

2012 Data Summary

Georgia Coverdell Acute Stroke Registry

PROGRAM OVERVIEW

- Funded by the Centers for Disease Control and Prevention (CDC) as part of the Paul Coverdell National Acute Stroke Registry
- Named in honor of the late Senator Paul Coverdell of Georgia who died of a massive stroke in 2000
- Partnership between Georgia Department of Public Health, State Office of EMS, Emory University, American Heart Association/American Stroke Association, Georgia Medical Care Foundation, Georgia Hospital Association, CDC, and participating hospitals

GOALS

- Reduce fatalities and disability due to stroke and the incidence of recurrent stroke in Georgia by:
 1. Monitoring and improving the quality of acute stroke care in hospitals;
 2. Encouraging collaboration among hospitals and other institutions in Georgia concerned with stroke care quality improvement

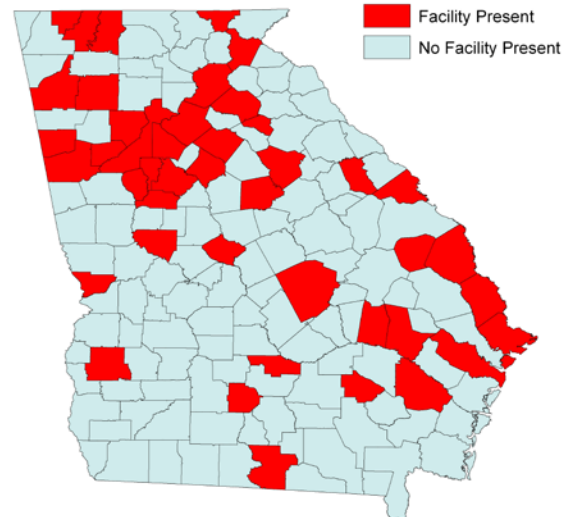
HOSPITAL PARTICIPATION

- Hospitals were recruited to participate in the registry in various stages:
 - Cohort 1 started in November 2005 (26 hospitals)
 - Cohort 2 started in October 2006 (27 hospitals)
 - Cohort 3 started in March 2008 (11 hospitals)
 - Cohort 4 started in May 2010 (16 hospitals)
 - Cohort 5 started in December 2011 (13 hospitals)
- Currently 66 hospitals participate in the registry, of which 34 are Joint Commission or Det Norske Veritas (DNV) certified primary stroke centers
- The registry captures about 79% of stroke admissions in Georgia

DATA COLLECTION

- Data on stroke patient characteristics and care received during hospital stay are collected by participating hospitals for patients admitted with acute stroke or transient ischemic attack
- The purpose of data collection is to monitor the quality of stroke care delivered at hospitals and to guide quality improvement efforts

Georgia Coverdell Acute Stroke Registry Facilities by County, December 2012



Data Source: Georgia Coverdell Acute Stroke Registry

QUALITY IMPROVEMENT ACTIVITIES

- Participating hospitals receive individualized stroke care quality improvement consultation
- Regular educational conference calls and newsletters to share best practices among participating hospitals and EMS providers
- Annual meetings and trainings to enhance skills and exchange best practices
- Acute Stroke Life Support training
- Quality improvement efforts focused initially on deep vein thrombosis (DVT) prophylaxis, then on dysphagia screening, and now on thrombolytic treatment for eligible stroke patients

QUALITY INDICATORS

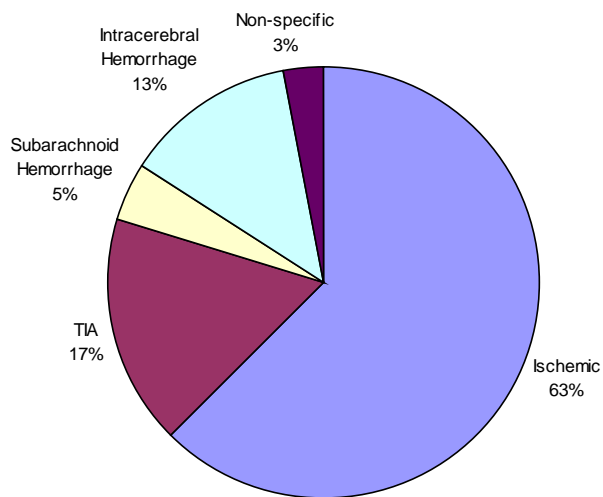
- Care received by patients is compared with quality indicators representing care processes that have been shown to be beneficial and that have been included in clinical recommendations
- Quality indicator calculations include identification of patients for whom a care process would have been recommended, and a determination of how many of those patients received the recommended care

- The 10 registry quality indicators are:
 1. Administration of tissue plasminogen activator (tPA)
 2. Dysphagia screening
 3. Administration of antithrombotic medication within 48 hours
 4. Deep Vein Thrombosis (DVT) prophylaxis
 5. Prescription of lipid lowering medication
 6. Delivery of stroke education
 7. Smoking cessation counseling or treatment
 8. Rehabilitation assessment
 9. Prescription of antithrombotic medication at discharge
 10. Prescription of anticoagulant medication for patients with atrial fibrillation
- Defect-free care is defined as *the delivery of care meeting all quality indicators for which a patient is eligible*

STROKE REGISTRY DATA

- Analysis included data from 43,656 patients admitted to participating hospitals from November 2007 to December 2011

Fig 1. Types of Stroke



- Among hypertensives, 80% were on antihypertensive medication during the week prior to admission for acute stroke
- Two percent of patients were newly diagnosed with diabetes during admission for acute stroke in 2011

Table 1. The most frequent co-morbidities

Co-morbidity	Percent
Hypertension	83%
Dyslipidemia	37%
Diabetes mellitus	35%
CAD/prior MI	24%
Atrial fibrillation/flutter	13%
Smoking	23%

- For ischemic stroke, prompt treatment (thrombolysis) is critical for good recovery
 - For ischemic stroke patients admitted in 2011, 37% arrived at the emergency department within 2 hours from the last time they were known to be well
 - Among these, 38% were eligible for tPA
 - Among the eligible patients, 77% received thrombolytic treatment within 3 hours after symptom onset
 - Forty percent of treated patients received IV tissue plasminogen activator (tPA) within an hour of arrival at the emergency department
 - The median time to receive tPA for ischemic stroke patients arriving within two hours of symptom onset was 67 minutes

Fig 2 Percentage of eligible ischemic stroke patients receiving intravenous tPA treatment

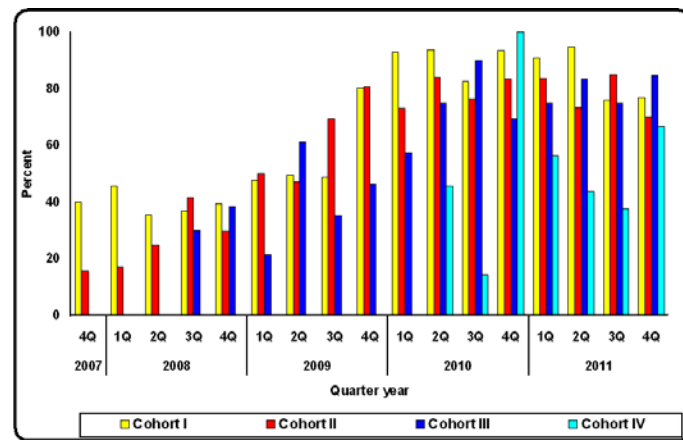
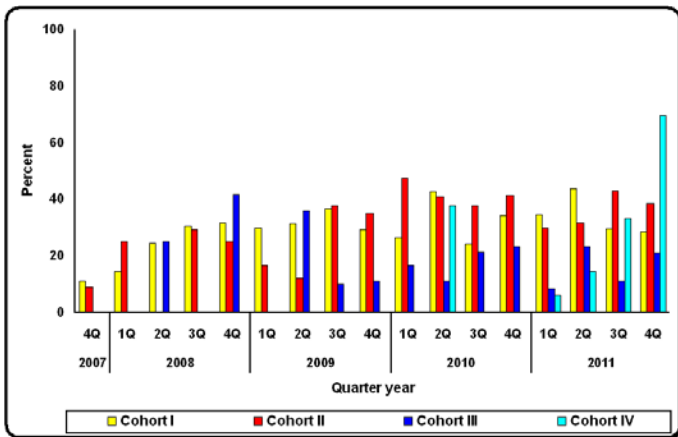


Fig 3. Percentage of ischemic stroke patients treated with IV tPA within 60 minutes of hospital arrival



IMPROVEMENTS OVER TIME

- In the aggregate, tPA administration among eligible ischemic stroke patients increased from 28% in 2007 to 77% in 2011 (Fig 2)
- The percentage of those who received IV tPA within 60 minutes of their arrival increased from 10% to 34% (Fig 3)
- Dysphagia screening improved from 65% in 2007 to 85% in 2011 (Fig 4)
- The percentage of patients who received defect-free care increased, from 51% in 2007 to 74% in 2011 (Fig 5)
- The steady increase in the performance measures among the four cohort groups indicates that GCASR participating hospitals have shown improvement in the quality of stroke patient care (Fig 2 - 5)

DEFINITIONS

- Stroke: brain tissue death; can be the result of a thrombus (blocked artery) or a hemorrhage (ruptured artery) which prevents blood flow to the brain
- Transient ischemic attack: temporary blockage of cerebral blood flow that causes a short-lived neurological deficit
- Deep Vein Thrombosis (DVT): blood clot located in a large vein; a potential complication of stroke
- Dysphagia: problems swallowing; a potential complication of stroke that can lead to pneumonia

- Antithrombotic: medication administered to prevent platelets or clotting factors in the blood from forming a blood clot
- Anticoagulation: administration of medications to prevent clotting of the blood
- Tissue plasminogen activator (tPA): a thrombolytic medication administered to eligible acute ischemic stroke patients to reestablish blood supply to the brain

Fig 4. Percentage of eligible acute stroke patients who received dysphagia screening

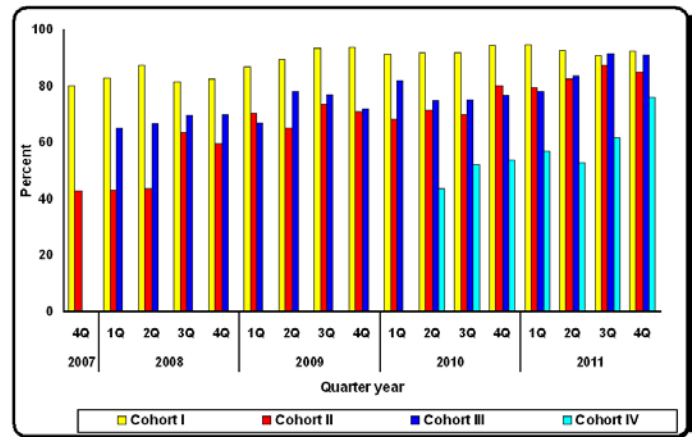
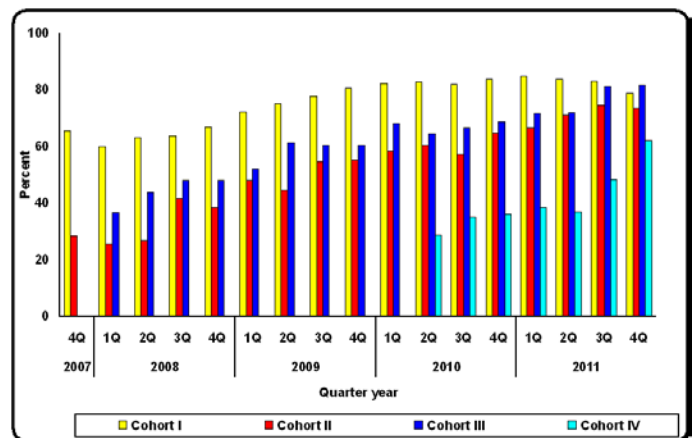


Fig 5. Percentage of acute stroke patients who received defect-free care



FOR MORE INFORMATION ON GCASR, PLEASE VISIT <http://www.health.state.ga.us/epi/cdiee/strokeregistry.asp>