DEPARTMENT OF HEALTH
STROKE PROGRAM

Minnesota Stroke Registry Abstraction Manual

VERSION 2

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For questions about abstraction or the Stroke Program, please contact:

Minnesota Department of Health
Stroke Program
625 Robert St. N.
P.O. Box 64975
St. Paul, MN 55164-0975
651-201-5000
health.stroke@state.mn.us
www.health.state.mn.us

To obtain this information in a different format, call: 651-201-5000.

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Minnesota Stroke Registry

The Minnesota Stroke Registry is the statewide registry for acute stroke patient quality of care data. It is one of the components in the *Minnesota Stroke Portal* and is managed by the Minnesota Department of Health (MDH). Hospitals submit data on stroke patients online into the registry and can use the data to review their processes, identify areas to improve, and set and track performance improvement goals for their facility.

Purpose

All acute treatment hospitals in Minnesota are required to submit case-level stroke patient data to the Minnesota Stroke Registry. The data to submit is collected through chart abstraction, which is the process of reviewing the patient's medical record to find stroke specific information and manually abstracting it into the system. The registry functions as a quality of care data repository, offering hospitals a free data collection and reporting platform. The Minnesota Stroke Registry features real-time reports on stroke core measures, performance improvement case review, and quality of care indicators. Hospitals designated by the MDH as an Acute Stroke Ready Hospital, Primary Stroke Center, Thrombectomy-Capable Stroke Center, Comprehensive Stroke Center can use the Registry to fulfill their requirement to collect and track stroke patient data. As well as serving as a single point to submit, store, and review case-level data for stroke patients, all hospitals meet reporting requirements for the Minnesota Statewide Quality Reporting and Measurement System (SQRMS) on emergency department care by submitting data to the stroke registry.

The Minnesota Stroke Registry also collects a full panel of data on emergency and inpatient care submitted by hospitals for the national registry, the Centers for Disease Control and Prevention (CDC) Paul Coverdell National Acute Stroke Registry. The MDH receives funding from the CDC Paul Coverdell National Acute Stroke Program and submits the registry data to the CDC quarterly as part of its cooperative agreement.

Since January 2019, all acute treatment hospitals must enter the full panel of data on emergency and inpatient care that are required by the CDC Paul Coverdell National Acute Stroke Registry. Exempted facilities include federal and Indian Health Service hospitals, children's hospitals, and facilities designed primarily for specialty services.

Case Ascertainment

The process that hospitals use to identify potential patients for entry into the registry is called case ascertainment. The facility's stroke coordinator should work with the abstractor on a regular basis to determine which patients to submit into the Minnesota Stroke Registry using some of these methods.

- Review of emergency department logs for stroke code activations
- Concurrent alert of all stroke code activations
- Weekly, semi-monthly, or monthly query and report of all patients with ICD-10 principal or secondary discharge code of stroke from the medical or billing department
- Review of case logs of neurology consults
- Stroke order sets report
- Use optional National Syndromic Surveillance Program (NSSP) feed within Minnesota Stroke Registry

Case Definition

Patients meeting **any** of the following criteria are to be submitted to the stroke registry – even if they expire, leave against medical advice, transfer to another acute care hospital, refuse treatment or have Do Not Resuscitate (DNR) orders:

- ICD-10-CM principal/primary or secondary discharge diagnosis codes related to stroke listed in Appendix A on Table 1. Ischemic Stroke ICD-10-CM Codes; Table 2. Transient Ischemic Attack ICD-10-CM Codes; Table 3. Hemorrhagic Stroke ICD-10-CM Codes; or Table 4. Diseases of the circulatory system complicating pregnancy, childbirth and puerperium ICD-10-CM Codes* only if final clinical diagnosis is stroke.
- Final clinical diagnosis related to stroke: Ischemic Stroke, Subarachnoid Hemorrhage, Intracerebral Hemorrhage, Transient Ischemic Attack, or Stroke Not Otherwise Specified.
- Patients who receive IV thrombolytic in the emergency department at the hospital (Patients whose stroke symptoms began while they were already in the emergency department or were already admitted are optional to be submitted.)

Include patients evaluated and/or treated in the Emergency Department (ED) AND patients directly admitted to nursing units within the hospital without first being seen in the ED (such as stroke patients who receive treatment at another hospital and are transferred).

Note: For conducting performance improvement case review, **all patients** for which a stroke code or alert is activated should be entered into the registry or another tracking system, even if the final diagnosis was not stroke. This allows the hospital to review their process across clinical variables for all patients with suspected stroke, regardless of the final diagnosis. As mentioned above, the *Minnesota Stroke Portal* is a free and robust system for collecting data and outputting case-level review reports. Only cases confirmed to be stroke or transient ischemic attack will be included in performance measure report calculations.

Exclusions:

1. Do not include patients < 18 years of age.
2. Exclude patients admitted for the sole purpose of the performance of elective carotid endarterectomy or any revascularization. (Note: Get With The Guidelines®- Stroke participating hospitals may enter these patients optionally.)

Required Data Elements

In the *Minnesota Stroke Portal*, the Case Report Form within the Minnesota Stroke Registry uses conditional branching to streamline case entry, so only questions that apply to the case are visible. Based on the answer to a question, additional questions may be required. For example, the data elements in the *Inpatient* section are required only if the patient was admitted to the facility. Required fields are marked with a red asterisk in the registry.

All data elements required to be abstracted are in the table below; some are hyperlinked to the Appendices section for further information. Please consult the Data Dictionary for detailed guidance for each element. The table shows each data element and where it is located in the case form; the answer that triggers additional questions; and conditionally-required data elements. Note that not all data elements have responses that will prompt more questions and

some elements listed below might not show in the *Inpatient* section depending on discharge disposition.

Section	Data element	Answer	Conditionally Required
Patient Information	Arrival Date		
	Arrival Time		
	Age		
	Sex		
	Residential zip code		If blank, "Patient experiencing homelessness"
	Race/Ethnicity		
	ED Patient	Yes	ED Discharge Date
			ED Discharge Time
	Admitted	Yes	Admission Date
			Inpatient Discharge Date
Diagnosis	Elective carotid intervention		
	Stroke-related clinical trial		
	ICD-10 Principal Discharge Diagnosis		
	Final Clinical Diagnosis Related to Stroke		
	Discharge Disposition		
Evaluation	Arrival mode	EMS from home/scene	Scene Arrival Date
			Scene Arrival Time
			Scene Departure Date
			Scene Departure Time
			Advanced notification by EMS
			Pre-hospital stroke screen performed
			Was glucose checked by EMS?
			If "Yes" to glucose checked by EMS, enter Blood Glucose measured by EMS.
		Transfer	Facility
	Earliest CMO		
	Last Known Well Date		
	Last Know Well Time		
	Discovery Date		
	Discovery Time		

Section	Data element	Answer	Conditionally Required
	Where was patient when stroke symptoms discovered		
	Stroke symptoms resolved		
	Acute Stroke Team Activated	Yes	AST Activation Date
			AST Activation Time
			ED Provider Assessment Date
			ED Provider Assessment Time
	Patient received a telestroke consultation	Yes	Where was patient located at time of consultation?
			If “At my hospital”: Consultation method
			Telestroke initiated Date
			Telestroke initiated Time
			Telestroke connected Date
			Telestroke connected Time
			If “At another hospital”: Who provided the telestroke consultation?
	NIHSS Performed	Yes	NIHSS Score
	Patient NPO		
	STK 7: Dysphagia screen	Yes	Result of first dysphagia screen
	Imaging initiated after arrival as part of initial evaluation for this episode of care	Yes	Imaging type
			Imaging initiated date
			Imaging initiated time
			Imaging interpreted date
			Imaging interpreted time
			Initial brain imaging findings
	Acute vascular or perfusion imaging performed (CTA, MRA, DSA)		Only appears if final clinical diagnosis is ischemic stroke or stroke not otherwise specified
Treatment	IV thrombolytic at outside hospital or EMS/Mobile Stroke Unit	Yes	Select the thrombolytic administered
	IV thrombolytic at this hospital	Yes	Initiated IV thrombolytic date
			Initiated IV thrombolytic time
			Thrombolytic used
			If “Alteplase”: Total dose (mg) (bolus +infusion)

Section	Data element	Answer	Conditionally Required
			If "Tenecteplase": Total dose (mg) (bolus)
			If "Tenecteplase": Reason for selecting tenecteplase over alteplase
			Complications of thrombolytic therapy
			If complications occurred: When were complications detected if transferred after IV thrombolytic
			If > 45 minutes from hospital arrival to initiation of IV thrombolytic: IV thrombolytic delay reasons documented
			If > 45 or > 60 minutes from hospital arrival to initiation of IV thrombolytic and documented reason for delay: Was the reason the need for additional PPE for suspected/confirmed infectious disease?
			If > 60 minutes from hospital arrival to initiation of IV thrombolytic: IV thrombolytic delay reasons documented
			If ≥ 180 minutes from LKW to initiated IV thrombolytic: Contraindications or warnings documented for not initiating in the 0-3 hour treatment window
			If ≥ 180 and ≤ 270 minutes from LKW to initiated IV thrombolytic: Documented reasons for extending initiation to 3-4.5 hour time window
			If > 270 minutes from LKW to initiated IV thrombolytic: Was imagined used to identify eligibility?
			If ≥ 270 minutes from LKW to arrival: Contraindications or warnings documented for not initiating in the 3-4.5 hour treatment window
		No	If ≤ 180 minutes from LKW to arrival: Contraindications or warnings documented for not initiating in the 0-3 hour treatment window
			If ≤ 270 minutes from LKW to arrival: Contraindications or warnings documented for not initiating in the 3-4.5 hour treatment window
	Endovascular Reperfusion	Yes	Endovascular Reperfusion Initiated Date
			Endovascular Reperfusion Initiated Time
History	Known Medical History	Hx of emerging infectious disease (SARS, COVID-19, MERS)	Emerging infectious disease(s)

Section	Data element	Answer	Conditionally Required
		Currently pregnant or within 6 weeks postpartum	Yes, currently pregnant or No, postpartum up to 6 weeks
	Ambulation status prior to current event		
Inpatient *This tab only appears if the patient was admitted to your hospital*	Cholesterol reducing medication prior to admission		
	Antithrombotic therapy received		
	STK 1: VTE Prophylaxis administered	LDUH, LMWH, intermittent pneumatic compression devices, Factor Xa Inhibitor, Oral Factor Xa Inhibitor, warfarin, and/or venous foot pumps	Date VTE prophylaxis administered
		Oral Factor Xa Inhibitor	Documented reason for using Oral Factor Xa Inhibitor
		Not documented or None of the above, graduated compression stockings and/or aspirin	Documented reason for not administering VTE prophylaxis (will disappear if GCS and/or aspirin is selected with another VTE prophylaxis)
	Other therapeutic anticoagulation provided	Yes	Other therapeutic anticoagulation
	Persistent or paroxysmal atrial fibrillation		
	Patient was treated for hospital acquired pneumonia 48 hours or more after admission		
	Patient experience a DVT or pulmonary embolus (PE) during this admission		
	Active bacterial or viral infection	Emerging infectious disease (SARS, COVID-19, MERS)	Emerging infectious disease(s)
	STK 2: Antithrombotic medication prescribed at discharge		Antithrombotic medication(s) prescribed
	STK 3: Anticoagulation medication prescribed for atrial fibrillation/flutter		
	STK 6: Cholesterol reducing treatment	Statin	Statin Medication and Statin Dosage
			Statin intensity

Section	Data element	Answer	Conditionally Required
			Documented reason for not prescribing recommended statin intensity (if lower intensity than guideline recommends)
		Fibrate, Niacin, Absorption Inhibitor, PCSK9, Other, None - contraindication, None prescribed/ND	Documented reason for not prescribing a statin at discharge (if "Statin" not selected)
	Antihypertensive medication prescribed		
	Modified Rankin Scale at discharge	Yes	Modified Rankin Scale Score
	Ambulation status at discharge		
	STK 8: Risk factors for stroke		
	STK 8: Stroke Warning Signs & Symptoms		
	STK 8: How to activate EMS for stroke		
	STK 8: Need for follow-up after discharge		
	STK 8: Medications prescribed at discharge		
	STK 9 History of smoking: Smoking Cessation		
	STK 10: Patient assessed for and/or received rehabilitation services		

Optional Data Elements

Below is a list of optional data elements. Some optional data elements will only appear as a follow-up question and will not have a red asterisk on the case form upon closing the record. (No optional elements are required to be answered in order to close a case record.)

Section	Data element	More questions will appear if you answer	Optional Entry
Patient Information	Preferred language		
	Health Insurance Status		
	Race/Ethnicity (Required)	American Indian or Alaska Native; Asian or Asian American; Black, African, or African American; Hispanic, Latino, or Spanish; Middle Eastern or North African; Native Hawaiian	Expanded race/ethnicity selection within each subcategory.

Section	Data element	More questions will appear if you answer	Optional Entry
		or Pacific Islander; White; Unknown	
Diagnosis	Discharge disposition (Required)	Acute Care Facility	Facility
Evaluation	Arrival mode (Required)	EMS from home/scene	EMS Agency
			Incident number
		Transfer from another hospital	Transferred by EMS Agency
Treatment	IV thrombolytic initiated at this hospital (Required)	Yes	First Systolic BP
			First Diastolic BP
			First Blood Glucose

Reporting

Data Reporting Deadlines

It is required to submit all stroke registry data according to the following schedule:

Discharge or Transfer Date	Deadline for Submission
Quarter 1 – January 1 through March 31	August 15
Quarter 2 – April 1 through June 30	November 15
Quarter 3 – July 1 through September 30	February 15
Quarter 4 – October 1 through December 31	May 15

The *minimum* requirement is to submit data quarterly by the deadlines above. However, MDH strongly recommends collecting and reporting stroke patient data continuously, rather than at the end of each reporting period. The facility's Stroke Coordinator should be reviewing the data at least monthly in order to ensure that adjustments to process or training can happen in a timely fashion. This will allow patient care to be optimized quickly and help identify improvements sooner.

Note: If an entry error is found while performing case review or if a chart is amended after a record has been entered, the abstractor can update the case in the Minnesota Stroke Registry. Records from twelve months prior to the current date can be amended without notification.

Reporting Methods

Hospitals have two options for methods for submitting their case-level data to the MDH.

First, hospitals may use the MDH's *Minnesota Stroke Portal* to submit their data. Abstracted case-level data entered into the Minnesota Stroke Registry fulfills reporting requirements. All hospitals can request access to use the *Minnesota Stroke Portal* free of charge.

Second, hospitals may choose to voluntarily participate in the American Heart Association's Get With The Guidelines®- Stroke (GWTG®-Stroke) program. Patient-level data are abstracted (collected) in the same way, but are submitted into the Patient Management Tool™, operated by IQVIA. With the permission of the hospital, the MDH accesses a copy of the hospital's case level data once a month and imports those data into the Minnesota Stroke Registry.

No patient/personal identifiers are collected by the MDH.

Chart Audits

Chart audits are performed to check the completeness and quality of the data submitted into the registry. They are conducted to verify that the stroke registry data are reliable and correctly abstracted. This ensures that decisions about improving acute stroke care in the hospital are driven by accurate data.

This data validation is done through a process called re-abstraction or auditing. The MDH generates an audit sample for each hospital using specific criteria to select a mixture of records on patients who have been treated at each facility throughout the calendar year under review. The sample size is dependent on the hospital's annual stroke volume; a maximum of ten case records are re-abstracted during a round of audits. A third-party vendor, authorized by the MDH, receives the specified patient medical records from each facility and re-abstracts select data elements in accordance with the Minnesota Stroke Registry Data Dictionary. All personal identifiers are redacted or removed from these records for this audit.

The audited cases are then compared with what was originally abstracted into the registry to find the percent agreement rate. Once the audit is complete, the facility will receive a hospital-level summary report on the correlation rates and case-level discrepancies. An overview summary report is shared with MDH.

By performing chart audits, the MDH can identify areas of possible misinterpretation or confusion for hospital abstractors and use this information to update guidance in the data dictionary as well as inform future training efforts. After reviewing the results, each hospital's Stroke Committee may find areas of opportunity, such as optimizing the EHR to ease the abstraction process, create stroke flowsheets, or customize templates to improve required provider documentation.

As part of the cooperative agreement with the CDC Paul Coverdell National Acute Stroke Program, the MDH may audit a sample of case records for every participating hospital. Therefore, every hospital submitting data to the Minnesota Stroke Registry must comply with this auditing requirement. Due to resource and capacity limitations, hospitals are audited approximately once every two years or as requested by CDC.

Reports

The Minnesota Stroke Portal offers a variety of reports to view the data that has been submitted into the Registry. There are four report sets available: Performance Improvement, Stroke Consensus Performance Metrics (STK Core Measures), Population Reports, and the Performance Improvement Case Review Report. See below for a description of each report.

Note: The MDH publicly reports two sets of performance measures on all hospitals, the STK Core Measures and the Statewide Quality Reporting and Measurement System (SQRMS). Information on specifications for each measure, such as the inclusion criteria, exclusion criteria, data elements and calculations are in the Appendices.

Performance Improvement reports

The Performance Improvement reports are used by hospitals to assess their overall stroke code activation performance by key time intervals (door-to-action indicators). Each report shows the aggregate data based on the criteria in either bar or line graph form as well as optional benchmark or filters applied. Non-Compliant Cases option will allow user to view and investigate cases that did not met the measure or were out of compliance.

Reports available are:

- Door to Imaging Initiated ≤ 25 minutes - all patients, no exclusions
  - Includes **all** cases that had imaging at that hospital, regardless of final stroke diagnosis.
  - Calculates the amount of time from patient arrival in ED to imaging initiation.
- Door to Imaging Initiated ≤ 25 minutes (SQRMS)
  - Please click on the hyperlink above to see detailed SQRMS specifications for inclusions and exclusions criteria.
- Door to Needle < 45 minutes – all patients, no exclusions
  - Includes **all** cases that received IV thrombolytic at this hospital, regardless of final stroke diagnosis.
  - Calculates the amount of time from patient arrival in ED to IV thrombolytic initiation.
- Door to Needle ≤ 60 minutes -all patients, no exclusions
  - Includes **all** cases that received IV thrombolytic at this hospital, regardless of final stroke diagnosis.
  - Calculates the amount of time from patient arrival in ED to IV thrombolytic initiation.
- Door to Imaging Read ≤ 45 minutes
  - Includes **all** cases that had imaging at that hospital, regardless of final stroke diagnosis.
  - Calculates the amount of time from patient arrival in ED to imaging interpreted.
- Door to Needle ≤ 60 minutes (SQRMS)
  - Please click on the hyperlink above to see detailed SQRMS specifications for inclusions and exclusions criteria.
  - Calculates the amount of time from patient arrival in ED to IV thrombolytic initiation.
- Door-In to Door-Out ≤ 120 minutes
  - Includes **all** ED patients, regardless of final stroke diagnosis.
  - Calculates the amount of time from patient arrival in ED to discharge from ED.
- Door to ED Provider Assessment < 10 minutes

  - Includes all patients that received an ED provider assessment, regardless of final stroke diagnosis.
  - Calculates amount of time between patient arrival in ED to receiving ED Provider assessment.
- Door to Stroke Team Activation < 15 minutes
  - Includes all cases that had an Acute Stroke Team activation.
  - Calculates the amount of time between patient arrival in ED to activation of Acute Stroke Team/stroke code.
- Door to Telestroke Initiation < 15 minutes
  - Includes all cases that activated telestroke.
  - Calculates the amount of time between patient arrival in ED to telestroke initiation.
- Telestroke Initiated to Telestroke Connected < 20 minutes
  - Includes all cases that activated telestroke, regardless of method used.
  - Calculates the amount of time between telestroke initiation to connection with a stroke expert.
- Last Known Well to Arrival
  - Includes all patients.
  - Calculates the amount of time from patient's last known well to arrival in ED.

Stroke Consensus Performance Metrics

The STK core measure reports are used by hospitals to assess their compliance with nationally implemented standards for stroke care. Please click on the hyperlinks to see detailed specifications for inclusion and exclusion criteria. Each report shows the aggregate data based on the criteria in either bar or line graph form as well as optional benchmark or filters applied. Non-Compliant Cases option will allow user to view and investigate cases that did not met the measure or were out of compliance.

These reports are:

1. STK-1: Venous Thromboembolism Prophylaxis
2. STK-2: Discharged on Antithrombotic Therapy
3. STK-3: Anticoagulation Therapy for Atrial Fibrillation/Flutter
4. STK-4: Thrombolytic Therapy
5. STK-5: Antithrombotic Therapy by the end of Hospital Day Two
6. STK-6: Discharged on Statin Medication
7. STK-7: Dysphagia Screening
8. STK-8: Stroke Education
9. STK-9: Smoking Cessation/ Advice/Counseling
10. STK-10: Assessed for Rehabilitation

Population reports

Population reports are used by hospitals to view their **total** patient cases during a specified timeframe by stroke type, arrival method, transferred vs. admitted, or discharge disposition. Currently, case level data is not available for the Population reports in the Portal. Each report

shows the aggregate data based on the criteria entered as well as displays the aggregate data for all hospitals.

Reports available are:

- Number of cases by stroke type
  - Intracerebral hemorrhage
  - Subarachnoid hemorrhage
  - Ischemic stroke
  - Stroke not otherwise specified
  - Transient ischemic attack
  - No stroke related diagnosis
- Number of cases by arrival mode
  - EMS from home/scene
  - Private transportation/taxi/other
  - Transfer from another hospital
  - Not documented or unknown
- Number of cases by transferred vs. admitted
  - Admitted
  - Transferred
  - Other
- Number of cases by discharge disposition
  - Home
  - Hospice – Home
  - Hospice – Health Care Facility
  - Acute Care Facility
  - Other Health Care Facility
  - Expired
  - Left Against Medical Advice/ AMA
  - Not Documented (ND) or Unable to Determine (UTD)

Performance Improvement (PI) Log

The Performance Improvement (PI) Log is a detailed case-level spreadsheet export of all cases that were entered into the Minnesota Stroke Registry during the specified time period. Hospitals can utilize this report to assess their overall performance and identify areas of improvement. The following data elements and calculations are included:

- Hospital
- Patient ID
- Age
- Gender
- Race
- Insurance
- Stroke Diagnosis
- Arrival Mode
- Ems Agency

- Pre-Notify
- Stroke Team Activation
- Stroke Team Activation Date
- Stroke Team Activation Time
- Door To Stroke Team Activation (Minutes) - Calculated
- ED Provider Assessment Date
- ED Provider Assessment Time
- Door To ED Provider Assessment (Minutes) - Calculated
- Telestroke Type
- Telestroke Initiated Date
- Telestroke Initiated Time
- Door To Telestroke Initiated (Minutes) - Calculated
- Telestroke Connected Date
- Telestroke Connected Time
- Telestroke Initiated To Connected (Minutes) - Calculated
- LKW Date
- LKW Time
- Arrival Date
- Arrival Time
- LKW To Arrival (Minutes) - Calculated
- Imaging Date
- Imaging Time
- Door To Imaging (Minutes) - Calculated
- Image Read Date
- Image Read Time
- Door To Image Read (Minutes) - Calculated
- IV Thrombolytic Given
- Thrombolytic Used
- IV Thrombolytic Date
- IV Thrombolytic Time
- Door To Needle (Minutes) - Calculated
- Discharge Disposition
- ED Discharge Date
- ED Discharge Time
- Door To Transfer (Minutes) - Calculated
- Inpatient Stroke
- NIHSS
- CMO
- Dysphagia Screen
- NPO
- Admitted
- Hospital Discharge Date
- Transferred To
- Transferred From

Appendices

Appendix A: ICD-10-CM Discharge Diagnosis Codes Related to Stroke

Ischemic stroke

Table 1. Ischemic stroke ICD-10-CM diagnosis codes

ICD-10 Code	Description
I63.00	Cerebral infarction due to thrombosis of unspecified precerebral artery
I63.011	Cerebral infarction due to thrombosis of right vertebral artery
I63.012	Cerebral infarction due to thrombosis of left vertebral artery
I63.013	Cerebral infarction due to thrombosis of bilateral vertebral arteries
I63.019	Cerebral infarction due to thrombosis of unspecified vertebral artery
I63.02	Cerebral infarction due to thrombosis of basilar artery
I63.031	Cerebral infarction due to thrombosis of right carotid artery
I63.032	Cerebral infarction due to thrombosis of left carotid artery
I63.033	Cerebral infarction due to thrombosis of bilateral carotid arteries
I63.039	Cerebral infarction due to thrombosis of unspecified carotid artery
I63.09	Cerebral infarction due to thrombosis of other precerebral artery
I63.10	Cerebral infarction due to embolism of unspecified precerebral artery
I63.111	Cerebral infarction due to embolism of right vertebral artery
I63.112	Cerebral infarction due to embolism of left vertebral artery
I63.113	Cerebral infarction due to embolism of bilateral vertebral arteries
I63.119	Cerebral infarction due to embolism of unspecified vertebral artery
I63.12	Cerebral infarction due to embolism of basilar artery
I63.131	Cerebral infarction due to embolism of right carotid artery
I63.132	Cerebral infarction due to embolism of left carotid artery
I63.133	Cerebral infarction due to embolism of bilateral carotid arteries
I63.139	Cerebral infarction due to embolism of unspecified carotid artery
I63.19	Cerebral infarction due to embolism of other precerebral artery
I63.20	Cerebral infarction due to unspecified occlusion or stenosis of unspecified precerebral arteries
I63.211	Cerebral infarction due to unspecified occlusion or stenosis of right vertebral arteries
I63.212	Cerebral infarction due to unspecified occlusion or stenosis of left vertebral arteries
I63.213	Cerebral infarction due to unspecified occlusion or stenosis of bilateral vertebral arteries
I63.219	Cerebral infarction due to unspecified occlusion or stenosis of unspecified vertebral arteries
I63.22	Cerebral infarction due to unspecified occlusion or stenosis of basilar arteries

ICD-10 Code	Description
I63.231	Cerebral infarction due to unspecified occlusion or stenosis of right carotid arteries
I63.232	Cerebral infarction due to unspecified occlusion or stenosis of left carotid arteries
I63.233	Cerebral infarction due to unspecified occlusion or stenosis of bilateral carotid arteries
I63.239	Cerebral infarction due to unspecified occlusion or stenosis of unspecified carotid arteries
I63.29	Cerebral infarction due to unspecified occlusion or stenosis of other precerebral arteries
I63.30	Cerebral infarction due to thrombosis of unspecified cerebral artery
I63.311	Cerebral infarction due to thrombosis of right middle cerebral artery
I63.312	Cerebral infarction due to thrombosis of left middle cerebral artery
I63.313	Cerebral infarction due to thrombosis of bilateral middle cerebral arteries
I63.319	Cerebral infarction due to thrombosis of unspecified middle cerebral artery
I63.321	Cerebral infarction due to thrombosis of right anterior cerebral artery
I63.322	Cerebral infarction due to thrombosis of left anterior cerebral artery
I63.323	Cerebral infarction due to thrombosis of bilateral anterior arteries
I63.329	Cerebral infarction due to thrombosis of unspecified anterior cerebral artery
I63.331	Cerebral infarction due to thrombosis of right posterior cerebral artery
I63.332	Cerebral infarction due to thrombosis of left posterior cerebral artery
I63.333	Cerebral infarction to thrombosis of bilateral posterior arteries
I63.339	Cerebral infarction due to thrombosis of unspecified posterior cerebral artery
I63.341	Cerebral infarction due to thrombosis of right cerebellar artery
I63.342	Cerebral infarction due to thrombosis of left cerebellar artery
I63.343	Cerebral infarction to thrombosis of bilateral cerebellar arteries
I63.349	Cerebral infarction due to thrombosis of unspecified cerebellar artery
I63.39	Cerebral infarction due to thrombosis of other cerebral artery
I63.40	Cerebral infarction due to embolism of unspecified cerebral artery
I63.411	Cerebral infarction due to embolism of right middle cerebral artery
I63.412	Cerebral infarction due to embolism of left middle cerebral artery
I63.413	Cerebral infarction due to embolism of bilateral middle cerebral arteries
I63.419	Cerebral infarction due to embolism of unspecified middle cerebral artery
I63.421	Cerebral infarction due to embolism of right anterior cerebral artery
I63.422	Cerebral infarction due to embolism of left anterior cerebral artery
I63.423	Cerebral infarction due to embolism of bilateral anterior cerebral arteries
I63.429	Cerebral infarction due to embolism of unspecified anterior cerebral artery
I63.431	Cerebral infarction due to embolism of right posterior cerebral artery
I63.432	Cerebral infarction due to embolism of left posterior cerebral artery

ICD-10 Code	Description
I63.433	Cerebral infarction due to embolism of bilateral posterior cerebral arteries
I63.439	Cerebral infarction due to embolism of unspecified posterior cerebral artery
I63.441	Cerebral infarction due to embolism of right cerebellar artery
I63.442	Cerebral infarction due to embolism of left cerebellar artery
I63.443	Cerebral infarction due to embolism of bilateral cerebellar arteries
I63.449	Cerebral infarction due to embolism of unspecified cerebellar artery
I63.49	Cerebral infarction due to embolism of other cerebral artery
I63.50	Cerebral infarction due to unspecified occlusion or stenosis of unspecified cerebral artery
I63.511	Cerebral infarction due to unspecified occlusion or stenosis of right middle cerebral artery
I63.512	Cerebral infarction due to unspecified occlusion or stenosis of left middle cerebral artery
I63.513	Cerebral infarction due to unspecified occlusion or stenosis of bilateral middle arteries
I63.519	Cerebral infarction due to unspecified occlusion or stenosis of unspecified middle cerebral artery
I63.521	Cerebral infarction due to unspecified occlusion or stenosis of right anterior cerebral artery
I63.522	Cerebral infarction due to unspecified occlusion or stenosis of left anterior cerebral artery
I63.523	Cerebral infarction due to unspecified occlusion or stenosis of bilateral anterior arteries
I63.529	Cerebral infarction due to unspecified occlusion or stenosis of unspecified anterior cerebral artery
I63.531	Cerebral infarction due to unspecified occlusion or stenosis of right posterior cerebral artery
I63.532	Cerebral infarction due to unspecified occlusion or stenosis of left posterior cerebral artery
I63.533	Cerebral infarction due to unspecified occlusion or stenosis of bilateral posterior arteries
I63.539	Cerebral infarction due to unspecified occlusion or stenosis of unspecified posterior cerebral artery
I63.541	Cerebral infarction due to unspecified occlusion or stenosis of right cerebellar artery
I63.542	Cerebral infarction due to unspecified occlusion or stenosis of left cerebellar artery
I63.543	Cerebral infarction due to unspecified occlusion or stenosis of bilateral cerebellar arteries
I63.549	Cerebral infarction due to unspecified occlusion or stenosis of unspecified cerebellar artery
I63.59	Cerebral infarction due to unspecified occlusion or stenosis of other cerebral artery
I63.6	Cerebral infarction due to cerebral venous thrombosis, nonpyogenic
I63.8	Other cerebral infarction
I63.81	Other cerebral infarction due to occlusion or stenosis of small artery, lacunar infarction
I63.89	Other cerebral infarction
I63.9	Cerebral infarction, unspecified

Transient Ischemic Attack

Table 2. Transient ischemic attack ICD-10-CM diagnosis codes

ICD-10 Code	Description
G45.0	Vertebro-basilar artery syndrome
G45.1	Carotid artery syndrome (hemispheric)
G45.2	Multiple and bilateral precerebral artery syndromes
G45.8	Other transient cerebral ischemic attacks and related syndromes
G45.9	Transient cerebral ischemic attack, unspecified
G46.0	Middle cerebral artery syndrome
G46.1	Anterior cerebral artery syndrome
G46.2	Posterior cerebral artery syndrome

Hemorrhagic Stroke

Table 3: Hemorrhagic stroke ICD-10-CM diagnosis codes

ICD-10 Code	Description
I60.00	Nontraumatic subarachnoid hemorrhage from unspecified carotid siphon and bifurcation
I60.01	Nontraumatic subarachnoid hemorrhage from right carotid siphon and bifurcation
I60.02	Nontraumatic subarachnoid hemorrhage from left carotid siphon and bifurcation
I60.10	Nontraumatic subarachnoid hemorrhage from unspecified middle cerebral artery
I60.11	Nontraumatic subarachnoid hemorrhage from right middle cerebral artery
I60.12	Nontraumatic subarachnoid hemorrhage from left middle cerebral artery
I60.2	Nontraumatic subarachnoid hemorrhage from anterior communicating artery
I60.30	Nontraumatic subarachnoid hemorrhage from unspecified posterior communicating artery
I60.31	Nontraumatic subarachnoid hemorrhage from right posterior communicating artery
I60.32	Nontraumatic subarachnoid hemorrhage from left posterior communicating artery
I60.4	Nontraumatic subarachnoid hemorrhage from basilar artery
I60.50	Nontraumatic subarachnoid hemorrhage from unspecified vertebral artery
I60.51	Nontraumatic subarachnoid hemorrhage from right vertebral artery
I60.52	Nontraumatic subarachnoid hemorrhage from left vertebral artery
I60.6	Nontraumatic subarachnoid hemorrhage from other intracranial arteries
I60.7	Nontraumatic subarachnoid hemorrhage from unspecified intracranial artery
I60.8	Other nontraumatic subarachnoid hemorrhage
I60.9	Nontraumatic subarachnoid hemorrhage, unspecified
I61.0	Nontraumatic intracerebral hemorrhage in hemisphere, subcortical
I61.1	Nontraumatic intracerebral hemorrhage in hemisphere, cortical
I61.2	Nontraumatic intracerebral hemorrhage in hemisphere, unspecified
I61.3	Nontraumatic intracerebral hemorrhage in brain stem
I61.4	Nontraumatic intracerebral hemorrhage in cerebellum
I61.5	Nontraumatic intracerebral hemorrhage, intraventricular
I61.6	Nontraumatic intracerebral hemorrhage, multiple localized
I61.8	Other nontraumatic intracerebral hemorrhage
I61.9	Nontraumatic intracerebral hemorrhage, unspecified

ICD-10 Code	Description
I62.9	Nontraumatic intracranial hemorrhage, unspecified **part of CDC inclusion and not CMS*

Diseases of the circulatory system complicating pregnancy, childbirth and puerperium

Table 4: Diseases of the circulatory system complicating pregnancy, childbirth and puerperium ICD-10-CM diagnosis codes

ICD-10	Description
O99.411	Diseases of the circulatory system complicating pregnancy- first trimester
O99.412	Diseases of the circulatory system complicating pregnancy- second trimester
O99.413	Diseases of the circulatory system complicating pregnancy- third trimester
O99.419	Diseases of the circulatory system complicating pregnancy- unspecified trimester
O99.42	Diseases of the circulatory system complicating childbirth
O99.43	Diseases of the circulatory system complicating the puerperium

Appendix B: Reporting Specifications

Stroke Consensus Performance Metrics

Included are excerpts from the Specifications Manual for Joint Commission National Quality Measures that have been adapted for the purposes of the of Minnesota Stroke Registry.

Measure ID: STK-1

Name: Venous Thromboembolism (VTE) Prophylaxis

Description: Ischemic or hemorrhagic stroke patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given the day of or the day after hospital admission

Rationale: Stroke patients are at increased risk of developing venous thromboembolism (VTE). One study noted proximal deep vein thrombosis in more than a third of patients with moderately severe stroke. Reported rates of occurrence vary depending on the type of screening used. Prevention of VTE, through the use of prophylactic therapies, in at risk patients is a noted recommendation in numerous clinical practice guidelines. For acutely ill stroke patients who are confined to bed, thromboprophylaxis with low-molecular weight heparin (LMWH), low-dose unfractionated heparin (LDUH), or fondaparinux is recommended if there are no contraindications. Aspirin alone is not recommended as an agent to prevent VTE.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Ischemic or hemorrhagic stroke patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given on the day of or the day after hospital admission.

Included Populations: Not applicable

Excluded Populations: None

Data Elements:

- *Reason for No VTE Prophylaxis – Hospital Admission*
- *Reason for Oral Factor Xa Inhibitor*
- *VTE Prophylaxis*
- *VTE Prophylaxis Date*

Denominator Statement: Ischemic or hemorrhagic stroke patients

Included Populations: Discharges with an ICD-10-CM Principal Diagnosis Code for ischemic or hemorrhagic stroke as defined in Appendix A (Table 1 or Table 3) OR final clinical diagnosis related to stroke that is ischemic stroke, subarachnoid hemorrhage, intracerebral hemorrhage, or stroke not otherwise specified.

Excluded Populations:

- Patients less than 18 years of age
- Patients who have a Length of Stay less than 2 days

- Patients who have a Length of Stay greater than 120 days
- Patients with Comfort Measures Only documented on day of or day after hospital arrival
- Patients enrolled in clinical trials
- Patients admitted for Elective Carotid Intervention

Data Elements:

- *Admission Date*
- *Birthdate*
- *Clinical Trial*
- *Comfort Measures Only*
- *Discharge Date*
- *Elective Carotid Intervention*
- *ICD-10-CM Principal Diagnosis Code*
- *Final clinical diagnosis related to stroke*

Return to Performance Measures List

Measure ID: STK-2

Name: Discharged on Antithrombotic Therapy

Description: Ischemic stroke patients prescribed antithrombotic therapy at hospital discharge

Rationale: The effectiveness of antithrombotic agents in reducing stroke mortality, stroke-related morbidity and recurrence rates has been studied in several large clinical trials. While the use of these agents for patients with acute ischemic stroke and transient ischemic attacks continues to be the subject of study, substantial evidence is available from completed studies. Data at this time suggest that antithrombotic therapy should be prescribed at discharge following acute ischemic stroke to reduce stroke mortality and morbidity as long as no contraindications exist.

For patients with a stroke due to a cardioembolic source (e.g., atrial fibrillation, mechanical heart valve), warfarin is recommended unless contraindicated. In recent years, novel oral anticoagulants (NOACs) have been developed and approved by the U.S. Food and Drug Administration (FDA) for stroke prevention, and may be considered as an alternative to warfarin for select patients. Anticoagulation therapy is not generally recommended for secondary stroke prevention in patients presumed to have a non-cardioembolic stroke. Anticoagulants at doses to prevent venous thromboembolism are insufficient antithrombotic therapy to prevent recurrent ischemic stroke or TIA.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Ischemic stroke patients prescribed antithrombotic therapy at hospital discharge.

Included Populations: Not applicable

Excluded Populations: None

Data Elements:

- *Antithrombotic Therapy Prescribed at Discharge*

Denominator Statement: Ischemic stroke patients.

Included Populations: Discharges with an ICD-10-CM Principal Diagnosis Code for ischemic stroke as defined in Appendix A, Table 1 or ischemic stroke as final clinical diagnosis related to stroke.

Excluded Populations:

- Patients less than 18 years of age
- Patients who have a Length of Stay greater than 120 days
- Patients with Comfort Measures Only documented
- Patients enrolled in clinical trials
- Patients admitted for Elective Carotid Intervention
- Patients discharged to another hospital
- Patients who left against medical advice
- Patients who expired

- Patients discharged to home for hospice care
- Patients discharged to a health care facility for hospice care
- Patients with a documented Reason For Not Prescribing Antithrombotic Therapy at Discharge

Data Elements:

- *Admission Date*
- *Birthdate*
- *Clinical Trial*
- *Comfort Measures Only*
- *Discharge Date*
- *Discharge Disposition*
- *Elective Carotid Intervention*
- *ICD-10-CM Principal Diagnosis Code*
- *Final clinical diagnosis related to stroke*
- *Reason for Not Prescribing **Antithrombotic** Therapy at Discharge*

Return to Performance Measures List

Measure ID: STK-3

Name: Anticoagulation Therapy for Atrial Fibrillation/Flutter

Description: Ischemic stroke patients with atrial fibrillation/flutter who are prescribed anticoagulation therapy at hospital discharge.

Rationale: Nonvalvular atrial fibrillation (NVAF) is a common arrhythmia and an important risk factor for stroke. It is one of several conditions and lifestyle factors that have been identified as risk factors for stroke. It has been estimated that over 2 million adults in the United States have NVAF. While the median age of patients with atrial fibrillation is 75 years, the incidence increases with advancing age. For example, The Framingham Heart Study noted a dramatic increase in stroke risk associated with atrial fibrillation with advancing age, from 1.5% for those 50 to 59 years of age to 23.5% for those 80 to 89 years of age. Furthermore, a prior stroke or transient ischemic attack (TIA) are among a limited number of predictors of high stroke risk within the population of patients with atrial fibrillation. Therefore, much emphasis has been placed on identifying methods for preventing recurrent ischemic stroke as well as preventing first stroke. Prevention strategies focus on the modifiable risk factors such as hypertension, smoking, and atrial fibrillation. Analysis of five placebo-controlled clinical trials investigating the efficacy of warfarin in the primary prevention of thromboembolic stroke, found the relative risk of thromboembolic stroke was reduced by 68% for atrial fibrillation patients treated with warfarin. In recent years, novel oral anticoagulant agents (NOACs) have been developed and approved by the U.S. Food and Drug Administration (FDA) for stroke prevention, and may be considered as an alternative to warfarin for select patients. The administration of anticoagulation therapy, unless there are contraindications, is an established effective strategy in preventing recurrent stroke in high stroke risk-atrial fibrillation patients with TIA or prior stroke.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Ischemic stroke patients prescribed anticoagulation therapy at hospital discharge.

Included Populations: Not applicable

Excluded Populations: None

Data Elements:

- *Anticoagulation Therapy Prescribed at Discharge*

Denominator Statement: Ischemic stroke patients with documented atrial fibrillation/flutter.

Included Populations:

- Discharges with an ICD-10-CM Principal Diagnosis Code for ischemic stroke as defined in Appendix A, Table 1 or ischemic stroke as final clinical diagnosis related to stroke.
- Patients with documented Atrial Fibrillation/Flutter

Excluded Populations:

- Patients less than 18 years of age
- Patients who have a Length of Stay greater than 120 days
- Patients with Comfort Measures Only documented
- Patients enrolled in clinical trials
- Patients admitted for Elective Carotid Intervention
- Patients discharged to another hospital
- Patients who left against medical advice
- Patients who expired
- Patients discharged to home for hospice care
- Patients discharged to a health care facility for hospice care
- Patients with a documented Reason For Not Prescribing Anticoagulation Therapy

Data Elements:

- *Admission Date*
- *Atrial Fibrillation/Flutter*
- *Birthdate*
- *Clinical Trial*
- *Comfort Measures Only*
- *Discharge Date*
- *Discharge Disposition*
- *Elective Carotid Intervention*
- *ICD-10-CM Principal Diagnosis Code*
- *Final clinical diagnosis related to stroke*
- *Reason for Not Prescribing Anticoagulation Therapy at Discharge*

Return to Performance Measures List

Measure ID: STK-4

Name: Thrombolytic Therapy

Description: Acute ischemic stroke patients who arrive at this hospital within 2 hours of time last known well and for whom IV thrombolytic was initiated at this hospital within 3 hours of time last known well.

Rationale: The administration of IV alteplase to carefully screened, eligible patients with acute ischemic stroke has been shown to be beneficial in several clinical trials (Class I, Level of Evidence A, American Heart Association/American Stroke Association (AHA/ASA), 2019). These included two positive randomized controlled trials in the United States: The National Institute of Neurological Disorders and Stroke (NINDS) Studies, Part I and Part II. Based on the results of these studies, the Food and Drug Administration (FDA) approved the use of intravenous alteplase for the treatment of acute ischemic stroke when given within 3 hours of stroke symptom onset. A large meta-analysis controlling for factors associated with stroke outcome confirmed the benefit of IV alteplase in patients treated within 3 hours of symptom onset. Physicians with experience and skill in stroke management and the interpretation of CT scans should supervise treatment.

The European Cooperative Acute Stroke Study (ECASS) III trial indicated that intravenous r-tPA (alteplase) can be given safely to, and can improve outcomes for, carefully selected patients treated 3 to 4.5 hours after stroke; however, as the NINDS investigators concluded, the earlier that IV thrombolytic therapy is initiated, the better the patient outcome. Therefore, the target for IV alteplase initiation remains within 3 hours of time last known well. The administration of IV alteplase beyond 3 hours of stroke symptom onset has not been FDA approved.

Although the benefit of IV alteplase has been well established, only a minority of patients with acute ischemic stroke actually receive this medication across the United States, despite the removal of many previous contraindications and warnings for alteplase therapy in recent years. Updated recommendations from the AHA/ASA in 2019 identify tenecteplase as a reasonable alternative to alteplase in acute ischemic stroke patients with minor neurological impairment and no major intracranial occlusion (0.4-mg/kg single IV bolus), or who are also eligible to undergo mechanical thrombectomy (0.25 -mg/kg single IV bolus, maximum 25 mg). Clinical evidence at this time is unclear whether tenecteplase is as effective as or more effective than alteplase (Class IIb, Level of Evidence BR). The administration of IV tenecteplase for ischemic stroke within or beyond 3 hours of stroke symptom onset has not been FDA approved.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Acute ischemic stroke patients for whom IV thrombolytic therapy was initiated at this hospital within 3 hours (less than or equal to 180 minutes) of time last known well.

Included Populations: Not applicable

Excluded Populations: None

Data Elements:

- *Date Last Known Well*
- *IV Thrombolytic Initiation*
- *IV Thrombolytic Initiation Date*
- *IV Thrombolytic Initiation Time*
- *Time Last Known Well*

Denominator Statement: Acute ischemic stroke patients whose time of arrival is within 2 hours (less than or equal to 120 minutes) of time last known well.

Included Populations: Discharges with an ICD-10-CM Principal Diagnosis Code for ischemic stroke as defined in Appendix A, Table 1.

Excluded Populations:

- Patients less than 18 years of age
- Patients who have a Length of Stay greater than 120 days
- Patients enrolled in clinical trials
- Patients admitted for Elective Carotid Intervention
- Time Last Known Well to arrival in the emergency department greater than 2 hours
- Patients with a documented Reason For Extending the Initiation of IV Thrombolytic
- Patients with a documented Reason For Not Initiating IV Thrombolytic

Data Elements:

- *Admission Date*
- *Arrival Date*
- *Arrival Time*
- *Birthdate*
- *Clinical Trial*
- *Date Last Known Well*
- *Discharge Date*
- *ED Patient*
- *Elective Carotid Intervention*
- *ICD-10-CM Principal Diagnosis Code*
- *Final clinical diagnosis related to stroke*
- *Last Known Well*
- *Reason for Extending the Initiation of IV Thrombolytic*
- *Reason for Not Initiating IV Thrombolytic*
- *Time Last Known Well*

Return to Performance Measures List

Measure ID: STK-5

Name: Antithrombotic Therapy By End of Hospital Day Two

Description: Ischemic stroke patients administered antithrombotic therapy by the end of hospital day 2.

Rationale: The effectiveness of antithrombotic agents in reducing stroke mortality, stroke-related morbidity and recurrence rates has been studied in several large clinical trials. While the use of these agents for patients with acute ischemic stroke and transient ischemic attacks continues to be the subject of study, substantial evidence is available from completed studies. Data at this time suggest that antithrombotic therapy should be administered within 2 days of symptom onset in acute ischemic stroke patients to reduce stroke mortality and morbidity as long as no contraindications exist.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Ischemic stroke patients who had antithrombotic therapy administered by end of hospital day 2.

Included Populations: Not applicable

Excluded Populations: None

Data Elements:

- *Antithrombotic Therapy Administered by End of Hospital Day 2*

Denominator Statement: Ischemic stroke patients.

Included Populations: Discharges with an ICD-10-CM Principal Diagnosis Code for ischemic stroke as defined in Appendix A, Table 1.

Excluded Populations:

- Patients less than 18 years of age
- Patients who have a Duration of Stay less than 2 days
- Patients who have a Length of Stay greater than 120 days
- Patients with Comfort Measures Only documented on day of or day after arrival
- Patients enrolled in clinical trials
- Patients admitted for Elective Carotid Intervention
- Patients discharged prior to the end of hospital day 2
- Patients with IV OR IA Thrombolytic (t-PA) Therapy Administered at This Hospital or Within 24
- Hours Prior to Arrival
- Patients with a documented Reason for Not Administering Antithrombotic Therapy by End of
- Hospital Day 2

Data Elements:

- *Admission Date*
- *Arrival Date*
- *Birthdate*
- *Clinical Trial*
- *Comfort Measures Only*
- *Discharge Date*
- *Elective Carotid Intervention*
- *ICD-10-CM Principal Diagnosis Code*
- *Final clinical diagnosis related to stroke*
- *IV OR IA Thrombolytic (t-PA) Therapy Administered at This Hospital or Within 24 Hours Prior to Arrival*
- *Reason for Not Administering Antithrombotic Therapy by End of Hospital Day 2*

Return to Performance Measures List

Measure ID: STK-6

Name: Discharged on Statin Medication

Description: Ischemic stroke patients who are prescribed statin medication at hospital discharge.

Rationale: There is an extensive and consistent body of evidence supporting the use of statins for secondary prevention in patients with clinically evident atherosclerotic cardiovascular disease (ASCVD), which includes individuals with ischemic stroke due to large artery atherosclerosis, individuals with ischemic stroke due to intrinsic small vessel disease, and individuals with ischemic stroke not directly due to atherosclerosis but with clinically evident atherosclerotic disease in an uninvolved cerebral or noncerebral bed. Both women and men with clinical ASCVD are at increased risk for recurrent ASCVD and ASCVD death. High-intensity statin therapy should be initiated or continued as first-line therapy in women and men less than or equal to 75 years of age who have clinical ASCVD, unless contraindicated. In patients with clinical ASCVD and a contraindication to high-intensity statin therapy, moderate-intensity therapy should be considered as an alternative if it can be tolerated. In individuals greater than 75 years of age, the potential for ASCVD risk reduction benefits, adverse effects, drug-drug interactions, and patient preferences should be considered, and statin therapy individualized based on these considerations (Stone, 2013).

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Ischemic stroke patients prescribed statin medication at hospital discharge.

Included Populations: Not applicable

Excluded Populations: None

Data Elements:

- *Statin Medication Prescribed at Discharge*

Denominator Statement: Ischemic stroke patients

Included Populations: Discharges with an ICD-10-CM Principal Diagnosis Code for ischemic stroke as defined in Appendix A, Table 1.

Excluded Populations:

- Patients less than 18 years of age
- Patients who have a Length of Stay greater than 120 days
- Patients with Comfort Measures Only documented
- Patients enrolled in clinical trials
- Patients admitted for Elective Carotid Intervention
- Patients discharged to another hospital
- Patients who left against medical advice
- Patients who expired
- Patients discharged to home for hospice care
- Patients discharged to a health care facility for hospice care

- Patients with a Reason for Not Prescribing Statin Medication at Discharge

Data Elements:

- *Admission Date*
- *Birthdate*
- *Clinical Trial*
- *Comfort Measures Only*
- *Discharge Date*
- *Discharge Disposition*
- *ICD-10-CM Principal Diagnosis Code*
- *Final clinical diagnosis related to stroke*
- *Reason for Not Prescribing Statin Medication at Discharge*

Return to Performance Measures List

Measure ID: STK-7

Name: Dysphagia Screening

Description: Patients with ischemic or hemorrhagic stroke who undergo screening for dysphagia with an evidence-based beside testing protocol approved by the hospital before being given an food, fluid, or medications by mouth.

Rationale: Dysphagia is a potentially serious complication of stroke. The importance of assessing a patient's ability to swallow, before approving the oral intake of fluids, food, or medication, has been noted in multiple practice guidelines including the Agency for Healthcare Research and Quality (AHRQ) Post-Stroke Rehabilitation guideline. It has been estimated that 27-50% of stroke patients develop dysphagia. Furthermore, 43-54% of stroke patients with dysphagia will experience aspiration and of those patients 37% will develop pneumonia. Dysphagia may contribute to malnutrition and increased length of hospital stay. Most guidelines include a recommendation that all patients be screened for their ability to swallow and those with abnormal results be referred for a complete examination by a speech and language pathologist or other qualified individual. Recent evidence suggests that pneumonia rates in this population may be reduced when a systematic program of diagnosis and treatment of dysphagia is included in an ischemic stroke management plan.

Type Of Measure: Process

Improvement Noted As: An increase in rate

Numerator Statement: Admitted patients who were screened for dysphagia before taking any food, fluids, or medications by mouth.

Included Populations: Not applicable

Excluded Populations: None

Data Elements:

- *Dysphagia Screen*

Denominator Statement: All patients with acute ischemic or hemorrhagic stroke

Included Populations: Admitted patients discharged with an ICD-10-CM Principal Diagnosis Code for ischemic or hemorrhagic stroke as defined in Appendix A (Table 1 or Table 3) OR final clinical diagnosis related to stroke that is ischemic stroke, subarachnoid hemorrhage, intracerebral hemorrhage, or stroke not otherwise specified.

Excluded Populations:

- Patients less than 18 years of age
- Stroke occurred after hospital arrival (in ED/Obs/Inpatient)
- Patients enrolled in clinical trials
- Patients admitted for Elective Carotid Intervention
- Patients who are NPO throughout entire hospital stay
- Contraindications to dysphagia screening prior to any oral intake

Data Elements:

- *Admission Date*

- *Birthdate*
- *Patient Location*
- *Clinical Trial*
- *Discharge Date*
- *Elective Carotid Intervention*
- *Final Clinical Diagnosis Related to Stroke*
- *NPO throughout the hospital stay*
- *None-Contraindicated to dysphagia screening prior to any oral intake*

Return to Performance Measures List

Measure ID: STK-8

Name: Stroke Education

Description: Ischemic or hemorrhagic stroke patients or their caregivers who were given educational materials during the hospital stay addressing all of the following: activation of emergency medical system, need for follow-up after discharge, medications prescribed at discharge, risk factors for stroke, and warning signs and symptoms of stroke.

Rationale: There are many examples of how patient education programs for specific chronic conditions have increased healthful behaviors, improved health status, and/or decreased health care costs of their participants. Clinical practice guidelines include recommendations for patient and family education during hospitalization as well as information about resources for social support services. Some clinical trials have shown measurable benefits in patient and caregiver outcomes with the application of education and support strategies. The type of stroke experienced and the resulting outcomes will play a large role in determining not only the course of treatment but also what education will be required. Patient education should include information about the event (e.g., cause, treatment, and risk factors), the role of various medications or strategies, as well as desirable lifestyle modifications to reduce risk or improve outcomes. Family/caregivers will also need guidance in planning effective and realistic care strategies appropriate to the patient's prognosis and potential for rehabilitation.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Ischemic or hemorrhagic stroke patients with documentation that they or their caregivers were given educational material addressing all of the following:

1. Activation of emergency medical system
2. Follow-up after discharge
3. Medications prescribed at discharge
4. Risk factors for stroke
5. Warning signs and symptoms of stroke

Included Populations: Not applicable

Excluded Populations: None

Data Elements:

- *Education Addresses Activation of Emergency Medical System*
- *Education Addresses Follow-up After Discharge*
- *Education Addresses Medication Prescribed at Discharge*
- *Education Addresses Risk Factors for Stroke*
- *Education Addresses Warning Signs and Symptoms of Stroke*

Denominator Statement: Ischemic stroke or hemorrhagic stroke patients discharged home.

Included Populations:

- Discharges with an ICD-10-CM Principal Diagnosis Code for ischemic or hemorrhagic stroke as defined in Appendix A (Table 1 or Table 3) OR final

clinical diagnosis related to stroke that is ischemic stroke, subarachnoid hemorrhage, intracerebral hemorrhage, or stroke not otherwise specified.

AND

- A discharge to home, home care or court/law enforcement

Excluded Populations:

- Patients less than 18 years of age
- Patients who have a Length of Stay greater than 120 days
- Patients with Comfort Measures Only documented
- Patients enrolled in clinical trials
- Patients admitted for Elective Carotid Intervention

Data Elements:

- *Admission Date*
- *Birthdate*
- *Clinical Trial*
- *Discharge Date*
- *Discharge Disposition*
- *Elective Carotid Intervention*
- *ICD-10-CM Principal Diagnosis Code*
- *Final clinical diagnosis related to stroke*

Return to Performance Measures List

Measure ID: STK-9

Name: Smoking Cessation Advice or Counseling

Description: Patients with ischemic or hemorrhagic stroke with a history of smoking cigarettes, who are, or whose caregivers are, given smoking cessation advice or counseling during hospital stay. For the purposes of this measure, a smoker is defined as someone who has smoked cigarettes anytime during the year prior to hospital arrival.

Rationale: Cigarette smoking is the single most alterable risk factor contributing to premature morbidity and mortality, accounting for approximately 430,000 deaths in the United States. Smoking nearly doubles the risk of ischemic stroke. Numerous prospective investigations have demonstrated substantial decrease in coronary heart disease mortality for former smokers, and similar rapid decreases in risk with smoking are seen for ischemic stroke. The Framingham Heart Study concluded that smoking made a significant independent contribution to the risk of stroke. Although no randomized controlled trials have been performed, there is very strong consensus that patients who smoke should be counseled to stop smoking to decrease the risk of stroke. Research indicates that patients who receive even brief smoking cessation advice from their physicians are more likely to quit than those receiving no counseling at all. Addressing smoking habits and initiating cessation efforts are reasonable interventions during hospitalization for acute stroke and may promote the patient's medical recovery.

Type Of Measure: Process

Improvement Noted As: An increase in rate.

Numerator Statement: Stroke patients (cigarette smokers) who receive smoking cessation advice or counseling during hospital stay, or documentation that patient's caregiver was given smoking cessation advice or counseling during hospital stay.

Included Populations: Not applicable

Excluded Populations: None

Data Elements:

- *Adult Smoking Counseling*

Denominator Statement: Ischemic stroke or hemorrhagic stroke patients with a history of smoking cigarettes anytime during the year prior to hospital arrival

Included Populations:

- Discharges with an ICD-10-CM Principal Diagnosis Code for ischemic or hemorrhagic stroke as defined in Appendix A (Table 1 or Table 3) OR final clinical diagnosis related to stroke that is ischemic stroke, subarachnoid hemorrhage, intracerebral hemorrhage, or stroke not otherwise specified.

AND

- History of smoking cigarettes anytime during the year prior to arrival

Excluded Populations:

- Patients less than 18 years of age

- Patients who have a Length of Stay greater than 120 days
- Patients with Comfort Measures Only documented
- Patients enrolled in clinical trials
- Patients admitted for Elective Carotid Intervention
- Patients discharged to another hospital
- Patients who left against medical advice
- Patients who expired
- Patients discharged to home for hospice care
- Patients discharged to a health care facility for hospice care
- Patients for whom discharge disposition is not documented or unable to determine
- Patients with no history of smoking within past year

Data Elements:

- *Admission Date*
- *Birthdate*
- *Clinical Trial*
- *Comfort Measures Only*
- *Discharge Date*
- *Discharge Disposition*
- *Elective Carotid Intervention*
- *ICD-10-CM Principal Diagnosis Code*
- *Final clinical diagnosis related to stroke*
- *History of smoking*

Return to Performance Measures List

Measure ID: STK-10

Name: Assessed for Rehabilitation

Description: Ischemic or hemorrhagic stroke patients who were assessed for rehabilitation services.

Rationale: Each year about 700,000 people experience a new or recurrent stroke, which is the nation's third leading cause of death. Approximately two thirds of these individuals survive and require rehabilitation. Stroke is a leading cause of serious, long-term disability in the United States, with about 4.4 million stroke survivors alive today. Forty percent of stroke patients are left with moderate functional impairment and 15 to 30 percent with severe disability. More than 60% of those who have experienced stroke, serious injury, or a disabling disease have never received rehabilitation. Stroke rehabilitation should begin as soon as the diagnosis of stroke is established and life-threatening problems are under control. Among the high priorities for stroke are to mobilize the patient and encourage resumption of self-care activities as soon as possible. A considerable body of evidence indicates better clinical outcomes when patients with stroke are treated in a setting that provides coordinated, multidisciplinary stroke-related evaluation and services. Effective rehabilitation interventions initiated early following stroke can enhance the recovery process and minimize functional disability. The primary goal of rehabilitation is to prevent complications, minimize impairments, and maximize function.

Type Of Measure: Process

Improvement Noted As: Increase in the rate

Numerator Statement: Ischemic or hemorrhagic stroke patients assessed for or who received rehabilitation services.

Included Populations: Not applicable

Excluded Populations: None

Data Elements:

- *Assessed for Rehabilitation Services*

Denominator Statement: Ischemic or hemorrhagic stroke patients.

Included Populations: Discharges with an ICD-10-CM Principal Diagnosis Code for ischemic or hemorrhagic stroke as defined in Appendix A (Table 1 or Table 3) OR final clinical diagnosis related to stroke that is ischemic stroke, subarachnoid hemorrhage, intracerebral hemorrhage, or stroke not otherwise specified.

Excluded Populations:

- Patients less than 18 years of age
- Patients who have a Length of Stay greater than 120 days
- Patients with Comfort Measures Only documented
- Patients enrolled in clinical trials
- Patients admitted for Elective Carotid Intervention
- Patients discharged to another hospital
- Patients who left against medical advice
- Patients who expired

- Patients discharged to home for hospice care
- Patients discharged to a health care facility for hospice care

Data Elements:

- *Admission Date*
- *Birthdate*
- *Clinical Trial*
- *Discharge Date*
- *Discharge Disposition*
- *Elective Carotid Intervention*
- *ICD-10-CM Principal Diagnosis Code*
- *Final clinical diagnosis related to stroke*

Return to Performance Measures List

Statewide Quality Reporting and Measurement System (SQRMS) Specifications

Included are excerpts from the MDH Emergency Department Stroke Registry Indicator Specifications 2020 Report Year (07/01/2020 to 06/30/2021 Discharge Dates).

Measure ID: Door-to-Imaging Initiated Time (SQRMS)

Name: Door to Imaging Initiated ≤ 25 minutes

Description: Indicator used to assess the percentage of adult stroke patients for which diagnostic imaging was initiated in 25 minutes or less following their arrival to the hospital or emergency department (ED).

Rationale: Rapid diagnosis of stroke subtype and possible contraindications to thrombolytic therapy needs to occur rapidly for administration of IV thrombolytic in the appropriate time window. Tracking when imaging was initiated may lead to streamlining of key care processes that might otherwise delay the initiation of thrombolytic therapy. Imaging should be initiated within 25 minutes of arrival.

Numerator: All ischemic stroke, transient ischemic attack, subarachnoid hemorrhage, intracerebral hemorrhage, and stroke not otherwise specified patients whose diagnostic imaging was initiated at the reporting hospital within 25 minutes or less from time of arrival

Denominator: Patients with documented final clinical diagnosis of ischemic stroke, transient ischemic attack, subarachnoid hemorrhage, intracerebral hemorrhage, or stroke not otherwise specified, or whose ED visit was assigned a principal ICD-10-CM diagnosis code listed in Table 1 for ischemic stroke, Table 2 for transient ischemic attack, or Table 3 for hemorrhagic stroke.

Exclusions:

- Patients <18 years of age on date of arrival to hospital.
- Patients admitted solely for elective carotid endarterectomy or any revascularization.
- Patients enrolled in a clinical trial related directly to stroke care.
- Patients who started experiencing stroke symptoms after hospital arrival (in ED/Observation/Inpatient).
- Patients who were determined to receive comfort measures only while still in the emergency department.
- Patients who expire while in the emergency department
- Patients whose date or time of arrival are missing or not documented.
- Patients whose last known well time is missing.
- Patients whose date or time of imaging are missing or not documented.
- Patients transferred into your facility from another facility through the emergency department or as a direct admit.
- Patients whose last known well time is greater than 3.5 hours from hospital arrival time.
- Patients whose symptoms have resolved, which may be determined using any of the following criteria:
    - Documentation in the physician notes to the effect of “symptoms have resolved prior to arrival” or “patient has returned to baseline”; or the choice “yes” is selected for the data element “had stroke symptoms resolved at time of presentation.”

Measure ID: Door-to-Needle Time (SQRMS)

Name: Time to Intravenous Thrombolytic Therapy ≤ 60 minutes

Description: Indicator used to assess the percentage of adult ischemic stroke patients for which intravenous thrombolytic therapy was administered within 60 minutes following their arrival to the hospital.

Rationale: Appropriate, rapid administration of thrombolytic therapy within 4.5 hours of symptom onset has shown to improve outcomes for ischemic stroke patients. Tracking the time to IV thrombolytic administration can lead to streamlining of key care processes for acute ischemic stroke patients. IV thrombolytic should be administered within 60 minutes of arrival.

Numerator: All ischemic stroke patients who receive IV thrombolytic at the reporting hospital within 60 minutes or less from time of arrival.

Denominator: Patients with documented final clinical diagnosis of ischemic stroke, or whose ED visit was assigned a principal ICD-10-CM diagnosis code listed in Table 1 for ischemic stroke.

AND

Patients who received IV thrombolytic at the hospital.

Exclusions:

- Patients <18 years of age on date of arrival to hospital.
- Patients admitted solely for elective carotid endarterectomy or any revascularization.
- Patients enrolled in a clinical trial related directly to stroke care.
- Patients who started experiencing stroke symptoms after hospital arrival (in ED/Observation/Inpatient).
- Patients who were determined to receive comfort measures only while still in the emergency department.
- Patients who expire while in the emergency department
- Patients whose date or time of arrival are missing or not documented.
- Patients whose last known well time is missing.
- Patients whose date or time of IV thrombolytic administration are missing or not documented.
- Patients that receive IV thrombolytic greater than 4.5 hours after time last known to be well.
- Patients with a documented eligibility or medical reason for delay in treatment (if IV thrombolytic initiation is greater than 60 minutes after arrival).

Return to Performance Improvement Reports List

Appendix C: Miscellaneous

Antihypertensive Medications

Table 5. Antihypertensive medications by name and drug class

Medication	Drug Class
Accupril	ACE Inhibitor
Accuretic	ACE Inhibitor and Diuretic
Acebutolol	Beta Blocker
Aceon	ACE Inhibitor
Adalat	Ca++ Blockers
Adalat CC (extended release)	Ca++ Blockers
Afeditab CR	Ca++ Blockers
Aldactazide	Diuretic
Aldactone	Diuretic
Aldoclor	Diuretic & Other anti-hypertensive med
Aldomet	Other anti-hypertensive med
Aldoril	Diuretic & Other anti-hypertensive med
Altace	ACE Inhibitor
Amiloride, Amiloride HCl	Diuretic
Amiloride/hydrochlorothiazide	Diuretic
Amlodipine	Ca++ Blockers
Amlodipine/atorvastatin	Ca++ Blocker & Statin
Apresoline	Other anti-hypertensive med
Aquatensen	Diuretic
Atacand	ARB
Atacand HCT	ARB and Diuretic
Atenolol	Beta Blocker
Atenolol Inj	Beta Blocker
Atenolol/chlorthalidone	Beta Blocker and Diuretic
Avalide	ARB and Diuretic
Avapro	ARB
Azilsartan	ARB
Azor	ARB and Calcium Channel Blocker
Benazepril, Benazepril Hydrochloride	ACE Inhibitor

Medication	Drug Class
Benazepril/amlodipine	ACE Inhibitors and Ca++ Channel Blocker
Benazepril/hydrochlorothiazide	ACE Inhibitors and Diuretic
Bendroflumethiazide	Diuretic
Benicar	ARB
Benicar HCT	ARB and Diuretic
Benzthiazide	Diuretic
Bepridil	Ca++ Blockers
Betapace, Betapace AF	Beta Blocker
Betaxolol	Beta Blocker
Bisoprolol, Bisoprolol Fumarate	Beta Blocker
Bisoprolol/hydrochlorothiazide	Beta Blocker and Diuretic
Brevibloc	Beta Blocker
Bumetanide	Diuretic
Bumex	Diuretic
Bystolic	Beta Blocker
Caduet	Ca++ Blocker & Statin
Calan	Ca++ Blockers
Calan SR	Ca++ Blockers
Candesartan	ARB
Candesartan/hydrochlorothiazide	ARB and Diuretic
Capoten	ACE Inhibitor
Capozide	ACE Inhibitor and Diuretic
Captopril	ACE Inhibitor
Captopril HCT, Captopril/hydrochlorothiazide	ACE Inhibitor and Diuretic
Cardene	Ca++ Blockers
Cardizem	Ca++ Blockers
Cardizem CD	Ca++ Blockers
Cardizem Monovial	Ca++ Blockers
Cardura	Other anti-hypertensive med
Carvedilol	Beta Blocker
Catapress	Other anti-hypertensive med
Catapress-TTS	Other anti-hypertensive med
Chlorothiazide	Diuretic
Chlorothiazide/methyldopa	Diuretic & Other anti-hypertensive med

Medication	Drug Class
Chlorthalidone	Diuretic
Clevidipine	Ca++ Blockers
Cleviprex	Ca++ Blockers
Clonidine	Other anti-hypertensive med
Clonidine hydrochloride/Chlorthalidone	Diuretic & Other anti-hypertensive med
Clonidine/chlorthalidone	Diuretic & Other anti-hypertensive med
Clorpres	Diuretic & Other anti-hypertensive med
Combipress	Diuretic & Other anti-hypertensive med
Coreg	Beta Blocker
Corgard	Beta Blocker
Corlopam	Other anti-hypertensive med
Corzide 40/5, 80/5	Beta Blocker and Diuretic
Covera-HS	Ca++ Blockers
Cozzar	ARB
Delone	Diuretic
Demadex	Diuretic
Diazoxide	Other anti-hypertensive med
Dibenzyline	Other anti-hypertensive med
Dilatrate-SR	Other anti-hypertensive med
Diltiazem	Ca++ Blockers
Diovan	ARB
Diovan HCT	ARB and Diuretic
Diucardin	Diuretic
Diupres	Diuretic
Diurese	Diuretic
Diuril	Diuretic
Doxazosin	Other anti-hypertensive med
Dyazide	Diuretic
DynaCirc CR	Ca++ Blockers
Dyrenium	Diuretic
Edarbi	ARB
Edecrin	Diuretic
Enalapril	ACE Inhibitor

Medication	Drug Class
Enalapril/hydrochlorothiazide, enalapril maleate/ hydrochlorothiazide	ACE Inhibitors and Diuretic
Enalaprilat	ACE Inhibitor
Enduron	Diuretic
Eplerenone	Diuretic
Eprosartan	ARB
Eprosartan/hydrochlorothiazide	ARB and Diuretic
Esidrix	Diuretic
Esmolol	Beta Blocker
Ethacrynic acid	Diuretic
Exforge	ARB and Ca++ Channel Blocker
Exna	Diuretic
Felodipine	Ca++ Blockers
Fenoldopam	Other anti-hypertensive med
Fosinopril	ACE Inhibitor
Fosinopril sodium/hydrochlorothiazide	ACE Inhibitors and Diuretic
Furocot	Diuretic
Furosemide	Diuretic
Guanabenz	Other anti-hypertensive med
Guanadrel	Other anti-hypertensive med
Guanethidine	Other anti-hypertensive med
Guanfacine	Other anti-hypertensive med
Hydralazine	Other anti-hypertensive med
Hydrochlorothiazide (HCTZ)	Diuretic
Hydrochlorothiazide/triamterene	Diuretic
HydroDIURIL	Diuretic
Hydroflumethiazide	Diuretic
Hydromox	Diuretic
Hydro-Par	Diuretic
Hygroton	Diuretic
Hylorel	Other anti-hypertensive med
Hytrin	Other anti-hypertensive med
Hyzaar	ARB and Diuretic
Imdur	Other anti-hypertensive med

Medication	Drug Class
Indapamide	Diuretic
Inderal, Inderal LA Long-Acting	Beta Blocker
Inderide	Beta Blocker and Diuretic
InnoPran XL	Beta Blocker
Inspra	Diuretic
Irbesartan	ARB
Irbesartan/hydrochlorothiazide	ARB and Diuretic
Ismelin	Other anti-hypertensive med
Ismo	Other anti-hypertensive med
Isochron	Other anti-hypertensive med
Isoptin SR	Ca++ Blockers
Isordil	Other anti-hypertensive med
Isordil Titradose	Other anti-hypertensive med
Isosorbide dinitrate	Other anti-hypertensive med
Isosorbide mononitrate	Other anti-hypertensive med
Isradipine	Ca++ Blockers
Labetalol	Beta Blocker
Lasix	Diuretic
Levatol	Beta Blocker
Lisinopril	ACE Inhibitor
Lisinopril/hydrochlorothiazide	ACE Inhibitors and Diuretic
Lisinopril/hydrochlorothiazide	ACE Inhibitors and Diuretic
ModifiedLo-Aqua	Diuretic
Loniten	Other anti-hypertensive med
Lopressor	Beta Blocker
Lopressor HCT, Lopressor Hydrochlorothiazide	Beta Blocker and Diuretic
Losartan	ARB
Losartan and hydrochlorothiazide	ARB and Diuretic
Lotensin	ACE Inhibitor
Lotensin HCT	ACE Inhibitors and Diuretic
Lotrel	ACE Inhibitors and Ca++ Channel Blocker
Lozol	Diuretic
Mannitol	Diuretic
Mavik	ACE Inhibitor

Medication	Drug Class
Maxzide	Diuretic
Metahydrin	Diuretic
Methyclothiazide	Diuretic
ModifiedMethyldopa	Other anti-hypertensive med
Methyldopa/hydrochlorothiazide	Diuretic & Other anti-hypertensive med
Metolazone	Diuretic
Metoprolol succinate	Beta Blocker
Metoprolol Tartrate	Beta Blocker
Metoprolol tartrate and hydrochlorothiazide, Metoprolol/hydrochlorothiazide	Beta Blocker and Diuretic
Micardis	ARB
Micardis HCT	ARB and Diuretic
Microzide	Diuretic
Midamor	Diuretic
Minipress	Other anti-hypertensive med
Minizide	Diuretic & Other anti-hypertensive med
Minoxidil	Other anti-hypertensive med
Moduretic	Diuretic
Moexipril, Moexipril Hydrochloride	ACE Inhibitor
Moexipril/hydrochlorothiazide, moexipril hydrochloride/hydrochlorothiazide	ACE Inhibitors and Diuretic
Monopril	ACE Inhibitor
Mykrox	Diuretic
Nadolol	Beta Blocker
Nadolol/bendroflumethiazide	Beta Blocker and Diuretic
Naqua	Diuretic
Naturetin	Diuretic
Nebivolol, Nebivolol Hydrochloride, Nebivolol HCl	Beta Blocker
Nicardipine	Ca++ Blockers
Nicardipine	Ca++ Blockers
Nifediac	Ca++ Blockers
Nifedical	Ca++ Blockers
Nifedipine	Ca++ Blockers
Nifedipine	Ca++ Blockers

Medication	Drug Class
Nifedipine Extended release	Ca++ Blockers
Nimodipine	Ca++ Blockers
Nimotop	Ca++ Blockers
Nisoldipine	Ca++ Blockers
Nitro-Dur	Other anti-hypertensive med
nitroglycerin	Other anti-hypertensive med
Nitrolingual	Other anti-hypertensive med
Nitropress	Other anti-hypertensive med
Nitroprusside	Other anti-hypertensive med
Nitroquick	Other anti-hypertensive med
Nitrostat	Other anti-hypertensive med
Norvasc	Ca++ Blockers
Olmesartan medoxomil/Amlodipine/ Hydrochlorothiazide	ARB and Calcium Channel Blockers and Diuretic
Olmesartan, olmesartan medoxomil	ARB
Olmesartan/amlodipine, olmesartan medoxomil/amlodipine	ARB and Calcium Channel Blocker
Olmesartan/hydrochlorothiazide, olmesartan medoxomil/hydrochlorothiazide	ARB and Diuretic
Oretic	Diuretic
Osmitrol	Diuretic
Penbutolol	Beta Blocker
Perindopril, Perindopril Erbumine	ACE Inhibitor
Phenoxybenzamine	Other anti-hypertensive med
Pindolol	Beta Blocker
Plendil	Ca++ Blockers
Polythiazide	Diuretic
Prazosin	Other anti-hypertensive med
Prazosin hydrochloride/polythiazide	Diuretic & Other anti-hypertensive med
Prinivil	ACE Inhibitor
Prinzide	ACE Inhibitors and Diuretic
Procardia	Ca++ Blockers
Procardia XL Extended Release	Ca++ Blockers
Proglycem	Other anti-hypertensive med
Propranolol, propranolol hydrochloride, propranolol HCl	Beta Blocker

Medication	Drug Class
Propranolol/hydrochlorothiazide	Beta Blocker and Diuretic
Quinapril HCl/HCT, Quinapril hydrochloride/hydrochlorothiazide, Quinapril/Hydrochlorothiazide	ACE Inhibitor and Diuretic
Quinapril, Quinapril HCl	ACE Inhibitor
Quinapril/hydrochlorothiazide	ACE Inhibitors and Diuretic
Quinaretic	ACE Inhibitors and Diuretic
Quinethazone	Diuretic
Ramipril	ACE Inhibitor
Renese	Diuretic
Resectisol	Diuretic
Reserpine	Other anti-hypertensive med
Saluron	Diuretic
Sectral	Beta Blocker
SODIUM EDECRIN	Diuretic
Sorbitrate	Other anti-hypertensive med
Sorine	Beta Blocker
Sotalol, sotalol hydrochloride, Sotalol HCL	Beta Blocker
Spironolactone	Diuretic
Spironolactone/hydrochlorothiazide	Diuretic
Sular	Ca++ Blockers
Tarka	ACE Inhibitors and Ca++ Channel Blocker
Tasosarten	ARB
Telmisartan	ARB
Telmisartan/amlodipine	ARB and Calcium Channel Blocker
Telmisartan/hydrochlorothiazide	ARB and Diuretic
Tenex	Other anti-hypertensive med
Tenoretic	Beta Blocker and Diuretic
Tenormin	Beta Blocker
Tenormin IV	Beta Blocker
Terazosin	Other anti-hypertensive med
Teveten	ARB
Teveten HCT	ARB and Diuretic
Thalitone	Diuretic
Tiazac	Ca++ Blockers

Medication	Drug Class
Timolol	Beta Blocker
Toprol-XL	Beta Blocker
Torsemide	Diuretic
Trandate, Trandate HCL	Beta Blocker
Trandolapril	ACE Inhibitor
Trandolapril/verapamil, trandolapril/verapamil hydrochloride	ACE Inhibitors and Ca++ Channel Blocker
Triamterene	Diuretic
Tribenzor	ARB and Calcium Channel Blockers and Diuretic
Trichlormethiazide	Diuretic
Twynsta	ARB and Calcium Channel Blocker
Uniretic	ACE Inhibitors and Diuretic
Univasc	ACE Inhibitor
Valsartan	ARB
Valsartan/aliskiren	ARB and Other anti-hypertensive med
Valsartan/amlodipine	ARB and Ca++ Channel Blocker
Valsartan/hydrochlorothiazide	ARB and Diuretic
Valturna	ARB and Other anti-hypertensive med
Vascor	Ca++ Blockers
Vaseretic	ACE Inhibitors and Diuretic
Vastoec	ACE Inhibitor
Vastoec IV	ACE Inhibitor
Verapamil extended release	Ca++ Blockers
Veraparmil	Ca++ Blockers
Verdia	ARB
Verelan	Ca++ Blockers
Verelan PM	Ca++ Blockers
Visken	Beta Blocker
Wytensin	Other anti-hypertensive med
Zaroxolyn	Diuretic
Zebeta	Beta Blocker
Zestoretic	ACE Inhibitors and Diuretic
Zestril	ACE Inhibitor
Ziac	Beta Blocker and Diuretic

Medication	Drug Class
Nimodipine	Ca++ Blockers
Nimotop	Ca++ Blockers
Nisoldipine	Ca++ Blockers
Nitro-Dur	Other anti-hypertensive med
nitroglycerin	Other anti-hypertensive med
Nitrolingual	Other anti-hypertensive med
Nitropress	Other anti-hypertensive med
Nitroprusside	Other anti-hypertensive med
Nitroquick	Other anti-hypertensive med
Nitrostat	Other anti-hypertensive med
Norvasc	Ca++ Blockers
Olmesartan medoxomil/Amlodipine/ Hydrochlorothiazide	ARB and Calcium Channel Blockers and Diuretic
Olmesartan, olmesartan medoxomil	ARB
Olmesartan/amlodipine, olmesartan medoxomil/amlodipine	ARB and Calcium Channel Blocker
Olmesartan/hydrochlorothiazide, olmesartan medoxomil/hydrochlorothiazide	ARB and Diuretic
Oretic	Diuretic
Osmitrol	Diuretic
Penbutolol	Beta Blocker
Perindopril, Perindopril Erbumine	ACE Inhibitor
Phenoxybenzamine	Other anti-hypertensive med
Pindolol	Beta Blocker
Plendil	Ca++ Blockers
Polythiazide	Diuretic
Prazosin	Other anti-hypertensive med
Prazosin hydrochloride/polythiazide	Diuretic & Other anti-hypertensive med
Prinivil	ACE Inhibitor
Prinzide	ACE Inhibitors and Diuretic
Procardia	Ca++ Blockers
Procardia XL Extended Release	Ca++ Blockers
Proglycem	Other anti-hypertensive med
Propranolol, propranolol hydrochloride, propranolol HCl	Beta Blocker
Propranolol/hydrochlorothiazide	Beta Blocker and Diuretic

Medication	Drug Class
Quinapril HCl/HCT, Quinapril hydrochloride/hydrochlorothiazide, Quinapril/Hydrochlorothiazide	ACE Inhibitor and Diuretic
Quinapril, Quinapril HCl	ACE Inhibitor
Quinapril/hydrochlorothiazide	ACE Inhibitors and Diuretic
Quinaretic	ACE Inhibitors and Diuretic
Quinethazone	Diuretic
Ramipril	ACE Inhibitor
Renese	Diuretic
Resectisol	Diuretic
Reserpine	Other anti-hypertensive med
Saluron	Diuretic
Sectral	Beta Blocker
SODIUM EDECRIN	Diuretic
Sorbitrate	Other anti-hypertensive med
Sorine	Beta Blocker
Sotalol, sotalol hydrochloride, Sotalol HCL	Beta Blocker
Spironolactone	Diuretic
Spironolactone/hydrochlorothiazide	Diuretic
Sular	Ca++ Blockers
Tarka	ACE Inhibitors and Ca++ Channel Blocker
Tasosarten	ARB
Telmisartan	ARB
Telmisartan/amlodipine	ARB and Calcium Channel Blocker
Telmisartan/hydrochlorothiazide	ARB and Diuretic
Tenex	Other anti-hypertensive med
Tenoretic	Beta Blocker and Diuretic
Tenormin	Beta Blocker
Tenormin IV	Beta Blocker
Terazosin	Other anti-hypertensive med
Teveten	ARB
Teveten HCT	ARB and Diuretic
Thalitone	Diuretic
Tiazac	Ca++ Blockers
Timolol	Beta Blocker

Medication	Drug Class
Toprol-XL	Beta Blocker
Torsemide	Diuretic
Trandate, Trandate HCL	Beta Blocker
Trandolapril	ACE Inhibitor
Trandolapril/verapamil, trandolapril/verapamil hydrochloride	ACE Inhibitors and Ca++ Channel Blocker
Triamterene	Diuretic
Tribenzor	ARB and Calcium Channel Blockers and Diuretic
Trichlormethiazide	Diuretic
Twynsta	ARB and Calcium Channel Blocker
Uniretic	ACE Inhibitors and Diuretic
Univasc	ACE Inhibitor
Valsartan	ARB
Valsartan/aliskiren	ARB and Other anti-hypertensive med
Valsartan/amlodipine	ARB and Ca++ Channel Blocker
Valsartan/hydrochlorothiazide	ARB and Diuretic
Valturna	ARB and Other anti-hypertensive med
Vascor	Ca++ Blockers
Vaseretic	ACE Inhibitors and Diuretic
Vastoec	ACE Inhibitor
Vastoec IV	ACE Inhibitor
Verapamil extended release	Ca++ Blockers
Veraparmil	Ca++ Blockers
Verdia	ARB
Verelan	Ca++ Blockers
Verelan PM	Ca++ Blockers
Visken	Beta Blocker
Wytensin	Other anti-hypertensive med
Zaroxolyn	Diuretic
Zebeta	Beta Blocker
Zestoretic	ACE Inhibitors and Diuretic
Zestril	ACE Inhibitor
Ziac	Beta Blocker and Diuretic

Cholesterol Reducing/Controlling Medications

Table 6. Cholesterol reducing medications by name and drug class

Generic Name	Brand Name	Drug Class
Alirocumab	Praluent	PCSK9 Inhibitor
Amlodipine + Atorvastatin	Caduet	Statin + calcium channel blocker (blood pressure)
Atorvastatin	Lipitor	Statin
Bempedoic acid	NEXLETOL	PCSK9 Inhibitor
Cholestyramine, Cholestyramine Light	Prevalite, Prevalite Powder	Other Med
Choline Fenofibrate	Trilipix	Fibrate
Colesevelam	Welchol	Other Med
Colestipol	Colestid	Other Med
Evolocumab	Repatha	PCSK9 Inhibitor
Ezetimibe	Zetia	Absorption Inhibitor
Ezetimibe + Simvastatin	Vytorin	Statin + absorption inhibitor
Fenofibrate	Antara, Fenoglide, Fibricor, Lipofen, Lofibra, Triglide	Fibrate
Fenofibric Acid	Trilipix	Fibrate
Fish Oil	Lovaza	Other Med
Fluvastatin, Fluvastatin XL	Lescol, Lescol XL	Statin
Gemfibrozil	Gemcor, Lopid	Fibrate
Icosapent ethyl*	Vascepa*	Other Med
Lomitapide*	Juxtapid*	Other Med
Lovastatin	Altocor, Altoprev, Mevacor	Statin
Lovastatin + extended release niacin	Advicor	Statin + niacin
Mipomersen sodium*	Kynamro*	Other Med
Niacin, Niacin Extended Release, Niacin ER, Niacin SR, Niacin TR	B-3-50, B3-500-Gr, Niacor, Niacor B3, Niaspan, Niaspan ER, Nico-400, Nicolar, Nicobid Tempules, Slo-Niacin	Niacin
Nicotinic Acid	Niacor, Niaspan, Nicotinex, Slo-Niacin	Niacin
Pitavastatin	Livalo	Statin
Pravastatin	Pravachol	Statin
Rosuvastatin	Crestor	Statin
Simvastatin	Zocor	Statin
Simvastatin + extended release niacin	Simcor	Statin + niacin
(ALN-PCSsc)	Inclisiran	PCSK9 Inhibitor

Statin Dose and Intensity

Table 7. Statin medications by name, dose, and level of intensity

Generic Name	Brand Name	Dose (mg)	Level of Intensity
Amlodipine + Atorvastatin	Caduet	2.5/10	Moderate
		2.5/20	Moderate
		2.5/40	High
		5/10	Moderate
		5/20	Moderate
		5/40	High
		5/80	High
		10/10	Moderate
		10/20	Moderate
		10/40	High
		10/80	High
		Unknown	
Atorvastatin	Lipitor	10	Moderate
		20	Moderate
		≥ 40	High
		Unknown	
Ezetimibe + Simvastatin	Vytorin	10/10	Low
		10/20	Moderate
		10/40	Moderate
		10/80	High
		Unknown	
Fluvastatin	Lescol	20	Low
		40	Low
		80	Moderate
		Unknown	
Fluvastatin XL	Lescol XL	80	Moderate
Lovastatin	Altoprev	20	Low
		40	Moderate
		60	Moderate
		Unknown	
Lovastatin	Mevacor	10	Low

Generic Name	Brand Name	Dose (mg)	Level of Intensity
		20	Low
Lovastatin	Mevacor	40	Moderate
		Unknown	
Lovastatin + Niacin	Advicor	20/500	Low
		20/750	Low
		20/1000	Low
		40/1000	Moderate
		Unknown	
Pitavastatin	Livalo	1	Low
		2	Moderate
		4	Moderate
		Unknown	
Pravastatin	Pravachol	10	Low
		20	Low
		40	Moderate
		80	Moderate
		Unknown	
Rosuvastatin	Crestor	5	Moderate
		10	Moderate
		≥ 20	High
		Unknown	
Simvastatin	Zocor	5	Low
		10	Low
		20	Moderate
		40	Moderate
		80	High
		Unknown	
Simvastatin + Niacin	Simcor	20/500	Moderate
		20/750	Moderate
		20/1000	Moderate
		40/500	Moderate
		40/1000	Moderate
		40/2000 (2 x 20/1000)	Moderate
		Unknown	

Antithrombotic Medications

Table 8. Antiplatelet medication by name and drug class

Generic Name	Brand Name	Drug Class
Aspirin, ASA	Acetylsalicylic Acid, Acuprin 81, Alka-Seltzer, Alka-Seltzer Morning Relief, Anacin, Arthritis Foundation Aspirin, Arthritis Pain Ascriptin Arthritis Pain Formula, ASA, ASA Baby, ASA Baby Chewable, ASA Baby Coated, ASA Bayer, ASA, Bayer Children's, ASA Buffered, ASA Children's, ASA EC, ASA Enteric Coated, ASA/Maalox, Ascriptin, Aspergum, Aspir-10, Aspir-Low, Aspir-Lox, Aspir-Mox, Aspir-Trin, Aspirbuf, Aspircaf, Aspirin, Aspirin Baby, Aspirin Bayer, Aspirin Bayer Children's, Aspirin Buffered, Aspirin Child, Aspirin Child Chewable, Aspirin Children's, Aspirin EC, Aspirin Enteric Coated, Aspirin Litecoat, Aspirin Lo-Dose, Aspirin Low Strength, Aspirin Tri-Buffered, Aspirin, Extended Release, Aspirin/butalbital/caffeine, Aspirin/caffeine Aspirtab, Bayer Aspirin, Bayer Aspirin PM Extra Strength, Bayer Children's, Bayer EC, Bayer Enteric Coated, Bayer Low Strength, Bayer Plus, Buffered ASA, Buffered Aspirin, Buffered Baby ASA, Bufferin, Bufferin Arthritis Strength, Bufferin Extra Strength, Buffex, Cama Arthritis Reliever, Child's Aspirin, Coated Aspirin, Cosprin, CTD, Aspirin, Dasprin, Doans Pills, Easprin, EC ASA, Ecotrin, Ecotrin Low Strength Adult, Effervescent Pain & Antacid, Empirin, Entab, Entaprin, Entercote, Enteric Coated Aspirin, Enteric Coated Baby Aspirin, Excedrin, Excedrin Extra Strength, Excedrin Geltab, Excedrin Migraine, Extra Strength Bayer, Genacote, Genprin, Halfprin, Lifecoat Aspirin, Low Dose ASA, Magnaprin, Med Aspirin, Norwich Aspirin, Pain Relief (Effervescent), Pain Relief with Aspirin, Sloprin, St. Joseph Aspirin, Stanback Analgesic, Therapy Bayer, Tri Buffered Aspirin, Uni-As, Uni-Buff, Uni-Tren, Zorprin	Antiplatelet
Aspirin/Dipyridamole	Aggrenox	Antiplatelet
Clopidogrel	Plavix	Antiplatelet
Ticlopidine	Ticlid	Antiplatelet
prasugrel*	Effient*	Antiplatelet
ticagrelor*	Brilinta*	Antiplatelet
Other Antiplatelet*	Example: Cilostazol*	Antiplatelet

* = Drug is **not** listed in Appendix C Table 8.2 in the Specifications Manual for National Hospital Inpatient Quality Measures. Verify that the antithrombotic medication is acceptable for TJC stroke core measures by checking Appendix C Table 8.2 in the most current specifications manual. If the medication administered does not appear in Table 8.2, you must change "Was antithrombotic therapy administered by the end of hospital day 2?" to "No" in order to be compliant with TJC standards.

Table 9. Anticoagulant medication by name and drug class

Generic Name	Brand Name	Drug Class
apixaban	Eliquis	Oral Factor Xa Inhibitor
argatroban	N/A	Direct Thrombin Inhibitor
dabigatran, dabigatran etexilate	Pradaxa	Direct Thrombin Inhibitor
dalteparin	Fragmin	LMWH
desirudin*	Iprivask*	Direct Thrombin Inhibitor
edoxaban	Savaysa	Oral Factor Xa Inhibitor
enoxaparin	Lovenox	LMWH (Note: Lovenox 40 mg sc qd is for DVT prevention and not of proven benefit for stroke prevention and is insufficient as antithrombotic therapy at this dose)
fondaparinux	Arixtra	Factor Xa Inhibitor
Heparin IV (heparin, heparin sodium, heparin Na, heparin sod, heparin sodium inj, heparin sodium inj pork, unfractionated heparin [NOT hep-lock, heparin flush])	N/A	Unfractionated Heparin IV
lepirudin	Refludan	Direct Thrombin Inhibitor
rivaroxaban	Xarelto	Oral Factor Xa Inhibitor
tinzaparin	Innohep	LMWH
Warfarin, Warfarin Sodium	Coumadin, Jantoven	

* = Drug is **not** listed in Appendix C Table 8.3 in the Specifications Manual for National Hospital Inpatient Quality Measures. Verify that the antithrombotic medication is acceptable for TJC stroke core measures by checking Appendix C Table 8.3 in the most current specifications manual. If the medication administered does not appear in Table 8.3, you must change "Was antithrombotic therapy administered by the end of hospital day 2?" to "No" in order to be compliant with TJC standards.

Venous Thromboembolism (VTE) Prophylaxis Inclusion Medications

Table 10. VTE Prophylaxis Inclusion Table

VTE Prophylaxis	Inclusion
Coumadin/Warfarin	Coumadin Jantoven Warfarin Warfarin Sodium
Factor Xa Inhibitor	fondaparinux sodium (Arixtra)
Oral Factor Xa Inhibitor	apixaban (Eliquis) edoxaban (Savaysa) rivaroxaban (Xarelto)
Low Dose Unfractionated Heparin (LDUH) Include only Heparin given by subcutaneous (SQ, Subcu, SC, SubQ) route	HEP Heparin Heparin Na Heparin Sod Heparin Sodium Heparin Sodium Inj. Heparin Sodium Inj. Pork Heparin Subcu/SQ/SC/SubQ
Low Molecular Weight Heparin (LWMH)	dalteparin (Fragmin) enoxaparin (Lovenox) tinzaparin (Innohep)
Intermittent Pneumatic Compression Device (IPC)	AE pumps (anti-embolic pumps) calf/thigh DVT (deep vein thrombosis) boots calf/thigh EPC cuffs/stockings (external pneumatic compression) calf/thigh Intermittent pneumatic compression stockings Intermittent compression devices (ICD) Leg pumpers Pneumatic intermittent impulse compression device RIAC devices (rapid inflation asymmetrical compression) Sequential compression device Sequential pneumatic hose Thrombus pumps calf/thigh
Venous Foot Pump (VFP)	AE pump (anti-embolic pumps) - foot only Foot pump Plantar venous plexus pump – foot only Sequential compression boots – foot only Sequential compression device boots – foot only Venous foot pump

Health Insurance Programs

Table 11. Health Insurance Programs by name and type

Name	Type
AARP ATLANTA	Private/VA/Champus/Other
AETNA	Private/VA/Champus/Other
ALLIED BENEFIT SYSTEMS	Private/VA/Champus/Other
ALLINA HOSP ABBT NW TRANSPLANT	Private/VA/Champus/Other
AMERICAN FAMILY PREFERRED ONE	Private/VA/Champus/Other
AMERICAS PPO	Private/VA/Champus/Other
AMERICAS TPA	Private/VA/Champus/Other
ASSURANT	Private/VA/Champus/Other
ASSURED ACCESS	Private/VA/Champus/Other
AUTO AAA INSURANCE	Private/VA/Champus/Other
AUTO ALLIED	Private/VA/Champus/Other
AUTO ALLSTATE INSURANCE KENNESAW	Private/VA/Champus/Other
AUTO ALLSTATE INSURANCE MINNEAPOLIS	Private/VA/Champus/Other
AUTO AMERICAN COUNTRY	Private/VA/Champus/Other
AUTO AMERICAN FAMILY MADISON WI	Private/VA/Champus/Other
AUTO AMERICAN FAMILY MPLS	Private/VA/Champus/Other
AUTO AMERICAN FAMILY ST CLOUD	Private/VA/Champus/Other
AUTO AMERICAN FAMILY ST PAUL	Private/VA/Champus/Other
AUTO AUSTIN MUTUAL	Private/VA/Champus/Other
AUTO DAIRYLAND	Private/VA/Champus/Other
AUTO ENCOMPASS INSURANCE CO	Private/VA/Champus/Other
AUTO FARM BUREAU INSURANCE	Private/VA/Champus/Other
AUTO FARMERS INSURANCE	Private/VA/Champus/Other
AUTO GEICO	Private/VA/Champus/Other
AUTO GENERIC	Private/VA/Champus/Other
AUTO HORACE MANN INSURANCE	Private/VA/Champus/Other
AUTO LIBERTY MUTUAL	Private/VA/Champus/Other
AUTO METLIFE AUTO AND HOME	Private/VA/Champus/Other
AUTO METRO TRANSIT	Private/VA/Champus/Other
AUTO OWNERS INSURANCE	Private/VA/Champus/Other
AUTO PROGRESSIVE INSURANCE COMPANY	Private/VA/Champus/Other

Name	Type
AUTO SAFECO AUTO CLAIMS	Private/VA/Champus/Other
AUTO SENTRY AUTO INSURANCE	Private/VA/Champus/Other
AUTO STATE AUTO INSURANCE	Private/VA/Champus/Other
AUTO STATE FARM INSURANCE COMPANY	Private/VA/Champus/Other
AUTO TRAVELERS PROPERTY AND CASUALTY	Private/VA/Champus/Other
AUTO USAA	Private/VA/Champus/Other
AUTO WESTBEND MUTUAL AUTO INSURANCE	Private/VA/Champus/Other
BANKERS LIFE AND CASUALTY	Private/VA/Champus/Other
BCBSC CCS COMPREHENSIVE CARE SVCS MN	Private/VA/Champus/Other
BCBSC MEATCUTTERS	Private/VA/Champus/Other
BCBSC MPLS MEATCUTTERS FOODHANDLERS	Private/VA/Champus/Other
BCBSC TWIN CITY PIPE TRADES	Private/VA/Champus/Other
BCBSC WILSON MCSHANE	Private/VA/Champus/Other
BCBSM AWARE DENTAL	Private/VA/Champus/Other
BCBSM BLUE CROSS FEDERAL EMPLOYEES PPO	Private/VA/Champus/Other
BCBSM BLUE CROSS PPO OPEN ACCESS	Private/VA/Champus/Other
BCBSM BLUE CROSS SECURE BLUE MSHO	Private/VA/Champus/Other
BCBSM BLUE CROSS VANTAGE BLUE	Private/VA/Champus/Other
BCBSM BLUE CROSS WALMART PPO PLAN	Private/VA/Champus/Other
BCBSM BLUE PLUS GA	Private/VA/Champus/Other
BCBSM BLUE PLUS HFA PLAN	Private/VA/Champus/Other
BCBSM BLUE PLUS MA	Medicaid
BCBSM BLUE PLUS MEDICARE SUPPLEMENTAL	Medicare/Medicare Advantage
BCBSM BLUE PLUS MINNESOTACARE	Private/VA/Champus/Other and Medicaid
BCBSM BLUE PLUS MN CARE BB	Private/VA/Champus/Other and Medicaid
BCBSM BLUE PLUS MN CARE KK/LL	Private/VA/Champus/Other and Medicaid
BCBSM BLUE PLUS REFERRAL	Private/VA/Champus/Other
BCBSM MEDICAREBLUE PPO	Medicare/Medicare Advantage
BCBSO OF ILLINOIS	Private/VA/Champus/Other
BCBSO OF IOWA	Private/VA/Champus/Other
BCBSO OF NORTH DAKOTA	Private/VA/Champus/Other
BCBSO OF SOUTH DAKOTA	Private/VA/Champus/Other
BCBSO OF WISCONSIN MILWAUKEE	Private/VA/Champus/Other
BCBSO OUT STATE GENERIC	Private/VA/Champus/Other

Name	Type
CHAMPUS	Private/VA/Champus/Other
CHAMPUS TRICARE	Private/VA/Champus/Other
CHAMPVA	Private/VA/Champus/Other
CHIROCARE	Private/VA/Champus/Other
CIGNA SCRANTON	Private/VA/Champus/Other
COMMERCIAL GENERIC	Private/VA/Champus/Other
CONVENTRY HEALTHCARE	Private/VA/Champus/Other
CORESOURCE MD	Private/VA/Champus/Other
COVENTRY HEALTHCARE OF IOWA	Private/VA/Champus/Other
CRIME VICTIMS REPARATIONS	Private/VA/Champus/Other
DAKOTACARE	Private/VA/Champus/Other
DEANCARE HMO	Private/VA/Champus/Other
DELTA DENTAL	Private/VA/Champus/Other
DELTA DENTAL DELTACARE	Private/VA/Champus/Other
DELTA DENTAL MEDICA CHOICE COMMERCIAL	Private/VA/Champus/Other
DELTA DENTAL MEDICAID	Private/VA/Champus/Other
DELTA DENTAL OUT STATE GENERIC	Private/VA/Champus/Other
DELTA DENTAL PREFERRED/DELTA PREMIER/USA	Private/VA/Champus/Other
DELTA DENTAL PREFERRED/PREMIER	Private/VA/Champus/Other
DELTA DENTAL PREFERRED/PREMIER 3M	Private/VA/Champus/Other
DELTA DENTAL U.S.A	Private/VA/Champus/Other
DELTA DENTAL USA	Private/VA/Champus/Other
DENTAL GENERIC	Private/VA/Champus/Other
DENTAL GUARD	Private/VA/Champus/Other
DORAL DENTAL PLAN	Private/VA/Champus/Other
EMPLOYEE BENEFIT ADM	Private/VA/Champus/Other
GENERAL ASSISTANCE MEDICAL CARE (GAMC)	Private/VA/Champus/Other
GENERIC OTHER MISCELLANEOUS	Private/VA/Champus/Other
GOVERNMENT EMPLOYEES HOSPITAL ASSOC	Private/VA/Champus/Other
GREAT WEST	Private/VA/Champus/Other
GROUP HEALTH INSURANCE INC	Private/VA/Champus/Other
GROUP HEALTH OF EAU CLAIRE	Private/VA/Champus/Other
GUARDIAN	Private/VA/Champus/Other
GUARDIAN LIFE INSURANCE PHCS	Private/VA/Champus/Other

Name	Type
HC ADULT CORRECTIONS FACILITY	Private/VA/Champus/Other
HC ADULT DETENTION CENTER	Private/VA/Champus/Other
HC CORRECTIONAL FACILITIES CUSTODY	Private/VA/Champus/Other
HC COUNTY HOME SCHOOL	Private/VA/Champus/Other
HC COURT HOLD 72 HOUR	Private/VA/Champus/Other
HC COURT HOLD CRIMINAL DISTRICT	Private/VA/Champus/Other
HC JUVENILE DETENTION CTR ADJUDICATED	Private/VA/Champus/Other
HC SEXUAL ASSAULT HENNEPIN CTY ED ONLY	Private/VA/Champus/Other
HC ST JOSEPHS HOME SCHOOL	Private/VA/Champus/Other
HEALTH NET	Private/VA/Champus/Other
HEALTH SERVICES MANAGEMENT	Private/VA/Champus/Other
HENNEPIN CARE DISCOUNT 1	Self Pay/No Insurance
HENNEPIN CARE DISCOUNT 2	Self Pay/No Insurance
HENNEPIN CARE DISCOUNT 3	Self Pay/No Insurance
HENNEPIN CARE DISCOUNT 4	Self Pay/No Insurance
HENNEPIN CARE DSCT FOREIGN NATIONALS	Self Pay/No Insurance
HIGH POINTE ANESTHESIA	Private/VA/Champus/Other
HOSPICE GENERIC	Private/VA/Champus/Other
HOSPICE OF THE TWIN CITIES	Private/VA/Champus/Other
HP CLASSIC PLAN	Private/VA/Champus/Other
HP COMMERCIAL OPEN ACCESS	Private/VA/Champus/Other
HP COMMERCIAL REFERRAL	Private/VA/Champus/Other
HP DISTINCTIONS CHOICE OP AC HC EMPL	Private/VA/Champus/Other
HP DISTINCTIONS CHOICE OP AC OTHER	Private/VA/Champus/Other
HP EMPOWER HRA HCMC EMPL	Private/VA/Champus/Other
HP EMPOWER HRA NON HCMC EMPL	Private/VA/Champus/Other
HP FREEDOM PLAN	Private/VA/Champus/Other
HP GA	Private/VA/Champus/Other
HP KIDNEY TRANSPLANT	Private/VA/Champus/Other
HP MA	Medicaid
HP MEDICARE SUPPLEMENTAL	Medicare/Medicare Advantage
HP MINNESOTACARE	Private/VA/Champus/Other and Medicaid
HP MN CARE BB	Private/VA/Champus/Other and Medicaid
HP MN CARE KK/LL	Private/VA/Champus/Other and Medicaid

Name	Type
HP MSHO	Medicaid
HUMANA	Private/VA/Champus/Other
HUMANA CHOICE PPO MEDICARE	Medicare/Medicare Advantage
HUMANA GOLD CHOICE PGBA	Private/VA/Champus/Other
HUMANA GOLD PLUS MEDICARE	Medicare/Medicare Advantage
INTAKE GREAT LAKES	Self Pay/No Insurance
INTAKE MA APP PENDING	Self Pay/No Insurance
INTAKE MA APP TAKEN	Self Pay/No Insurance
ITASCA MEDICAL CARE MA	Medicaid
ITASCA MEDICAL CARE MNCARE	Private/VA/Champus/Other and Medicaid
KAISER PERMANENTE	Private/VA/Champus/Other
KAISER PERMANENTE N CA	Private/VA/Champus/Other
KAISER PERMANENTE S CA	Private/VA/Champus/Other
LIBERTY MUTUAL INSURANCE	Private/VA/Champus/Other
LIFE TRAC	Private/VA/Champus/Other
MA CONSOLIDATED CHEM DEPENDENCY TRTMT	Medicaid
MA DHS 45 DAY PSYCH CONTRACT AMRTC	Medicaid
MA EMERGENCY MEDICAL ASSISTANCE	Medicaid
MA FAMILY PLANNING ONLY	Medicaid
MA GENERAL ASSISTANCE MEDICAL CARE	Private/VA/Champus/Other
MA GHO INPATIENT ONLY	Private/VA/Champus/Other
MA HH NO MA DENTAL	Medicaid
MA HH NO MA PHARMACY	Medicaid
MA MEDICAL ASSISTANCE	Medicaid
MA MINNESOTACARE	Private/VA/Champus/Other and Medicaid
MA MINNESOTACARE BB	Private/VA/Champus/Other and Medicaid
MA MINNESOTACARE KK/LL	Private/VA/Champus/Other and Medicaid
MA QUALIFIED MEDICARE BENEFICIARY WO MA	Private/VA/Champus/Other
MA RESTRICT FROM HCMC MEDICAL ASSISTANCE	Medicaid
MA RESTRICTED TO HCMC MEDICAL ASSISTANCE	Medicaid
MA SERVICE LIMITED MEDICARE BENEFT WO MA	Private/VA/Champus/Other
MAILHANDLERS BENEFIT PLAN	Private/VA/Champus/Other
MAO BADGER CARE	Private/VA/Champus/Other
MAYO MANAGEMENT SERVICES MMSI	Private/VA/Champus/Other

Name	Type
MEDCAID NORTH CAROLINA	Medicaid
MEDCAID TENNESSEE	Medicaid
MEDICA ADVANTAGE SOLUTION PLAN	Private/VA/Champus/Other
MEDICA CHOICE CARE GA	Private/VA/Champus/Other
MEDICA CHOICE CARE MA	Medicaid
MEDICA COMMERCIAL OPEN ACCESS	Private/VA/Champus/Other
MEDICA DUAL SOLUTION MSHO OPEN ACCESS	Medicaid
MEDICA DUAL SOLUTION MSHO REFERRAL	Medicaid
MEDICA DUAL SOLUTIONS MSHO	Medicaid
MEDICA DUAL SOLUTIONS MSHO	Medicare/Medicare Advantage
MEDICA ELECT MEDICA ESSENTIAL HFA HCMC	Private/VA/Champus/Other
MEDICA ELECT MEDICA ESSENTIAL OTHER	Private/VA/Champus/Other
MEDICA MEDICARE SUPPLEMENTAL	Medicare/Medicare Advantage
MEDICA MINNESOTACARE	Private/VA/Champus/Other and Medicaid
MEDICA MN CARE BB	Private/VA/Champus/Other and Medicaid
MEDICA MN CARE FF/JJ	Private/VA/Champus/Other and Medicaid
MEDICA MN CARE KK/LL	Private/VA/Champus/Other and Medicaid
MEDICA PRIME SOLUTION	Private/VA/Champus/Other
MEDICAID ARIZONA	Medicaid
MEDICAID ARKANSAS	Medicaid
MEDICAID CALIFORNIA	Medicaid
MEDICAID COLORADO	Medicaid
MEDICAID FLORIDA	Medicaid
MEDICAID GEORGIA	Medicaid
MEDICAID IDAHO	Medicaid
MEDICAID ILLINOIS	Medicaid
MEDICAID INDIANA	Medicaid
MEDICAID IOWA BUREAU MEDICAL SERVICES	Medicaid
MEDICAID IOWA CONSULTEC	Medicaid
MEDICAID KANSAS	Medicaid
MEDICAID KENTUCKY	Medicaid
MEDICAID LOUISIANA	Medicaid
MEDICAID MAINE	Medicaid
MEDICAID MASSACHUSETTS	Medicaid

Name	Type
MEDICAID MICHIGAN	Medicaid
MEDICAID MISSISSIPPI	Medicaid
MEDICAID MISSOURI	Medicaid
MEDICAID NEBRASKA	Medicaid
MEDICAID NEVADA	Medicaid
MEDICAID NEW JERSEY	Medicaid
MEDICAID NEW MEXICO	Medicaid
MEDICAID NEW YORK	Medicaid
MEDICAID NORTH DAKOTA	Medicaid
MEDICAID OHIO	Medicaid
MEDICAID OKLAHOMA	Medicaid
MEDICAID OREGON	Medicaid
MEDICAID OUT OF STATE GENERIC	Medicaid
MEDICAID PENNSYLVANIA	Medicaid
MEDICAID SOUTH CAROLINA	Medicaid
MEDICAID SOUTH DAKOTA	Medicaid
MEDICAID TEXAS	Medicaid
MEDICAID UTAH	Medicaid
MEDICAID VIRGINIA	Medicaid
MEDICAID WISCONSIN	Medicaid
MEDICARE COST PLAN	Medicare/Medicare Advantage
MEDICARE PART A	Medicare/Medicare Advantage
MEDICARE PART A AND B	Medicare/Medicare Advantage
MEDICARE PART B	Medicare/Medicare Advantage
MEDICARE RAILROAD	Medicare/Medicare Advantage
MEDICARE REPLACEMENT OPEN ACCESS GENERIC	Medicare/Medicare Advantage
MEDICARE REPLACEMENT REFERRAL GENERIC	Medicare/Medicare Advantage
MET LIFE INSURANCE	Private/VA/Champus/Other
METLIFE DENTAL CLAIMS	Private/VA/Champus/Other
MHP GA	Private/VA/Champus/Other
MHP MA	Medicaid
MHP MINNESOTACARE	Private/VA/Champus/Other and Medicaid
MHP MN CARE BB	Private/VA/Champus/Other and Medicaid
MHP MN CARE KK/LL	Private/VA/Champus/Other and Medicaid

Name	Type
MHP MSHO	Medicaid
MHP NORTH STAR ADVANTAGE	Medicare/Medicare Advantage
MHP NORTH STAR ADVANTAGE PLUS	Medicare/Medicare Advantage
MHP NORTH STAR PRIVATE FEE FOR SERVICE	Medicare/Medicare Advantage
MHP NORTHSTAR BASIC	Medicare/Medicare Advantage
MHP REFERRAL	Private/VA/Champus/Other
MIDWEST LIFE AND HEALTH	Private/VA/Champus/Other
MIDWEST SECURITY	Private/VA/Champus/Other
MILITARY ENTRANCE PROCESSING	Private/VA/Champus/Other
MINNEAPOLIS POLICE DEPT	Private/VA/Champus/Other
MN HIGHWAY PATROL	Private/VA/Champus/Other
MULTIPLAN PPO	Private/VA/Champus/Other
MUTUAL OF OMAHA	Private/VA/Champus/Other
NATIONAL ASSOC OF LETTER CARRIERS	Private/VA/Champus/Other
NGS AMERICAN	Private/VA/Champus/Other
NH BENEDICTINE HEALTH CARE CENTER	Private/VA/Champus/Other
NH BRYN MAWR HEALTH CARE CENTER	Private/VA/Champus/Other
NH CHATEAU HEALTH CARE CENTER	Private/VA/Champus/Other
NH CITY OF LAKES TRANSITIONAL CC	Private/VA/Champus/Other
NH CRYSTAL CARE CENTER	Private/VA/Champus/Other
NH EBENEZER LUTHER HALL	Private/VA/Champus/Other
NH GENERIC	Private/VA/Champus/Other
NH JONES HARRISON RESIDENCE	Private/VA/Champus/Other
NH MISSION NURSING HOME	Private/VA/Champus/Other
NH ST LOUIS PARK PLAZA HEALTHCARE	Private/VA/Champus/Other
NH ST OLAF RESIDENCE	Private/VA/Champus/Other
NH TREVILLA OF GOLDEN VALLEY	Private/VA/Champus/Other
NH WALKER METHODIST HEALTH CARE CENTER	Private/VA/Champus/Other
PATIENT CHOICE CARE SYSTEM HFA WAUSAU	Medicaid
PATIENT CHOICE CARE SYSTEM OTHER CBSA	Medicaid
PATIENT CHOICE CARE SYSTEM OTHER WAUSAU	Medicaid
PATIENT CHOICE INSIGHTS MEDICA	Private/VA/Champus/Other
PATIENT CHOICE INSIGHTS WAUSAU	Medicaid
PHS BELCOURT ND	Private/VA/Champus/Other

Name	Type
PHS CIRCLE OF HEALTH	Private/VA/Champus/Other
PHS GENERIC	Private/VA/Champus/Other
PHS ONAMIA PUBLIC HEALTH SERVICE	Private/VA/Champus/Other
PHS RED LAKE	Private/VA/Champus/Other
PHS RED LAKE PUBLIC HEALTH	Private/VA/Champus/Other
PHS ROSEBUD	Private/VA/Champus/Other
PHS SISSETON	Private/VA/Champus/Other
PHYSICIANS MUTUAL	Private/VA/Champus/Other
PREFERRED ONE ADMIN SVCS OPEN ACCESS	Private/VA/Champus/Other
PREFERRED ONE ADMIN SVCS REFERRAL	Private/VA/Champus/Other
PREFERRED ONE COMMUNITY HEALTH PLAN	Private/VA/Champus/Other
PREFERRED ONE GENERIC	Private/VA/Champus/Other
PREFERRED ONE KIDNEY TRANSPLANT	Private/VA/Champus/Other
PREFERRED ONE PPO	Private/VA/Champus/Other
PRIME WEST	Private/VA/Champus/Other
PRINCIPAL FINANCIAL GROUP	Private/VA/Champus/Other
PRINCIPAL LIFE INSURANCE CO DENTAL PLAN	Private/VA/Champus/Other
PROFESSIONAL BENEFIT ADMIN	Private/VA/Champus/Other
RYAN WHITE	Private/VA/Champus/Other
SAGE	Private/VA/Champus/Other
SC AETNA EL PASO	Private/VA/Champus/Other
SC COMMERCIAL OPEN ACCESS	Private/VA/Champus/Other
SC COMMERCIAL REFERRAL	Private/VA/Champus/Other
SC GENERIC	Private/VA/Champus/Other
SC UHC ATLANTA	Private/VA/Champus/Other
SC UHC SALT LAKE CITY	Private/VA/Champus/Other
Self Pay	Self Pay/No Insurance
SENIOR PARTNERS CARE	Private/VA/Champus/Other
SIOUX VALLEY HEALTH PLAN	Private/VA/Champus/Other
STAR HRG	Private/VA/Champus/Other
STATE FARM HEALTH INSURANCE	Private/VA/Champus/Other
STERLING LIFE INSURANCE PLAN	Private/VA/Champus/Other
STRATEGIC RESOURCE	Private/VA/Champus/Other
TODAYS OPTIONS	Private/VA/Champus/Other

Name	Type
TRICARE FOR LIFE	Private/VA/Champus/Other
TRICARE WEST REGION	Private/VA/Champus/Other
UBH MEDICA GA	Private/VA/Champus/Other
UBH MEDICA MA	Medicaid
UBH MEDICA MINNESOTACARE	Private/VA/Champus/Other and Medicaid
UBH MEDICA OTHER	Private/VA/Champus/Other
UBH MSHO	Medicaid
UBH OTHER	Private/VA/Champus/Other
UCARE COMPLETE MNDHO MEDICARE	Medicare/Medicare Advantage
UCARE COMPLETE MNDHO NON MEDICARE	Medicaid
UCARE FOR SENIORS HFA HCMC PCP	Medicare/Medicare Advantage
UCARE FOR SENIORS NON HFA HCMC PCP	Medicare/Medicare Advantage
UCARE GA	Private/VA/Champus/Other
UCARE MA	Medicaid
UCARE MINNESOTACARE	Private/VA/Champus/Other and Medicaid
UCARE MN CARE BB	Private/VA/Champus/Other and Medicaid
UCARE MN CARE FF/JJ	Private/VA/Champus/Other and Medicaid
UCARE MN CARE KK/LL	Private/VA/Champus/Other and Medicaid
UCARE MSHO	Medicaid
UCARE SENIOR SELECT	Private/VA/Champus/Other
UHC DEFINITY HEALTH	Private/VA/Champus/Other
UHC MEDICARE COMPLETE	Medicare/Medicare Advantage
UHC MEDICARE COMPLETE CHOICE	Medicare/Medicare Advantage
UHC MEDICARE COMPLETE POS	Medicare/Medicare Advantage
UHC UNITED HEALTHCARE DENTAL	Private/VA/Champus/Other
UHC UNITED HEALTHCARE GEORGIA	Private/VA/Champus/Other
UHC UNITED HEALTHCARE SALT LAKE CITY	Private/VA/Champus/Other
UNICARE	Private/VA/Champus/Other
UNICARE SCHAUMBURG	Private/VA/Champus/Other
UNICARE SECURITY CHOICE MEDICARE	Private/VA/Champus/Other
UNITED AMERICAN INSURANCE	Private/VA/Champus/Other
UNITED MEDICAL RESOURCES	Private/VA/Champus/Other
UNITED RESOURCE NTWK TAP NTWK	Private/VA/Champus/Other
VALUE OPTIONS INC	Private/VA/Champus/Other

Name	Type
VETERANS ADMINISTRATION PLAN	Private/VA/Champus/Other
VETERANS ADMINISTRATION SLEEP LAB SVCS	Private/VA/Champus/Other
WAUSAU INSURANCE CO	Private/VA/Champus/Other
WC ACUITY WORK COMP PLAN	Private/VA/Champus/Other
WC AIG CLAIMS SERVICE	Private/VA/Champus/Other
WC AMERICAN FAMILY WORK COMP	Private/VA/Champus/Other
WC AMERICAN INTERSTATE	Private/VA/Champus/Other
WC BERKLEY ADMINISTRATORS	Private/VA/Champus/Other
WC BROADSPIRE FL ID	Private/VA/Champus/Other
WC BUNCH AND ASSOCIATES	Private/VA/Champus/Other
WC CAMBRIDGE INTEGRATED	Private/VA/Champus/Other
WC CHESTERFIELD RESOURCE	Private/VA/Champus/Other
WC CHUBB GROUP	Private/VA/Champus/Other
WC CINCINNATI INSURANCE	Private/VA/Champus/Other
WC CITY OF MINNEAPOLIS	Private/VA/Champus/Other
WC CLAIMS MANAGEMENT INCORPORATION	Private/VA/Champus/Other
WC CNA INSURANCE	Private/VA/Champus/Other
WC CONTINENTAL WESTERN GROUP	Private/VA/Champus/Other
WC CORVEL MEDCHECK	Private/VA/Champus/Other
WC CRAWFORD AND COMPANY	Private/VA/Champus/Other
WC DUNWOODY INSTITUTE	Private/VA/Champus/Other
WC ESIS	Private/VA/Champus/Other
WC FARMERS INSURANCE WORK COMP	Private/VA/Champus/Other
WC FEDERATED WORK COMP	Private/VA/Champus/Other
WC FIREMANS FUND	Private/VA/Champus/Other
WC GAB ROBBINS WORK COMP PLAN	Private/VA/Champus/Other
WC GALLAGHER BASSETT	Private/VA/Champus/Other
WC GENERAL CASUALTY	Private/VA/Champus/Other
WC GENERIC	Private/VA/Champus/Other
WC HARTFORD INSURANCE	Private/VA/Champus/Other
WC HAWKEYE SECURITY INS	Private/VA/Champus/Other
WC HC HCMC EMPLOYEES INJURED ON DUTY	Private/VA/Champus/Other
WC HCMC RESIDENTS INJURED ON DUTY	Private/VA/Champus/Other
WC HFA STAFF PHYSICIANS WORK COMP	Private/VA/Champus/Other

Name	Type
WC LEAGUE OF MINNESOTA CITIES	Private/VA/Champus/Other
WC LIBERTY MUTUAL	Private/VA/Champus/Other
WC MEADOWBROOK	Private/VA/Champus/Other
WC MEDICA WORK CHOICE	Private/VA/Champus/Other
WC METRO TRANSIT	Private/VA/Champus/Other
WC METROPOLITAN COUNCIL	Private/VA/Champus/Other
WC POSTAL INJURY COMPENSATION ST PAUL	Private/VA/Champus/Other
WC RAS	Private/VA/Champus/Other
WC RISK ENTERPRISE MANAGEMENT	Private/VA/Champus/Other
WC RTW	Private/VA/Champus/Other
WC SAFECO WORK COMP CLAIMS	Private/VA/Champus/Other
WC SECURA INSURANCE	Private/VA/Champus/Other
WC SEDGWICK JAMES	Private/VA/Champus/Other
WC SENTRY WORK COMP	Private/VA/Champus/Other
WC STATE FARM WORK COMP INSURANCE	Private/VA/Champus/Other
WC STATE FUND WORK COMP	Private/VA/Champus/Other
WC TRAVELERS WORK COMP	Private/VA/Champus/Other
WC UNIVERSITY OF MINNESOTA WORK COMP	Private/VA/Champus/Other
WC US DEPARTMENT OF LABOR	Private/VA/Champus/Other
WC WAUSAU WORK COMP	Private/VA/Champus/Other
WC WESTBEND MUTUAL WORK COMP	Private/VA/Champus/Other
WC WESTERN NATIONAL MUTUAL	Private/VA/Champus/Other
WC WESTFIELD GROUP	Private/VA/Champus/Other
WC WORKFORCE SAFETY AND INSURANCE	Private/VA/Champus/Other
WC ZURICH INSURANCE CHICAGO	Private/VA/Champus/Other
WC ZURICH INSURANCE GROUP	Private/VA/Champus/Other
WC ZURICH INSURANCE MN	Private/VA/Champus/Other
WISCONSIN EDUCATION ASSOCIATION	Private/VA/Champus/Other