2-3-1203, add (3) (ee.5) as follows:

**2-3-1203. Sunset review of advisory committees.** (3) The following dates are the dates for which the statutory authorization for the designated advisory committees is scheduled for repeal:

(ee.5) SEPTEMBER 1, 2018:

(II) THE STROKE ADVISORY BOARD CREATED IN SECTION 25-3-115, C.R.S.;

**SECTION 3. Appropriation.** In addition to any other appropriation, there is hereby appropriated, out of any moneys in the general fund not otherwise appropriated, to the department of public health and environment, for the fiscal year beginning July 1, 2013, the sum of

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## Appendix 6: Stroke Advisory Board Legislation

\$41,402 and 0.6 FTE, or so much thereof as may be necessary, for allocation to the emergency preparedness and response division for the stroke and STEMI heart attack designation line item related to the implementation of this act.

**SECTION 4. Safety clause.** The general assembly hereby finds, determines, and declares that this act is necessary for the immediate preservation of the public peace, health, and safety.

\_\_\_\_\_  
John P. Morse  
PRESIDENT OF  
THE SENATE

\_\_\_\_\_  
Mark Ferrandino  
SPEAKER OF THE HOUSE  
OF REPRESENTATIVES

\_\_\_\_\_  
Cindi L. Markwell  
SECRETARY OF  
THE SENATE

\_\_\_\_\_  
Marilyn Eddins  
CHIEF CLERK OF THE HOUSE  
OF REPRESENTATIVES

APPROVED \_\_\_\_\_

\_\_\_\_\_  
John W. Hickenlooper  
GOVERNOR OF THE STATE OF COLORADO

# Appendix 6: Stroke Advisory Board Legislation



HOUSE BILL 18-1265

BY REPRESENTATIVE(S) Lontine and Beckman, Buckner, Ginal, Kennedy, Roberts, Esgar, Gray, Hamner, Michaelson Jenet, Valdez, Young; also SENATOR(S) Crowder, Aguilar, Kefalas, Martinez Humenik, Merrifield, Moreno, Tate, Todd, Williams A.

CONCERNING THE CONTINUATION OF THE STROKE ADVISORY BOARD IN ACCORDANCE WITH THE RECOMMENDATION IN THE DEPARTMENT OF REGULATORY AGENCIES' 2017 SUNSET REPORT.

*Be it enacted by the General Assembly of the State of Colorado:*

**SECTION 1.** In Colorado Revised Statutes, 25-3-115, **amend** (5) as follows:

**25-3-115. Stroke advisory board - creation - membership - duties - report - definition - repeal.** (5) This section is repealed, effective ~~September 1, 2018~~ **SEPTEMBER 1, 2028**. Prior to the repeal, the department of regulatory agencies shall review the functions of the stroke advisory board in accordance with section 2-3-1203, C.R.S.

**SECTION 2.** In Colorado Revised Statutes, 2-3-1203, **repeal** (7)(a)(II); and **add** (19) as follows:

*Capital letters or bold & italic numbers indicate new material added to existing statutes; dashes through words indicate deletions from existing statutes and such material not part of act.*

# Appendix 6: Stroke Advisory Board Legislation

**2-3-1203. Sunset review of advisory committees - legislative declaration - definition - repeal.** (7) (a) The following statutory authorizations for the designated advisory committees will repeal on September 1, 2018:

(II) ~~The stroke advisory board created in section 25-3-115, C.R.S.~~

(19) (a) THE FOLLOWING STATUTORY AUTHORIZATIONS FOR THE DESIGNATED ADVISORY COMMITTEES WILL REPEAL ON SEPTEMBER 1, 2028:

(I) THE STROKE ADVISORY BOARD CREATED IN SECTION 25-3-115.

(b) THIS SUBSECTION (19) IS REPEALED, EFFECTIVE SEPTEMBER 1, 2030.

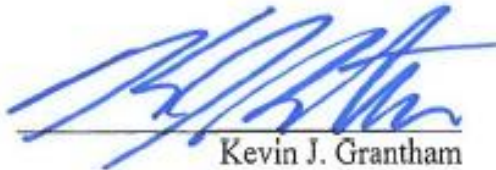
**SECTION 3. Act subject to petition - effective date.** This act takes effect September 1, 2018; except that, if a referendum petition is filed pursuant to section 1 (3) of article V of the state constitution against this act or an item, section, or part of this act within the ninety-day period after final adjournment of the general assembly, then the act, item, section, or part will not take effect unless approved by the people at the general election to be

## Appendix 6: Stroke Advisory Board Legislation

held in November 2018 and, in such case, will take effect on the date of the official declaration of the vote thereon by the governor.



Crisanta Duran  
SPEAKER OF THE HOUSE  
OF REPRESENTATIVES



Kevin J. Grantham  
PRESIDENT OF  
THE SENATE



Marilyn Eddins  
CHIEF CLERK OF THE HOUSE  
OF REPRESENTATIVES



Effie Ameen  
SECRETARY OF  
THE SENATE

APPROVED 12:18 PM May 4, 2018



John W. Hickenlooper  
GOVERNOR OF THE STATE OF COLORADO

# Appendix 6: Stroke Advisory Board Legislation



HOUSE BILL 20-1397

BY REPRESENTATIVE(S) McCluskie and Ransom, Esgar, Buentello, Michaelson Jenet, Titone, Becker;  
also SENATOR(S) Moreno and Zenzinger, Rankin, Cooke, Marble, Tate.

CONCERNING THE ELIMINATION OF THE REQUIREMENT THAT THE  
DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT PROVIDE  
ASSISTANCE TO CERTAIN BOARDS, AND, IN CONNECTION THEREWITH,  
REDUCING AN APPROPRIATION.

*Be it enacted by the General Assembly of the State of Colorado:*

**SECTION 1.** In Colorado Revised Statutes, 25-3-115, **amend** (3);  
and **add** (3.5) as follows:

**25-3-115. Stroke advisory board - creation - membership -  
duties - report - definition - repeal.** (3) The ~~department~~ STROKE  
ADVISORY BOARD may accept and expend, subject to appropriation by the  
general assembly, gifts, grants, and donations to pay the STROKE ADVISORY  
BOARD'S direct expenses. ~~of the department in assisting and staffing the  
stroke advisory board.~~ The ~~department~~ STROKE ADVISORY BOARD shall  
transmit any monetary gifts, grants, or donations it receives to the state  
treasurer for deposit in the health facilities general licensure cash fund. **and**

*Capital letters or bold & italic numbers indicate new material added to existing law; dashes  
through words or numbers indicate deletions from existing law and such material is not part of  
the act.*

# Appendix 6: Stroke Advisory Board Legislation

~~those moneys may be used only to pay the direct expenses of the department.~~

(3.5) THE DEPARTMENT STAFF IS NOT REQUIRED TO PROVIDE ANY FINANCIAL SUPPORT OR PERFORM ANY ADMINISTRATIVE DUTIES RELATED TO THE OPERATION OF THE STROKE ADVISORY BOARD.

**SECTION 2.** In Colorado Revised Statutes, 30-10-601.6, **amend** (5)(a) and (6) as follows:

**30-10-601.6. Coroners standards and training board.** (5) (a) ~~On and after August 6, 2003, The executive director of the department of public health and environment~~ C.C.S.T. BOARD may accept and expend gifts, grants, and donations to ~~cover the costs incurred in the establishment and operation of~~ PAY THE DIRECT EXPENSES OF the C.C.S.T. board. ~~Such~~ THE C.C.S.T. BOARD SHALL TRANSMIT ALL gifts, grants, and donations ~~received shall be transmitted~~ to the state treasurer, who shall credit the moneys MONEY to the coroner training fund created in section 30-10-601.8 (5). Any unencumbered state moneys MONEY remaining in the fund upon the repeal of this section shall be transferred to the general fund.

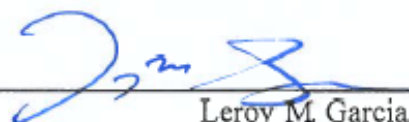
(6) The department of public health and environment staff ~~shall~~ IS NOT REQUIRED TO PROVIDE ANY FINANCIAL SUPPORT OR perform the ANY administrative duties related to the operation of the C.C.S.T. board.


**SECTION 3. Appropriation - adjustments to 2020 long bill.** To implement this act, the general fund appropriation made in the annual general appropriation act for the 2020-21 state fiscal year to the department of public health and environment for use by the health facilities and emergency medical services division is decreased by \$44,007.

# Appendix 6: Stroke Advisory Board Legislation

**SECTION 4. Safety clause.** The general assembly hereby finds, determines, and declares that this act is necessary for the immediate preservation of the public peace, health, or safety.

  
\_\_\_\_\_  
KC Becker  
SPEAKER OF THE HOUSE  
OF REPRESENTATIVES

  
\_\_\_\_\_  
Leroy M. Garcia  
PRESIDENT OF  
THE SENATE

  
\_\_\_\_\_  
Robin Jones  
CHIEF CLERK OF THE HOUSE  
OF REPRESENTATIVES

  
\_\_\_\_\_  
Cindi L. Markwell  
SECRETARY OF  
THE SENATE

APPROVED June 30, 2020 at 8:46 pm  
(Date and Time)

  
\_\_\_\_\_  
Jared S. Polis  
GOVERNOR OF THE STATE OF COLORADO