Stroke Care in Wyoming

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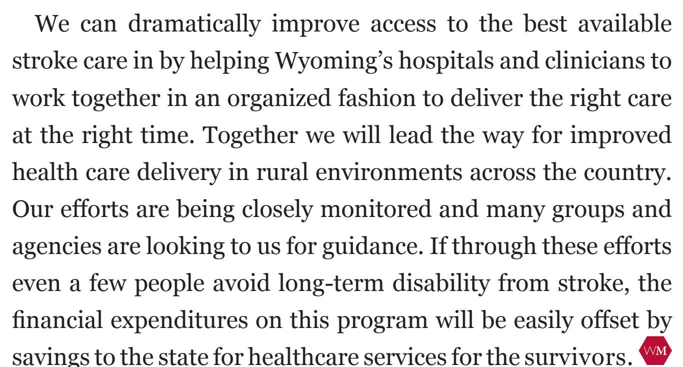
IIn the past several years there have been stunning advances in stroke including: expansion of the time window for thrombolytics to at least 4-1/2 hours, development of highly effective mechanical revascularization techniques and the arrival of imaging modalities that reveal how much brain can be saved by intervention regardless of time elapsed since symptom onset. Stroke remains the fifth leading cause of death and a leading cause of long-term disability. We lose nearly 2 million brain cells per minute during a stroke, so the faster normal blood flow is restored the more likely we are to achieve a positive outcome.

As the least populous state in the lower 48, Wyoming faces unique challenges in delivering time-sensitive care. With respect to stroke care, the farther one lives from a hospital the less likely one is to receive thrombolytic therapy, so there is a lower probability of an excellent outcome. In other words, people living in rural settings are more likely to die or be permanently disabled because of stroke than those who live in more densely populated areas. While advances in stroke care have been remarkable, the cost and complexity of delivering this care is such that not every hospital in Wyoming can hope to provide it. It is, therefore, essential that clinicians and hospitals across the state begin working together to develop the organizational infrastructure needed to ensure every Wyomingite has access to the best possible stroke care.

There is abundant data showing that hospitals participating in clinical data registries and using the information for process improvement have better stroke outcomes. Recognizing this, Wyoming enacted a law in 2013 requiring Emergency Medical Services to transport patients with stroke to the nearest appropriate stroke center. In this statute, an appropriate facility is defined as "designated" by the state Department of Health as a stroke center and this requires participation in data submission and process improvement programs. Only one hospital in Wyoming has been designated as a stroke center so far, so the law has not yet helped the state achieve its worthy goal of clinically organizing a system of care for stroke. Participation in clinical registries and process improvement programs is expensive, requires considerable administrative support and clinical effort. Clinicians tend to believe they are delivering excellent care unless and until they are shown data to the contrary, so they rarely push administrators to embark on process improvement missions without some coaxing. The Department of Health has not enforced the rules pertaining to stroke transport and facility designation, so there is no consequence to not participating.

I am confident that we can overcome the financial and administrative barriers to participation by delivering this service on a regional or statewide basis. The American Heart Association's Get With the Guidelines (GWTG) program is the international standard for stroke registries and has provided the basis for our rapidly developing practice parameters in this field. Abstracting charts and entering data into this registry is time consuming and hard to do well if it is done only intermittently. Hospitals with low stroke volume may struggle to provide needed staffing and expertise to do this work properly. Q-Centrix is a company that specializes in supporting hospitals participating in registries like GWTG. They work remotely to abstract charts and enter data into GWTG charging per chart, based on the complexity of the registry, along with a 15% service fee.

WMS is proposing that Wyoming provide a subscription to GWTG, stroke limited, and that we contract with Q-Centrix to provide chart abstraction and data entry for GWTG, stroke limited, to every hospital in the state. We should also provide for a "Superuser" account to be used by a Clinical Coordinator and a Medical Director who would work with participating hospital to develop both site-specific and system wide process improvement plans based on the information collected. The larger hospitals already participating in GWTG will see significant financial savings if GWTG, stroke limited, is provided to them for participating in the statewide system and these net savings could be diverted toward financial support of the Coordinator and Director.



We can dramatically improve access to the best available stroke care in by helping Wyoming's hospitals and clinicians to work together in an organized fashion to deliver the right care at the right time. Together we will lead the way for improved health care delivery in rural environments across the country. Our efforts are being closely monitored and many groups and agencies are looking to us for guidance. If through these efforts even a few people avoid long-term disability from stroke, the financial expenditures on this program will be easily offset by savings to the state for healthcare services for the survivors.