Kentucky Stroke Encounter Quality Improvement Project (SEQIP)

Kentucky Heart Disease and Stroke Prevention Task Force

SEQIP Registry 2018 Data Summary

2020 Annual Report

Kentucky Public Health
Prevent. Promote. Protect.

June 1, 2020

Acknowledgements

Allison Merritt, MPH
Epidemiologist
Heart Disease and Stroke Prevention Program
Kentucky Department for Public Health
275 East Main Street, HS2W-E
Frankfort, KY 40621
Allison.Merritt@ky.gov

Bonita A. Bobo, RN, HHS
Program Manager
Heart Disease and Stroke Prevention Program
Kentucky Department for Public Health
275 E. Main St., HS2W-E
Frankfort, KY 40621
502-564-7996
BonitaA.Bobo@ky.gov

Amy Graham, BS, RN
Director
Quality and Systems Improvement
Get With the Guidelines
Great Rivers Affiliate (DE, KY, OH, PA, WV)
240 Whittington Parkway I Louisville, KY 40222
Frankfort, KY 40621
502-371-6017
Amy.Graham@heart.org

Kari D. Moore, MSN, AGACNP-BC
Director of Outreach
Department of Neurology
University of Louisville
SEQIP Chair
502-852-6317
K.Moore@louisville.edu

A special acknowledgment to the members of the SEQIP Steering Committee:
Lisa Bellamy, BHS, RN, CPHQ (UK HealthCare/Norton Healthcare - Stroke Care Network)
Todd Early, NREMT-P, BS, RN (Buechel Fire-EMS)
Lynn Hundley, MSN, RN, APRN, CNRN, CCNS, ANVP, BC (Norton Healthcare, Inc.)
Polly Hunt, RN, BS, BSN (King's Daughters Medical Center - Ashland)
Dolores Luke, RN, BSN, NHA, CPHQ (Morgan County ARH)
Bill Singletary, RN, BA, BSN, MBM (The Medical Center at Bowling Green)

Report Summary

Stroke was the fifth highest cause of death in Kentucky in 2018. Overall, Kentuckians have high rates of heart disease, heart attack, and stroke, as well as high blood pressure and high cholesterol, which increase the risk of stroke or heart disease.

KRS 211.575 requires the Kentucky Department for Public Health (KDPH) to establish and implement a plan to address continuous quality improvement for stroke care. The Kentucky Stroke Encounter Quality Improvement Project (SEQIP) was created in 2009 as a statewide quality improvement initiative to advance stroke systems of care in Kentucky by developing collaboration among member hospitals to improve evidence-based performance measures for stroke care.

Strokes are caused by either a loss of blood flow to the brain due to blockage (ischemic) or bleeding into the brain due to breaking of the blood vessel (hemorrhagic). In 2018, 78.1% of SEQIP patients had ischemic strokes, 8.5% had transient ischemic attacks, 9.8% had intracerebral hemorrhages, and 3.2% had subarachnoid hemorrhages.

In 2018, 40% of SEQIP stroke registry patients were 65 years or younger while 49.3% were male and 50.7% were female. The race of patients was predominantly white at 85%, followed by black at 10%, and 0.6% for Latino/a or Hispanic individuals. Records of previously known medical histories indicate 76% of SEQIP patients had hypertension, 30% had a previous stroke, 48% had high cholesterol, 24% used tobacco, and 35% had diabetes. Of the 2018 SEQIP patients, 27% had Medicare, 14% had private insurance, 7% had Medicaid, 2.4% were uninsured, and 18% had 2 or more types of insurance. Patients arriving at the hospital via private vehicle was 31%, 37% arrived via emergency medical services (EMS), 32% were transfers from other hospitals, and 0.3% of transport modes were not documented.

SEQIP hospitals monitor 10 evidence-based performance measures endorsed by the American Heart/Stroke Association and The Joint Commission Stroke Center certification bodies for the treatment and management of stroke patients from hospital to discharge. The 10 measures are: IV Recombinant Tissue Plasminogen Activator (IV rt-PA) Administration; Early Antithrombotics; Venous Thromboembolism (VTE) Prophylaxis; Antithrombotics at Discharge; Anticoagulation for Atrial Fibrillation/Flutter; Smoking Cessation; Discharged on Statin Medication; Dysphagia Screening; Stroke Education; and Rehabilitation Considered.

The nationally recognized goal for the above performance measures by the American Heart Association/American Stroke Association (AHA/ASA) and The Joint Commission Stroke Center certifying bodies is >85% achievement for each measure. **SEQIP hospitals met this goal for all 10 measures during calendar year 2018.**

SEQIP will continue to work towards increasing the number of stroke certified hospitals in Kentucky along with increasing participation in SEQIP to enhance collaboration for performance measure quality improvement plans. SEQIP will also continue to partner with statewide organizations to improve data collection, educate the public, and strengthen the continuum of stroke care in Kentucky.

PURPOSE

This data summary report is compiled in pursuant to KRS 211.575, which requires the KDPH to establish and implement a plan to address continuous quality improvement for stroke care. KDPH is required to provide an annual report to the governor and the Legislative Research Commission that includes data, related findings, and recommendations to improve the delivery of stroke care efforts in Kentucky.

Table of Contents

Suggested Citation:

SEQIP Steering Committee. *The SEQIP Stroke Registry 2020 Annual Report*. Frankfort, KY: Kentucky Cabinet for Health and Family Services, Department for Public Health Heart Disease and Stroke Prevention Program, Stroke Encounter Quality Improvement Project, 2020.

Cerebrovascular/Cardiovascular Disease in Kentucky

What is Cardiovascular Disease?

Cardiovascular Disease (CVD) is a term that refers to a number of conditions involving the heart and blood vessels including heart disease, heart attack, stroke, hypertension, congestive heart failure, arrhythmia, and others.

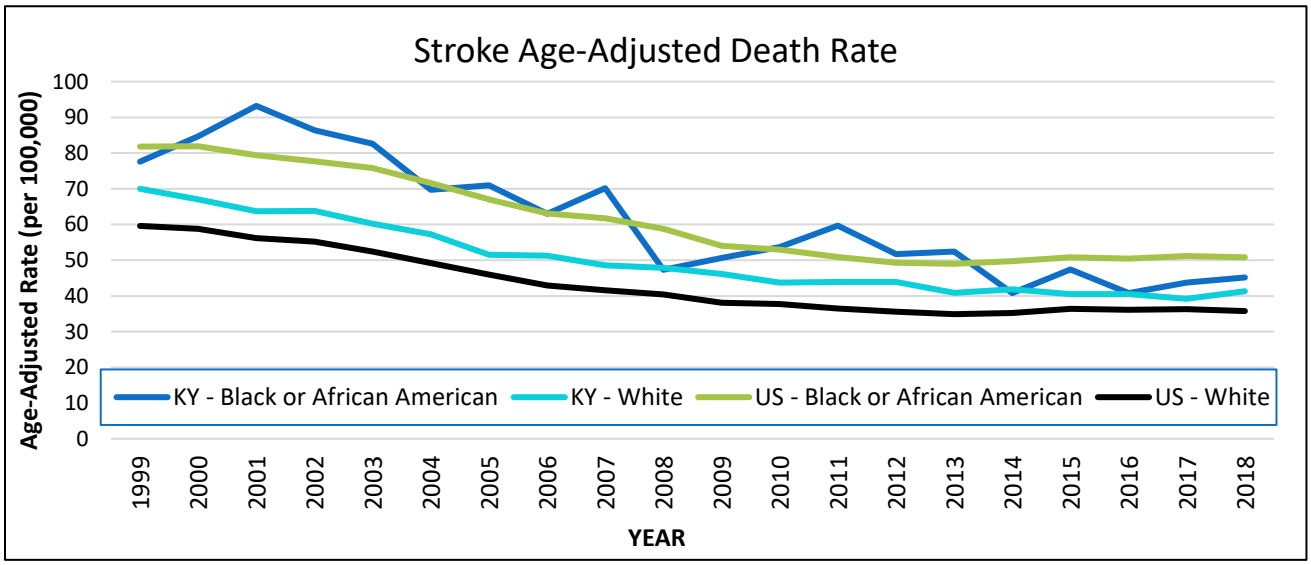
What is Cerebrovascular Disease?

Cerebrovascular disease includes all disorders that impact blood flow to the brain. Cerebrovascular disease includes stroke, transient ischemic attack (TIA), carotid stenosis, vertebral stenosis, intracranial stenosis, aneurysms, or vascular malformations. Many of these conditions involve narrowed or blocked blood vessels and contribute to the heavy burden of chronic diseases in Kentucky.

A stroke, also called a 'brain attack', occurs when blood flow to the brain is reduced or cut off, and brain cells begin to die from lack of oxygen. The effects of a stroke depend on the severity of the brain damage, but range from temporary weakness of the arm or leg, to permanent paralysis, loss of the ability to speak, and sometimes death[1]. Stroke is a significant cause of disability in the United States and reduces mobility in more than half of stroke survivors who are 65 years and older[2].

Some risk factors that increase one's likelihood of stroke are unable to be modified, such as age, gender, ethnicity, and genetic or heredity factors. Medical conditions that increase one's likelihood of having a stroke include high blood pressure, high cholesterol, heart disease, diabetes, being overweight or obese, and having a previous stroke or TIA[3]. Healthy behaviors such as avoiding tobacco, eating a balanced diet, getting enough physical activity, and not drinking too much alcohol all help reduce the risk of stroke.

The Burden of Stroke in Kentucky



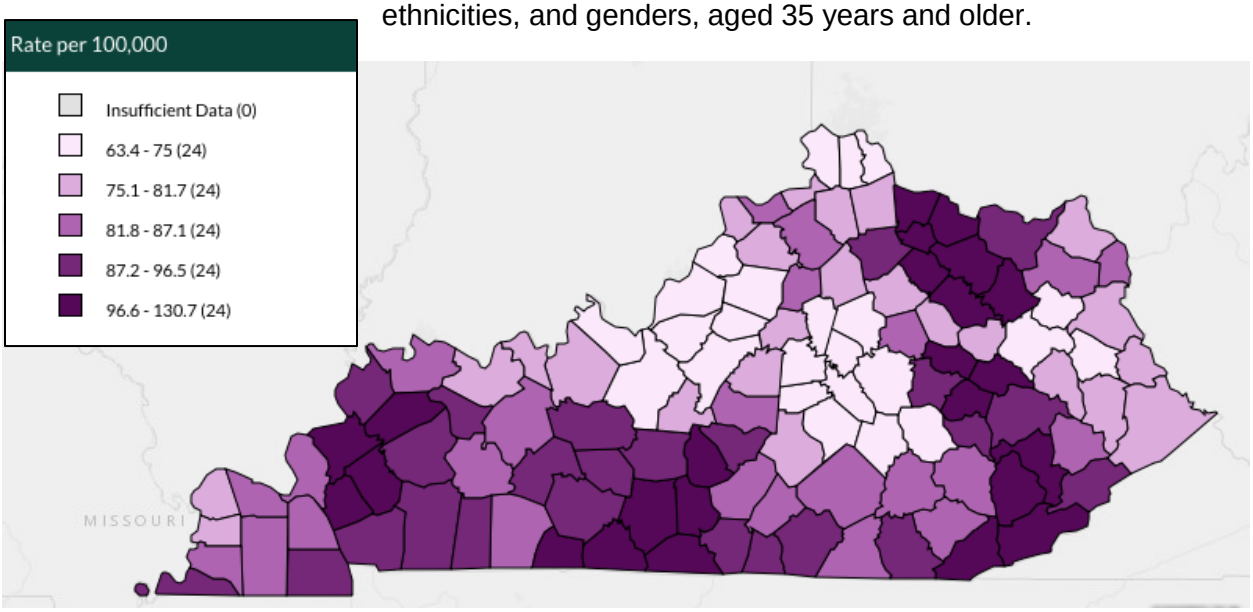
In 2018, stroke was the number five cause of death in Kentucky and in the United States[4]. Over 2,200 Kentuckians died in 2018 from stroke or stroke related complications[4]. When comparing

the age-adjusted death rate for stroke in Kentucky to the US average rate, Kentucky consistently fares worse.

According to the Kentucky Behavioral Risk Factor Surveillance System (KyBRFS) data from 2018, 4.0% of Kentuckians reported they had experienced a stroke at some time in their life[5]. Additionally, over 36% of Kentuckians report they have hypertension, putting them at increased risk of having a stroke[5].

Stroke Deaths by Kentucky County

In Kentucky, the age-adjusted death rate from stroke varies by county, as shown in the map below, when using stroke mortality data from 2014 through 2016, for individuals of all races, ethnicities, and genders, aged 35 years and older.



Why is early stroke treatment important?

Stroke is a medical emergency. The timely recognition of stroke symptoms, aided by using the F.A.S.T. acronym (Face drooping, Arm weakness, Speech difficulty, Time to call 911), can allow stroke patients greater benefit from symptom reversing medical therapies that are time dependent from the onset of stroke.

Early treatment may reduce long-term disability from stroke and prevent death. Stroke Systems of Care focuses on: increasing recognition of stroke symptoms; EMS protocols and treatment with immediate activation of EMS; patient care at a center equipped to treat acute stroke; offering FDA approved clot-busting therapy to appropriate patients; and arranging emergent transfer to tertiary centers for advanced stroke care, as appropriate. SEQIP was developed to improve these processes by sharing best practices, improving workflow when possible, and advocating for stroke systems improvements across Kentucky.

Stroke Encounter Quality Improvement Project (SEQIP)

Mission of SEQIP

The mission of SEQIP is to advance acute stroke care management and reduce stroke disparities in Kentucky by:

- Establishing a network of professionals that will encourage and support collaboration among stroke care providers in Kentucky;
- Providing opportunities to share information and resources related to stroke program development and proficiency across the continuum of care in Kentucky;
- Promoting quality, improving outcomes, and standardizing acute stroke care through collegiality and use of evidence-based practice guidelines; and
- Collaborating on stroke related research throughout Kentucky.

History of SEQIP

SEQIP was created in 2009 as a statewide voluntary stroke quality improvement initiative of the Kentucky Heart Disease and Stroke Prevention Task Force - Cardiovascular Health Delivery Systems Subcommittee, the Kentucky Heart Disease and Stroke Prevention Program (KHDSP), and the AHA/ASA. SEQIP initiated a voluntary participation in a stroke registry for hospitals, the first in Kentucky.

SEQIP includes hospitals that are stroke certified by The Joint Commission (TJC) as Comprehensive, Primary, and Acute Stroke Ready per KRS 216B.0425 (effective July 15, 2010), as well as hospitals certified by other nationally recognized agencies (DNV or HFAP) or hospitals seeking to advance stroke care in the community in which they serve. Participation in SEQIP is voluntary and open to all hospitals and stakeholders in Kentucky and surrounding areas. SEQIP member hospitals that are not stroke certified are not required to participate in the data registry.

Engaging Stakeholders

SEQIP was designed to encourage collaboration between hospitals and stakeholders in Kentucky to improve the quality of care given to stroke patients. At inception, 16 hospitals were geographically chosen and invited to participate to represent the state. Quality and process improvement reports were generated and reviewed by SEQIP member hospitals, and action plans were created and implemented by members. As the initiative has grown, additional hospitals have joined the effort. The data presented in this report are based on 23 of the 25 certified stroke centers that provided mandatory data for calendar year 2018. There are currently 35 hospitals engaged in SEQIP. Data from these additional centers will be reflected in future reports as data use agreements are obtained.

SEQIP Goals

- To adopt evidence-based guidelines and standards for practice
- To implement evidence-based integrated cerebrovascular systems of care
- To support and advance the quality of care available to stroke patients in Kentucky
- To share best practices and encourage collaboration among membership
- To identify and map certified stroke centers in the state
- To engage and recruit hospitals to seek certification as Comprehensive Stroke Center, Thrombectomy Capable Stroke Center, Primary Stroke Center, and Acute Stroke Ready Stroke Center

- Evaluate quality data and identify opportunities for collaboration with partners outside of SEQIP
- Address the entire stroke system of care including pre-hospital stroke care, stroke rehabilitation, transitions of care, and patient outcomes
- Develop and disseminate an annual report to the governor and legislature, including recommendations for improving stroke systems of care
- Support the passage of state policies that advance the implementation of stroke systems of care

Structure of SEQIP

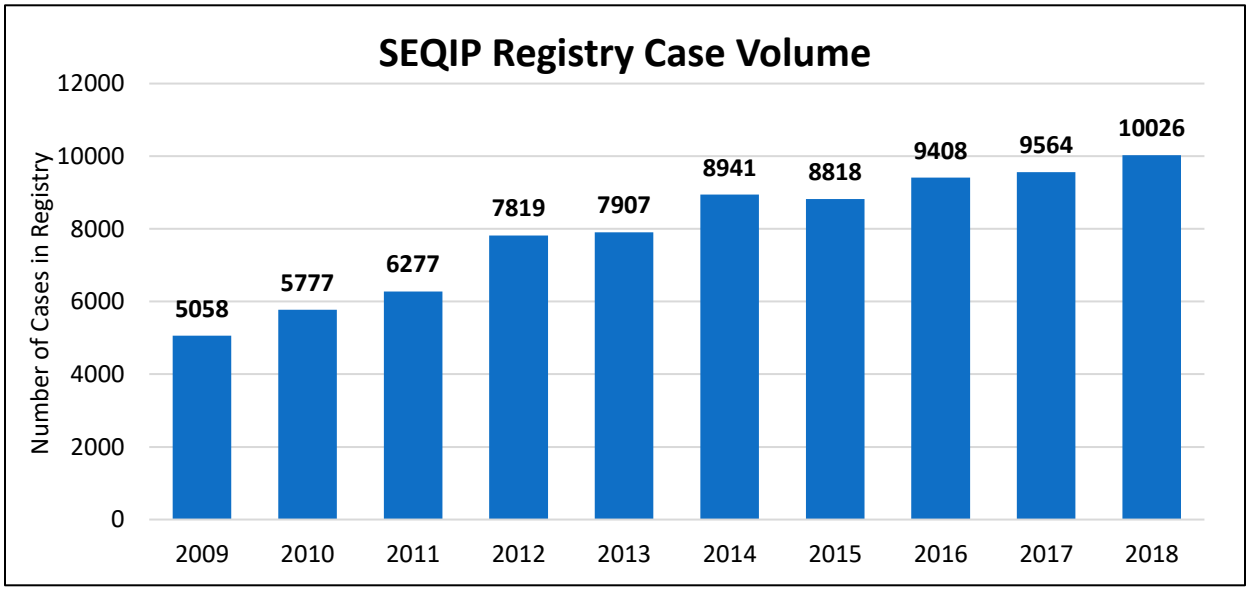
In 2017, the SEQIP Steering Committee approved the organization's charter, including mission statement (above), membership, policy, and governing structure.

While Kentucky hospitals that are stroke certified are required to participate in the data registry, per KRS 211.575, any hospital may join SEQIP to improve stroke systems of care. Denotations are made for those hospitals that voluntarily submit stroke patient data to the SEQIP registry and for those that are required to report by Kentucky statute.

2018 Certified Hospitals	Hospitals whose data are included in this report	Hospitals required to submit data per KRS 211.574
Baptist Health LaGrange	√	√
Baptist Health Lexington	√	√
Baptist Health Louisville	√	√
Baptist health Paducah	√	√
Frankfort Regional Medical Center		√
Greenview Regional Hospital		√
Hardin Memorial Hospital	√	√
Jackson Purchase Medical Center	√	√
Jewish Hospital	√	√
King's Daughter's Medical Center	√	√
Lake Cumberland Regional Hospital	√	√
Norton Audubon Hospital	√	√
Norton Brownsboro	√	√
Norton Hospital	√	√
Norton Women's and Children's Hospital	√	√
Owensboro Health Regional Hospital	√	√
Pikeville Medical Center	√	√
Saint Joseph Hospital	√	√
St Elizabeth Healthcare Edgewood	√	√
St Elizabeth Healthcare Florence	√	√
St. Elizabeth Healthcare Ft Thomas	√	√
Sts. Mary and Elizabeth Hospital	√	√
The Medical Center at Bowling Green	√	√
University of Kentucky	√	√
University of Louisville Hospital	√	√

SEQIP Data Registry

In 2009, 16 inaugural hospitals began the SEQIP data registry. In calendar year 2018, 23 of the 25 TJC stroke certified hospitals participated in the data registry. The following graph shows the growth of the SEQIP registry by case volume throughout the history of SEQIP. In 2009, over 5,000 cases were in the registry. By 2018, that number had grown to over 10,000. As SEQIP continues to grow and more hospitals join, the number of cases will grow, increasing the generalizability of SEQIP data to the state of Kentucky.

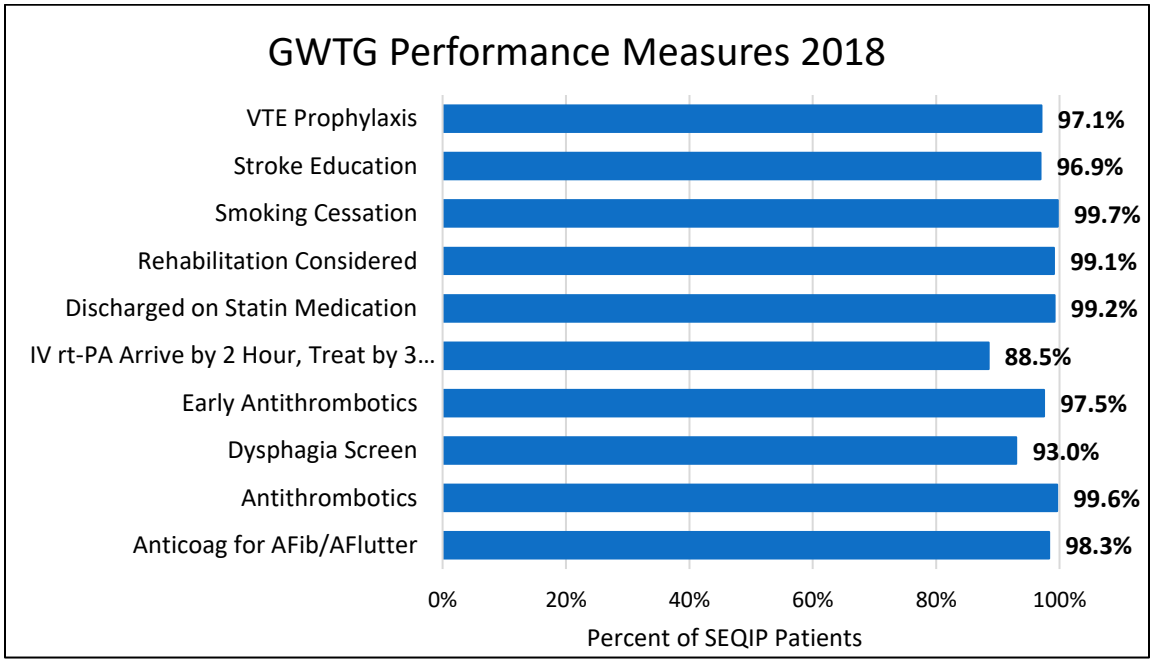


Explanation of SEQIP Reporting Year

Stroke cases are added to the SEQIP registry by individual hospital data abstractors, both in real-time and after patient discharge. The Joint Commission requires all data for the calendar year be entered in the registry by March 31 of the following year for consideration of award status. Because of this potential lag in reporting time, data for the yearly SEQIP report is not from the prior calendar year (i.e. calendar year 2018 data was not completely entered until March 31, 2019). This reporting deadline means the yearly SEQIP report aggregates data from two calendar years prior.

Kentucky SEQIP utilizes the performance measures developed by the AHA/ASA's nationally recognized Get With The Guidelines® (GWTG) – Stroke hospital-based quality improvement program recognized by The Joint Commission and the Centers for Disease Control and Prevention (CDC). This program provides hospitals with a data collection platform, decision support, and performance improvement methodologies to improve patient outcomes and uses a data-set with patient confidentiality standards.

SEQIP collects data on measures related to stroke care that are evidence-based guidelines for the treatment and management of stroke from hospital admission to discharge. The standardized, evidence-based performance measures are data driven and patient-centered to help hospitals monitor and improve acute stroke care processes and clinical outcomes. The chart below is based on performance measure data reported by the participating hospitals for calendar year 2018.



Participation in the SEQIP data registry is required per KRS 211.575 for all hospitals in Kentucky that are certified by The Joint Commission as Primary Stroke Center and Comprehensive Stroke Center. In 2015, Acute Stroke Ready Hospital certification was approved by The Joint Commission and in 2018, Thrombectomy-Capable Stroke Center certification was added.

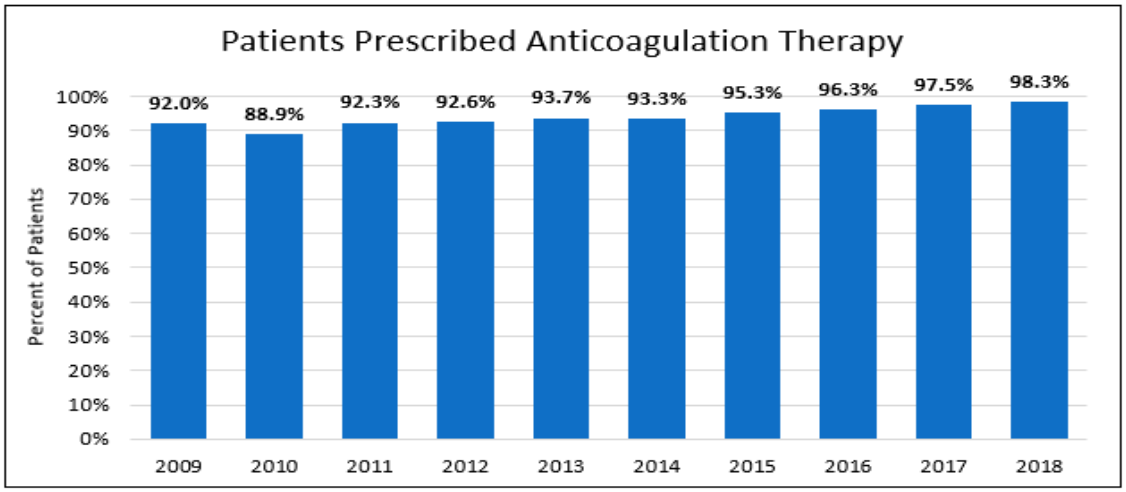
SEQIP hospitals collaborate to choose performance measures, share best practices, and develop action plans to address their quality improvement efforts. SEQIP also works to encourage hospitals to become stroke certified, increase their certification level, and improve their overall quality of patient care through QI processes. The Joint Commission Stroke Certifications for hospitals as of 2018 are described below.

Acute Stroke Ready Hospital: must have a dedicated stroke-focused program, have physicians privileged in the diagnosis and treatment of acute stroke or have telemedicine available within 20 minutes, have diagnostic imaging and laboratory testing done quickly, as well as ensure a stroke patient is assessed by a qualified practitioner within 15 minutes of arrival, have transfer protocols in place for continuation of stroke care, among other requirements.
Primary Stroke Center: must meet all Acute Stroke Ready Hospital requirements as well have dedicated in-patient beds for the acute care of stroke patients.
Thrombectomy Capable Stroke Center: must meet all Primary Stroke Center requirements and meet standards for performing endovascular thrombectomy and providing post – procedural care.
Comprehensive Stroke Center: must meet all Thrombectomy Capable Stroke Center requirements, as well as be able to meet concurrently the emergent needs of multiple complex stroke patients, including neurosurgical capability around the clock.

The goal for all stroke performance measures is to achieve greater than 85% compliance.

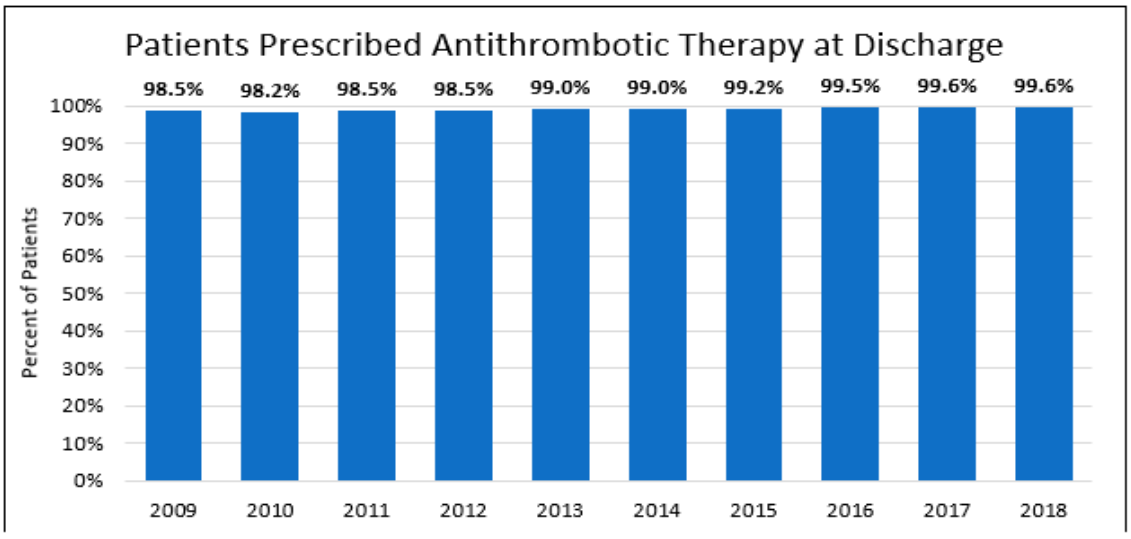
Anticoagulation Therapy

Measure: The percent of patients with ischemic stroke or TIA with atrial fibrillation/flutter who are discharged on anticoagulation therapy. In 2009, 92.0% of eligible patients were prescribed anticoagulation therapy upon discharge. In 2018, 98.3% of eligible patients were prescribed anticoagulation therapy, a 6.3% increase.



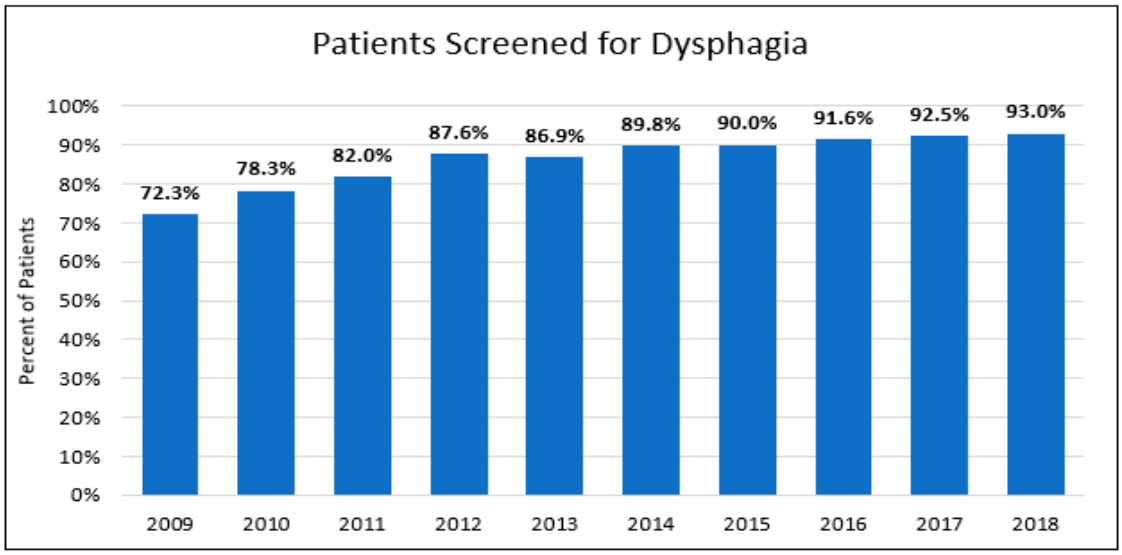
Antithrombotics at Discharge

Measure: The percentage of patients with an ischemic stroke or a TIA prescribed antithrombotic therapy at discharge. In 2009, 98.5% of eligible patients were prescribed antithrombotic therapy upon discharge. In 2018, 99.6% of eligible patients were prescribed antithrombotic therapy at discharge, a 1.1% increase.



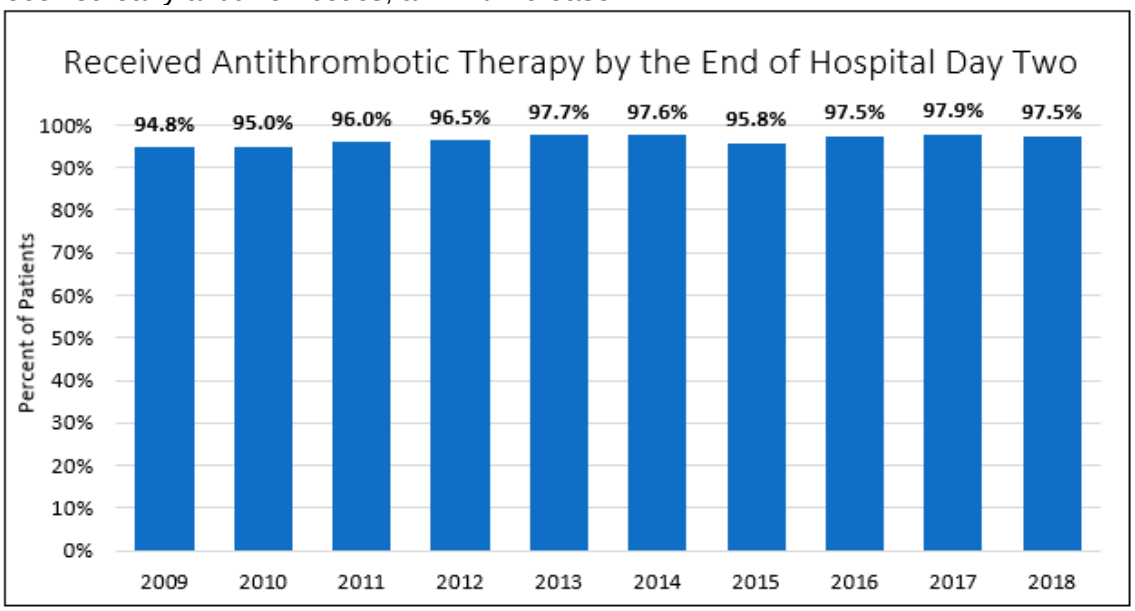
Dysphagia Screening

Measure: The percent of stroke patients who undergo screening for dysphagia with an evidence-based bedside testing protocol approved by the hospital before being given any food, fluids, or medication by mouth. In 2009, 72.3% of patients were screened for dysphagia before given any food, fluids, or medication by mouth. In 2018, 93.0% of patients were screened for dysphagia, a 20.7% increase.



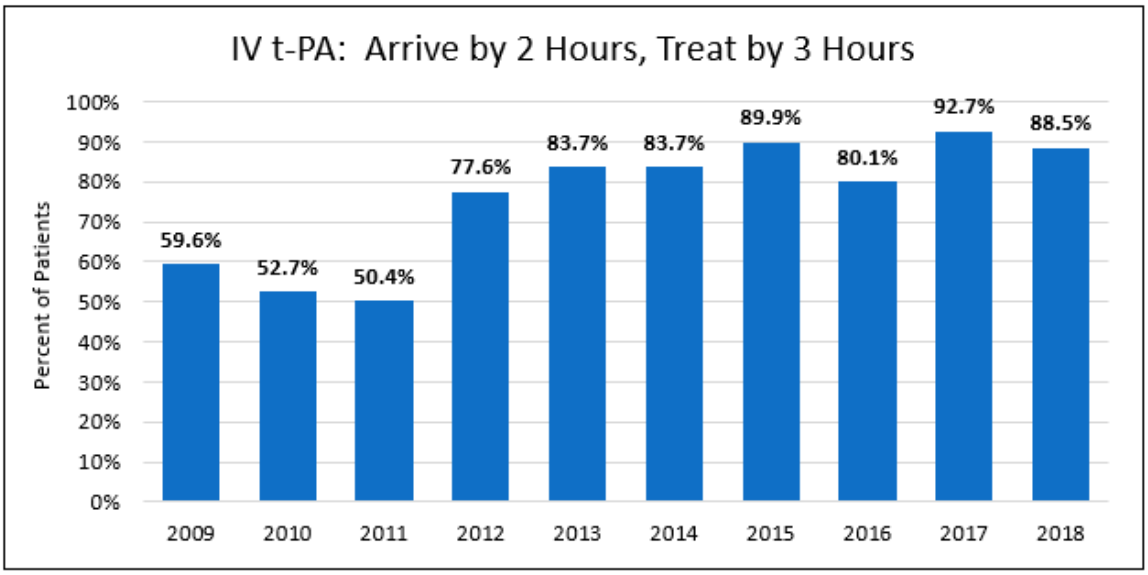
Early Antithrombotics

Measure: The percent of patients with ischemic stroke or TIA who receive antithrombotic therapy by the end of hospital day two. In 2009, 94.8% of eligible patients received antithrombotic therapy by the end of hospital day two. In 2018, 97.5% of patients received early antithrombotics, a 2.7% increase.



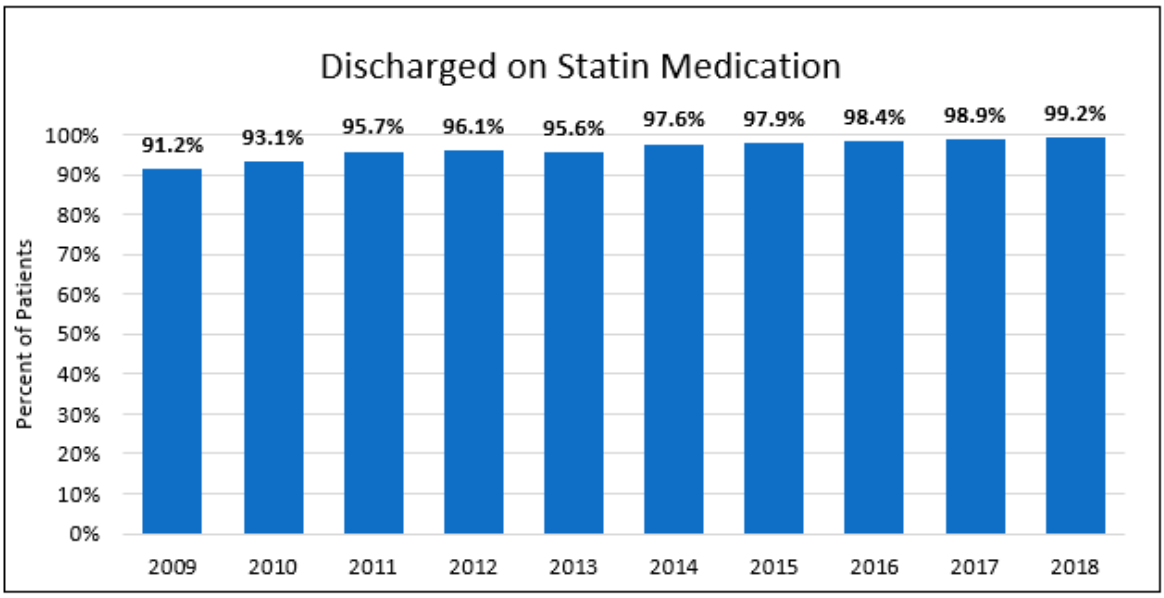
IV rt-PA Initiated Within 3 Hours

Measure: The percent of acute stroke patients arriving at the hospital within two hours of time last known well and for whom IV rt-PA is initiated at the hospital within three hours of time last known well. In 2009, 59.6% of eligible patients received IV-rt-PA within three hours of time last known well. In 2018, 88.5% of patients received IV rt-PA within three hours, a 28.9% increase.



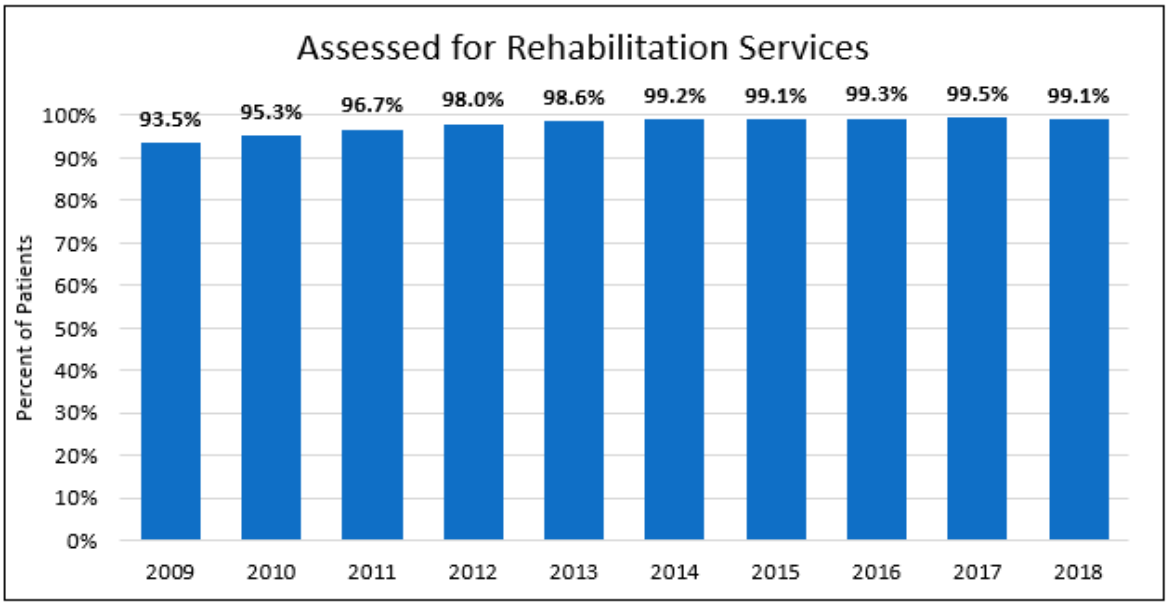
Discharged on Statin Medication

Measure: The percent of ischemic stroke or TIA patients who are discharged on statin medication. In 2009, 91.2% of eligible patients were discharged with a statin medication prescription. In 2018, 99.2% of eligible patients were discharged on a statin, a 7.0% increase.



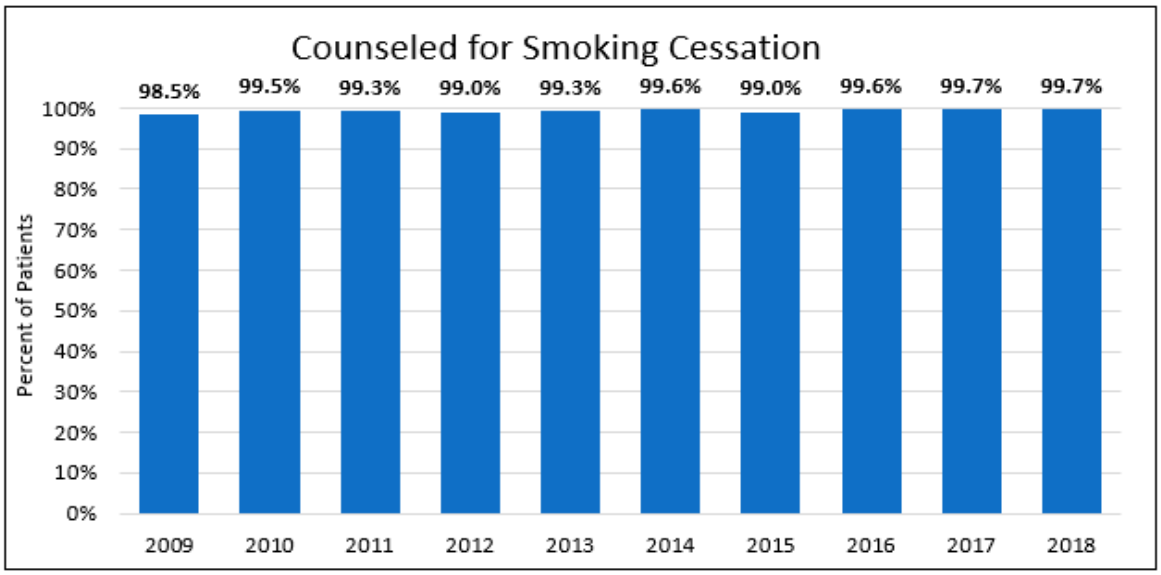
Rehabilitation Considered

Measure: The percent of patients with stroke who were assessed for rehabilitation services. In 2009, 93.5% of eligible patients were assessed for rehabilitation services. In 2018, 99.1% of eligible patients were assessed for rehabilitation, a 5.6% increase.



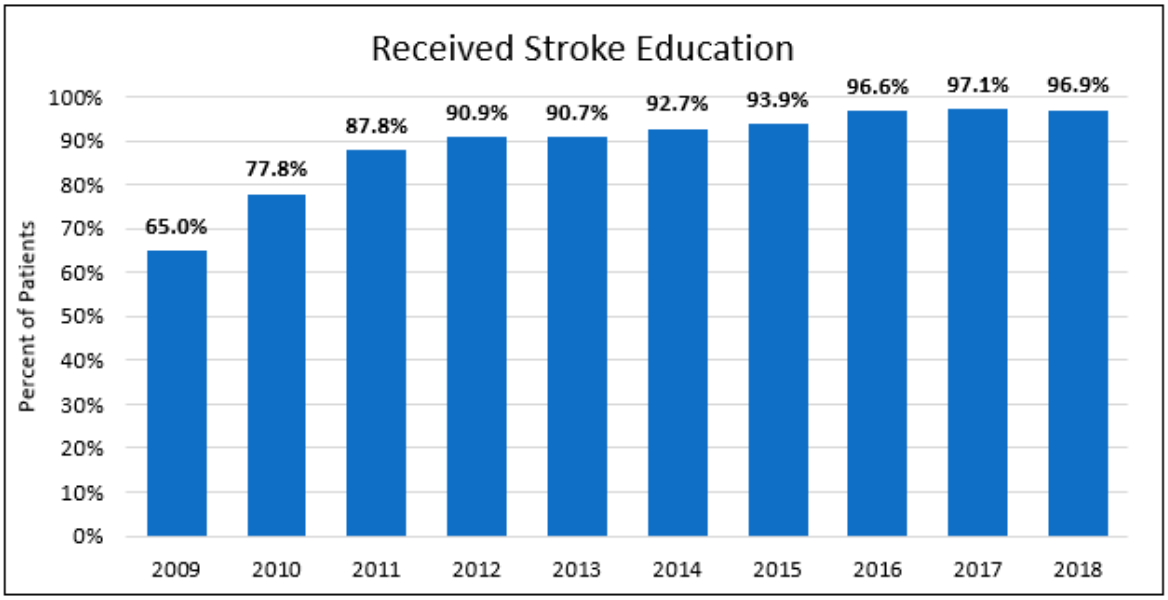
Smoking Cessation

Measure: The percent of patients with ischemic stroke, hemorrhagic stroke, or TIA with a history of smoking cigarettes, who are, or whose caregivers are, given smoking cessation advice or counseling during hospital stay. In 2009, 98.5% of eligible patients were counseled on smoking cessation. In 2018, 99.7% of eligible patients were counseled on cessation, a 1.2% increase.



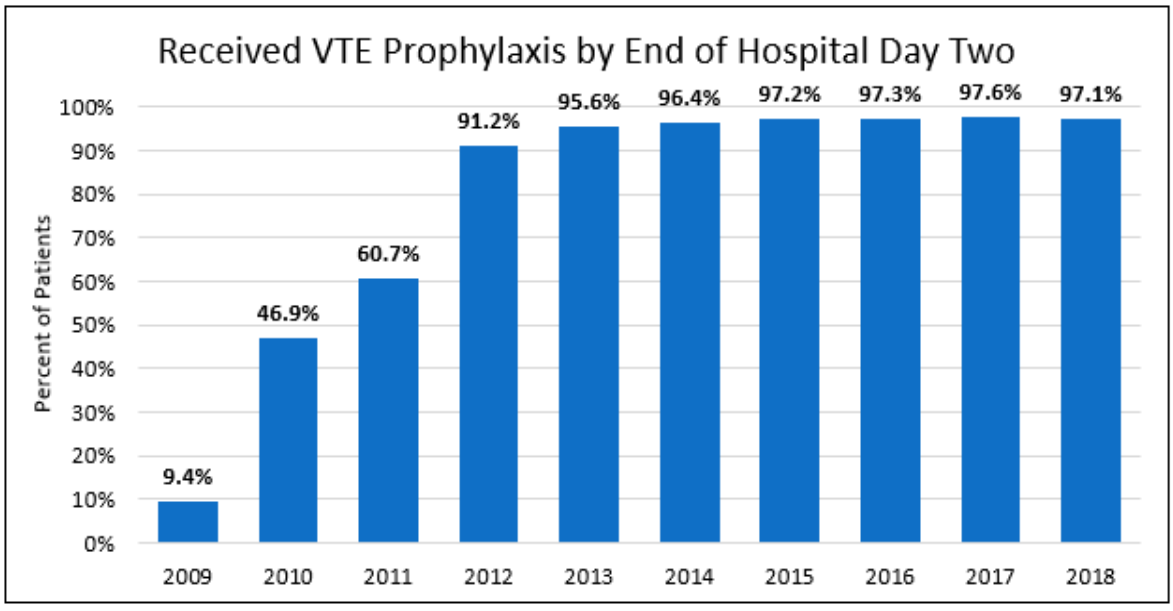
Stroke Education

Measure: The percent of patients with stroke or TIA or their caregivers who were given education and/or educational materials during the hospital stay addressing all of the following: personal risk factors for stroke, warning signs for stroke, activation of emergency medical system, the need for follow-up after discharge, and medications prescribed. In 2009, 65.0% of eligible patients were given stroke educational information. In 2018, 96.9% of eligible patients were given stroke educational information, a 31.9% increase.



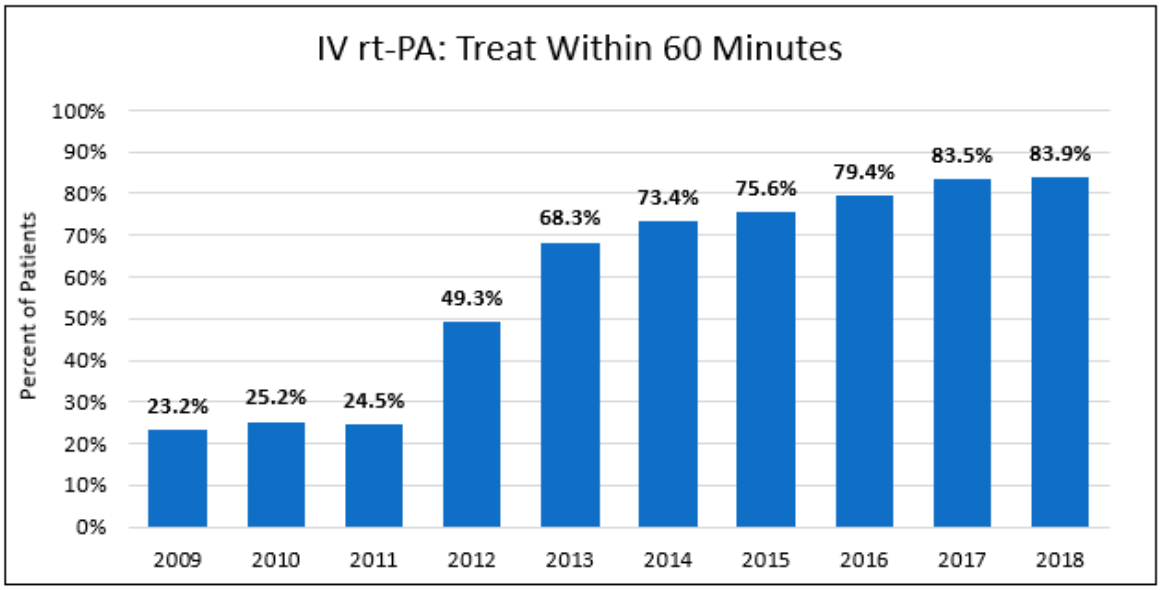
VTE Prophylaxis

Measure: The percent of patients with an ischemic stroke, hemorrhagic stroke, or a stroke not otherwise specified who receive VTE prophylaxis the day of or the day after hospital admission. In 2009, 9.4% of eligible patients received VTE prophylaxis by the end of hospital day two. In 2018, 97.1% of eligible patients received VTE prophylaxis, an 87.7% increase.



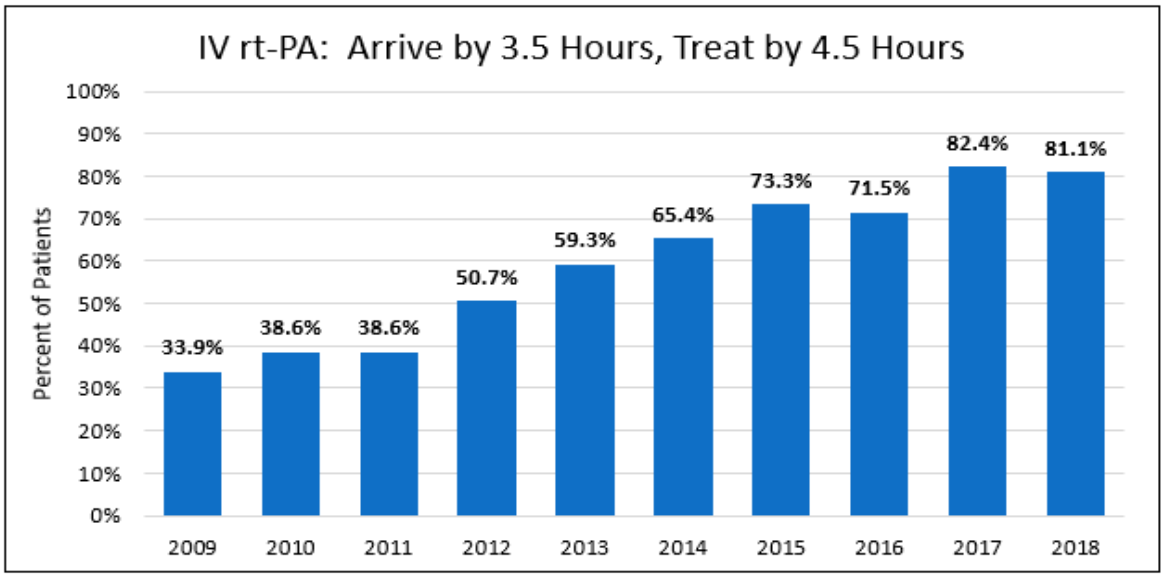
IV rt-PA Initiated Within 60 Minutes

Measure: The percent of acute stroke patients receiving intravenous tissue plasminogen activator therapy during the hospital stay who have a time from hospital arrival to initiation of thrombolytic therapy administration (door-to-needle) time of 60 minutes or less. In 2009, 23.2% of eligible patients received IV rt-PA within 60 minutes of arriving at the hospital. In 2018, 83.9%% of eligible patients received IV rt-PA within 60 minutes, a 60.7% increase.



IV rt-PA Initiated Within 4.5 Hours

Measure: The percent of acute stroke patients arriving at the hospital within three and a half hours of time last known well and for whom IV rt-PA is initiated at the hospital within four and a half hours of time last known well. In 2009, 33.9% of eligible patients received IV rt-PA within 4.5 hours of time last well known. In 2018, 81.1% of eligible patients received IV rt-PA within 4.5 hours, a 47.2% increase.



Recommendations

The Kentucky Heart Disease and Stroke Prevention Task Force along with the Kentucky Department for Public Health developed the Kentucky Heart Disease and Stroke Prevention Strategic Map and Plan for 2017-2019, as well as an updated version for 2020-2023. SEQIP members were active participants in the development and creation of the map and are committed to furthering the initiatives outlined in the plan for continued improvement in stroke systems of care in the commonwealth. The following objectives and action items are outlined in the 2020-2023 plan and are recommended for ongoing development and growth of stroke systems of care in the commonwealth. To view the objectives and action items from the 2017-2019 strategic map along with a progress notes and a gap analysis undertaken at the end of 2019, see Appendix D.

Identify and Improve Current Cerebrovascular Systems of Care

- To continue the collaboration with SEQIP and the AHA/ASA to identify and map certified stroke centers by certification levels as defined in KRS 216B.0425 (Comprehensive, Primary, and Acute Stroke Ready) and disseminate to KBEMS;
- To continue the collaboration with SEQIP and the Kentucky Hospital Association's (KHA) Rural Hospital Flexibility Program;
- To educate and partner with Kentucky hospitals to increase acute stroke treatments (intravenous tissue plasminogen activator and mechanical thrombectomy);
- To partner with KBEMS for continued development of inter-facility transport protocols for all stroke subtypes;
- To identify which EMS agencies have a field transport protocol for stroke and provide expert consultation/evaluation to ensure said protocols are up to date with the most current science;
- To partner with KBEMS to determine specific data points available for capture and reporting;
- To implement a pilot project for EMS feedback, training, and education to improve local systems of care in the Louisville Metro area;
- To continue collaboration with KBEMS Cardiac and Stroke Care subcommittee;
- To disseminate and provide access to current evidence-based dispatch protocols for stroke;
- To disseminate KBEMS inter-facility transport protocols at local and regional levels;
- To assess inter-facility emergent transfer needs to meet recommended time goals; and
- To establish a pediatric stroke subcommittee.

Continue the Stroke Encounter Quality Improvement Project (SEQIP) through Fiscal Year 2023

- Recruit at least one additional hospital pursuing thrombectomy-capable certification by March 2022;
- Continue to utilize registry to develop and implement an action plan around quality metrics and education; and
- Develop and disseminate Stroke Registry Data Summary in accordance with KRS 211.575.

Continue to Engage Hospitals to become Stroke Certified

- Disseminate the Kentucky State Plan for stroke systems of care and statewide map to target hospitals;
- Monitor and provide support for effective stroke program development in target hospitals; and
- Update and disseminate stroke resources through Kentucky Heart Disease and Stroke Prevention (KHDSP) Task Force website (KHDSPtaskforce.com) annually.

Continue Collaboration Among Healthcare Systems and Public Health in the State to Standardize Messaging

Provide patient and family education regarding:

- Signs and symptoms of stroke;
- The importance of calling 911;
- Primary and secondary prevention of stroke; and
- Vascular risk factor modification.

Partnership

KY Board of Emergency Medical Services (KBEMS)

KRS 311A.180 requires emergency medical services directors to establish pre-hospital care protocols for the assessment, treatment, and transport of stroke patients. Specific objectives include:

- Identify and convene experts and partners to guide the statewide approach to definitive treatment of cardiac and stroke cases and recommend project interventions;
- Implement and evaluate a comprehensive acute myocardial infarction (AMI) and stroke access assessment targeting 120 counties in the commonwealth;
- Collaborate with system engineers to analyze EMS system capabilities and the capabilities of regional healthcare facilities and specialty care centers;
- Begin implementation of quality improvement initiatives prioritized by expert groups;
- Identify policy initiatives based on the findings of the assessment and the expert group recommendations;
- Promote and advocate for educational programs, protocol updates, and regionalized EMS system of care;
- Establish a minimum set for cardiac and stroke care that can be reported by EMS systems and healthcare facilities for ongoing research; and
- Implement a reassessment to evaluate progress, remaining challenges, clarify questions on the initial assessment, and develop a gap analysis for ongoing evaluation.

Appendix D

KHDSP Task Force Strategic Map and Plan 2017-2019		SEQIP Progress and Gap Analysis
Objective: Improve statewide cerebrovascular systems of care		Performed Q4 2019
Strategy 1	**Action Items**	
Identify and improve current cerebrovascular systems of care.	Continue to identify and map certified stroke centers by certification levels as defined by KRS 216B.0425, and disseminate to Kentucky Board of Emergency Medical Services (KBEMS). - Acute Stroke Ready Hospitals - Primary Stroke Centers - Comprehensive Stroke Centers	**Gap** Add Thrombectomy-Capable Stroke Center certification to legislation (created by The Joint Commission in 2018)
	Continue collaboration with Kentucky Hospital Association's (KHA) Rural Hospital Flexibility Program.	**Achieved** Continue as goal for 2020-2023
	Partner with Kentucky hospitals to increase intravenous therapy (IV) tissue plasminogen activator (t-PA) utilization.	**Improved** Continue as goal and add acute treatments
	Disseminate KBEMS statewide inter-facility stroke transfer during or after IV t-PA protocol.	**Partially met** Continue as goal, not well utilized
	Identify Emergency Medical Service (EMS) agencies which have a field transport protocol for stroke.	**Gap** Identified inconsistent protocols (State Protocol vs. Medical Director approved by agency)
	Partner with KBEMS to determine stroke specific data points available for capture.	**Achieved** Continue as goal for 2020-2023
	Explore pilot project for EMS feedback utilizing proposed data elements.	**Achieved** Add pilot as goal for 2020-2023
	Continue collaboration with the KBEMS subcommittee, Cardiac and Stroke Care.	**Achieved** Continue as goal for 2020-2023
	Enhance EMS interaction and support of dispatch centers.	**Gap** Goal modified for 2020-2023
	Partner with KBEMS for continued development of inter-facility transport protocols for all stroke subtypes.	**Gap** Add acute ischemic stroke without thrombolytic therapy, and hemorrhagic stroke protocols as goal for 2020-2023
Strategy 2	**Action Items**	
Continue SEQIP through FY 2019.	Assess current Stroke Encounter Quality Improvement Project (SEQIP) members for continued participation by March 2016.	**Achieved**

	Recruit at least one hospital pursuing Acute Stroke Ready certification by March 2017.	**Achieved** Currently 11 ASR, change goal to TSC for 2022
	Utilize registry to develop and implement an action plan around quality metrics and education.	**Achieved**
	Develop and disseminate Stroke Registry Data Summary in accordance with KRS211.575, which goes to the governor and legislature and includes recommendations for improving stroke systems of care.	**Achieved**
Strategy 3	**Action Items**	
Continue to engage hospitals to become stroke certified.	Disseminate the Kentucky state plan for Stroke Systems of Care and statewide map to target hospitals by December 2016.	**Achieved**
	Monitor and provide support for stroke program development to target hospitals through December 2019.	**Achieved** Continue for 2020-2023 (currently 40 SEQIP hospitals)
	Update and disseminate KHA stroke resources.	**Gap** Move to HDSP website with SEQIP tab for current resources
Strategy 4	**Action Items**	
Develop collaboration among healthcare systems and public health in the state to standardize messaging.	Provide patient and family education regarding signs and symptoms of stroke.	**Achieved**
	Provide patient and family education regarding the importance of calling 911.	**Achieved**
	Provide patient and family education regarding primary and secondary prevention of stroke.	**Achieved**