



**Senate Health Committee  
Proponent testimony on Senate Bill 21  
Donald Frei, M.D.  
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**SB 21 – Regards emergency medical services and stroke patient protocols**

Chairman Huffman, Vice Chair Antani and Ranking Member Antonio, I appreciate the opportunity to provide proponent testimony on Senate Bill 21. My name is Donald Frei, M.D., and I am a neurointerventional surgeon at Radiology Imaging Associates and Swedish Medical Center in Englewood, CO. I am also a past president of the Society of NeuroInterventional Surgery (SNIS).

Nearly five years ago, SNIS launched the Get Ahead of Stroke campaign with the goal of improving emergency triage and transportation protocols across the country for patients suffering from severe stroke. Our primary objective is to bridge the gap between advancements in treating stroke and existing regulations which inadvertently prevent patients from effectively accessing care that will help them survive and fully recover from a stroke.

Every year, more than 795,000 Americans suffer a stroke; approximately 140,000 of these patients ultimately die from their stroke. Between 150,000 to 200,000 stroke patients suffer from an emergent large vessel occlusion (ELVO), a clot that restricts blood flow to the brain, killing up to two million brain cells each minute. Yet, only about 15 percent of patients afflicted with ELVO receive the proper treatment they need to survive and achieve a full recovery.

Despite having the technology today which allows us to successfully treat the most severe cases of stroke such as ELVO, most states do not have clear protocols to ensure the triage and direct transport of stroke patients to the hospitals best-equipped to treat them. Compared to the trauma system, where critically injured patients are triaged and directly transported to Level 1 trauma centers for the life-saving care they need to survive, most states do not have a similar system for patients suffering from severe stroke. In most cases, stroke patients are transported to the nearest hospital and then transferred to a Comprehensive (Level 1) Stroke Center (CSC) to get the care they need. Unfortunately, the time lost in transfer jeopardizes the patient's recovery given the loss of two million brain cells each minute.

Comprehensive (Level 1) Stroke Centers are the best-equipped to treat critical cases of stroke like ELVO. These facilities are staffed with highly trained Stroke and NeuroInterventional care teams who can provide advanced treatment like thrombectomy (endovascular clot extraction) to save patients' lives and reduce disability as long as patients reach these teams in time. Legislation such as SB 21 will help put Ohio on the path toward achieving the best outcomes for patients afflicted with severe stroke by helping them get to the right place at the right time.

In Colorado, we have made progress in improving the state's emergency triage and transportation protocols for patients suffering from severe stroke. This began with the Colorado General Assembly directing the state's Department of Public Health and Environment and the Colorado Community College System to provide EMTs and first responders with the education, training and tools necessary for the proper pre-hospital assessment and triage of stroke patients. This includes identifying suspected large vessel occlusion and familiarization with the state's designated stroke centers, particularly those with 24/7/365 neuroendovascular capabilities for treating large vessel occlusion.

In rural Colorado hospitals, transfer protocols are in place to rapidly transport severe stroke patients to a Level 1 stroke center. In urban areas of Colorado, where multiple hospitals are nearby, when EMS identifies a patient with a severe stroke, they transport them to the nearest level 1 stroke center, which may be a few miles further than the closest hospital, but the patient is taken to the right hospital first. This commonsense algorithm saves brain cells and lives, because patients with severe strokes are treated faster.

As a governor-appointed member of Colorado's Stroke Advisory Board, our multidisciplinary group of stroke professionals put politics aside and put stroke patients first.

Thank you for your consideration of SB 21. I appreciate the opportunity to provide proponent testimony in support of this important legislation that will help improve outcomes for stroke patients.

**Donald Frei, M.D.**