

**California Stroke Registry/California Coverdell Program (CSR/CCP)
Hospital Stroke Center Chart Audits**

**Inter-Rater Reliability and Concordance
Methodology and Documentation**

**Year 4
2018 – 19**



CALIFORNIA
STROKE
REGISTRY

Prepared by:
Terence C. Kelley, MS
Scientific Lead, California Stroke Registry/California Coverdell Program
Chronic Disease Control Branch
Center for Healthy Communities
California Department of Public Health

Introduction	3
Background	4
Get With The Guidelines Stroke Patient Management Tool	5
Medical Information Data Analysis System (MIDAS)	5
Year 4 Data Abstraction and Chart Audit Summary	5
Inter-rater reliability and concordance methodology.....	10
National Quality Forum Measures.	12
Hospital Specific Documentation	13
Chart Audit Process for Hospital 1	16
Chart Audit Process for Hospital 2	17
Chart Audit Process for Hospital 3	19
Chart Audit Process for Hospital 4	22
Chart Audit Process for Hospital 5	23
Chart Audit Process for Hospital 6	26
Chart Audit Process for Hospital 7	28
Chart Audit Process for Hospital 8	29
Chart Audit Process for Hospital 9	30
Chart Audit Process for Hospital 10	32
Chart Audit Process for Hospital 11	33
Chart Audit Process for Hospital 12	35

Introduction

In 2003, state legislation was passed to develop a Master Plan for the prevention and treatment of heart disease and stroke. *California's Master Plan for Heart Disease and Stroke Prevention and Treatment, 2007-2015*, was adopted in 2007 and included a recommendation to create a statewide database to monitor the quality of acute stroke care in California. The Integrated Data System (IDS) was developed by California Department of Public Health (CDPH) via a subcontract with Inland Counties Emergency Medical Services Agency (ICEMA) beginning in 2015 with support from the Centers for Disease Control and Prevention (CDC). The IDS was launched in 2018.

The CSR/CCP established the IDS within the California Emergency Medical Services Information System (CEMSIS¹) to gather, link, and store data regarding the clinical care of acute stroke patients from Local Emergency Medical Services Agencies (LEMSAs), pre-hospital, in-hospital, and post-hospital discharge settings. The IDS has the ability to import data on patients with acute stroke, suspected stroke, and transient ischemic attack using International Classification of Disease coding and create a continuous record of care for an episode of acute stroke.

CSR/CCP is responsible for ensuring that updated data elements and standards from American Heart Association/American Stroke Association's (AHA/ASA's) Get With the Guidelines® - Stroke (GWTG-S) program are incorporated into the IDS. GWTG-S improves acute stroke care by promoting consistent adherence to the latest scientific treatment guidelines. The CSR/CCP also utilizes GWTG-S reports for more than 60 hospitals and health systems across the State. The CSR/CCP develops a variety of reports for predictive data analytics and surveillance and for hospital performance benchmarking across the State.

The IDS also meets the CDC, Paul Coverdell National Acute Stroke Program (PCNASP) requirements to establish a data system infrastructure for integrated data management. The CSR/CCP is housed within the Chronic Disease Control Branch (CDCB) of the Center for Healthy Communities of CDPH and supported with funding from the CDC, PCNASP.

¹ CEMIS is California's secure centralized data system for collecting data about individual emergency medical service requests, patients treated at hospitals, and EMS provider organizations. Health and Safety Code, Section 1797.227 requires the most current version of National Emergency Medical Services Information System (NEMIS) to be used to collect EMS data.

Background

Healthcare organizations continue to face an increasing number of disparate data collection and reporting requirements.² The Health Information Technology for Economic and Clinical Health Act was designed to encourage widespread use of Electronic Health Records as a means to improve the quality, safety, and efficacy of care.³

Through its supportive role, the CSR/CCP has assisted partner hospitals since the beginning of the grant in Fiscal Year (FY) 2015-16 with their stroke center chart audits and re-abstraction of patient records to improve data quality and reporting to The Joint Commission (TJC)⁴ and the CDC. Per guidance from the CDC in lieu of conducting additional chart audits specific to the CSR/CCP, it has been acceptable to request and submit hospital-specific documentation that was generated and used in reporting on data validity to TJC. The CSR/CCP has requested this information annually from all TJC-certified stroke centers participating in the Coverdell program since 2015.

Due to the volume of hospitals and hospital records in California and extensive travel it would entail for CSR/CCP staff to perform the re-abstraction of hospitals records, the CSR/CCP felt it would be counterproductive and duplicative of efforts employed by the hospital in their annual reporting to TJC. The CSR/CCP has taken a more methodical and broader approach to ensuring data quality and consistency across all hospitals collaborating with the CSR/CCP. Moreover, since this time, the CSR/CCP has assessed the level of completeness and accuracy of data collected by employing an aggregated inter-rater reliability (IRR) methodology for stroke data abstraction.

In working with our partner hospitals, the CSR/CCP has heard feedback on quality improvement efforts being performed by the hospital that tests IRR in a number of areas within stroke care. The CSR/CCP has made recommendations to hospitals regarding their sampling methodology utilized including using a simple validity test or sharing sampling methods employed by other hospitals such as assessing records with Kappa or intra-class correlations (ICC) using a 2-way, random effects Analysis of variance (ANOVA) or other various random sampling methodologies.

For most hospitals, IRR is performed on a random sample of the initial population. As noted and discussed with the CDC, the initial abstraction for many hospitals is completed by the third party vendor contracting directly with the hospital.

² Collecting and Reporting Data for Performance Measurement: Moving Toward Alignment. (2007). Agency for Healthcare Research and Quality. Retrieved from <http://bok.ahima.org/doc?oid=75664#.XV78euhKgRE>

³ Blavin, F., Ramos, C., Shah, A., & Devers, K. (2013). Lessons from the Literature on Electronic Health Record Implementation (Rep.). Retrieved from <http://urbaninstitute.org/sites/default/files/alfresco/publication-pdfs/413010-The-Feasibility-of-Using-Electronic-Health-Data-for-Research-on-Small-Populations.PDF>

⁴ The Joint Commission is a United States-based nonprofit tax-exempt 501(c) organization that accredits more than 21,000 US health care organizations and programs.

Get With The Guidelines Stroke Patient Management Tool

The American Heart Association's Patient Management Tool™ (PMT) is an online, interactive assessment and reporting system that integrates GWTG-S and is administered by IQVIA, in Cambridge, Massachusetts⁵. As a qualified Center for Medicare & Medicaid Services (CMS) Stroke Core Measures vendor since 2000, IQVIA meets hospital data submission requirements while tracking and reporting on a hospital's performance when it comes to delivering guidelines-based treatment.

The PMT is an electronic case report form that serves the dual purpose of quality assurance and data collection. The PMT is integrated with electronic medical records and allows users to enter individual patient data at the point of care or during retrospective chart abstraction. Functions of the PMT include: submission of CMS Core Stroke Measures data and other reporting requirements, real-time data checks to identify potential entry errors such as inconsistent entries or values that are out of range prior to submission, real-time reporting to ensure assessments and interventions are completed to eliminate delays in performance feedback, real-time benchmarking by hospital size, region and other variables using the world's largest stroke benchmark group, patient-level reporting to help spot individual problems, raw-data downloads for additional analysis, physician tracking to help in evaluating performance by physician group of individual physician and point-of-care tools, including referral notes, patient letters and patient education for use at discharge if desired.

Medical Information Data Analysis System (MIDAS)

Some partner hospitals that the CSR/CCP collaborate with also perform chart audits on the MIDAS Platform in addition to GWTG-S. MIDAS is a system that integrates multimedia server technology with other open-source data analysis and visualization tools to enable data-intensive applications that interface with existing workflows. Since some hospitals have this already built into their chart auditing protocols, we do not discourage the use of this system. However, for hospitals that are new to the Coverdell layer, the CSR/CCP encourages the use of the PMT since the PMT allows users to enter individual patient data at the point of care or during retrospective chart abstraction.

Year 4 Data Abstraction and Chart Audit Summary

In FY 2018-19, there were 67 partner hospitals. This is inclusive of the number of hospitals participating in GWTG-S Coverdell layer (See Table 1):

⁵ For more information on the PMT, please call Outcome at (888) 526-6700 or email InfosarioOutcomeSupport@quintiles.com.

Table 1. Partner hospitals by LEMSA jurisdiction and TJC Certification.

LEMSA Name	Hospital Name	Stroke Certification Program
Alameda	Alameda Hospital	Advanced Primary Stroke Center
Alameda	Alta Bates Summit Medical Center Summit Campus - Hawthorne Oakland, CA	Advanced Primary Stroke Center
Alameda	Kaiser Foundation Hospital - Fremont Medical Center	Advanced Primary Stroke Center
Alameda	Kaiser Foundation Hospital - Oakland/Richmond	Advanced Primary Stroke Center
Alameda	Sutter Eden Medical Center	Advanced Primary Stroke Center
Contra Costa	John Muir Medical Center - Walnut Creek	Advanced Comprehensive Stroke Center
Contra Costa	John Muir Medical Center - Concord	Advanced Primary Stroke Center
Contra Costa	Kaiser Foundation Hospital - Antioch	Advanced Primary Stroke Center
Contra Costa	Kaiser Foundation Hospital - Richmond	Advanced Primary Stroke Center
Contra Costa	Kaiser Foundation Hospital - Walnut Creek	Advanced Primary Stroke Center
Contra Costa	San Ramon Regional Medical Center	Advanced Primary Stroke Center
Inland Counties	Arrowhead Regional Medical Center	Advanced Primary Stroke Center
Inland Counties	Kaiser Foundation Hospital - Fontana	Advanced Primary Stroke Center
Inland Counties	Kaiser Foundation Hospital - Ontario	Advanced Primary Stroke Center
Inland Counties	Redlands Community Hospital	Advanced Primary Stroke Center
Inland Counties	Victor Valley Community Hospital	Advanced Primary Stroke Center
Kern	San Joaquin Community Hospital	Advanced Primary Stroke Center
Los Angeles	Good Samaritan Hospital - Los Angeles	Advanced Comprehensive Stroke Center
Los Angeles	Henry Mayo Newhall Memorial Hospital	Advanced Primary Stroke Center
Los Angeles	Huntington Memorial Hospital	Advanced Primary Stroke Center

LEMSA Name	Hospital Name	Stroke Certification Program
Los Angeles	Kaiser Foundation Hospital - Baldwin Park Medical Center	Advanced Primary Stroke Center
Los Angeles	Kaiser Foundation Hospital - Woodland Hills	Advanced Primary Stroke Center
Los Angeles	Long Beach Memorial Medical Center	Advanced Comprehensive Stroke Center
Los Angeles	Mission Community Hospital - Panorama Campus	Advanced Primary Stroke Center
Los Angeles	Pomona Valley Hospital Medical Center	Advanced Comprehensive Stroke Center
Los Angeles	Providence Saint Joseph Medical Center	Advanced Thrombectomy Capable Stroke Center
Los Angeles	Ronald Regan UCLA Medical Center	Advanced Comprehensive Stroke Center
Los Angeles	St. Mary Medical Center	Advanced Primary Stroke Center
Monterey	Salinas Valley Memorial Hospital	Advanced Primary Stroke Center
Orange	Hoag Memorial Hospital Presbyterian	Advanced Primary Stroke Center
Orange	Los Alamitos Medical Center	Advanced Primary Stroke Center
Orange	St. Joseph Hospital - Orange	Advanced Primary Stroke Center
Riverside	Corona Regional Medical Center - Main	Advanced Primary Stroke Center
Riverside	Desert Regional Medical Center	Advanced Primary Stroke Center
Riverside	Eisenhower Medical Center	Advanced Primary Stroke Center
Riverside	Inland Valley Medical Center and Rancho Springs Medical Center	Advanced Primary Stroke Center
Riverside	Loma Linda University Medical Center - Murrieta	Advanced Primary Stroke Center
Riverside	Parkview Community Hospital Medical Center	Advanced Primary Stroke Center
Riverside	Rancho Springs Medical Center	Advanced Primary Stroke Center
Riverside	Riverside Community Hospital	Advanced Thrombectomy Capable Stroke Center
Riverside	Riverside University Medical Center	Advanced Primary Stroke Center
Riverside	Temecula Valley Medical Center	Advanced Primary Stroke Center

LEMSA Name	Hospital Name	Stroke Certification Program
Sacramento	UC Davis Medical Center	Advanced Primary Stroke Center
San Diego	Alvarado Hospital	Advanced Primary Stroke Center
San Diego	Palomar Medical Center - Escondido	Advanced Primary Stroke Center
San Diego	Palomar Medical Center - Poway	Advanced Primary Stroke Center
San Diego	Scripps Memorial Hospital La Jolla	Advanced Comprehensive Stroke Center
San Francisco	California Pacific Medical Center - Davies Campus	Advanced Primary Stroke Center
San Francisco	California Pacific Medical Center - Pacific Campus	Advanced Primary Stroke Center
San Joaquin	Adventist Health Lodi	Advanced Primary Stroke Center
San Joaquin	Kaiser Foundation Hospital - Manteca/Modesto	Advanced Primary Stroke Center
San Joaquin	San Joaquin General Hospital	Advanced Primary Stroke Center
San Joaquin	St. Joseph Medical Center - Stockton (Dignity Health)	Advanced Primary Stroke Center
San Joaquin	Sutter Tracy Community Hospital	Advanced Primary Stroke Center
San Luis Obispo	Sierra Vista Regional Medical Center	Advanced Primary Stroke Center
San Mateo	Mills-Peninsula Medical Center	Advanced Thrombectomy Capable Stroke Ctr
San Mateo	Sequoia Hospital	Advanced Primary Stroke Center
San Mateo	Seton Medical Center	Advanced Primary Stroke Center
Santa Clara	El Camino Hospital	Advanced Primary Stroke Center
Santa Clara	Good Samaritan Hospital - San Jose	Advanced Comprehensive Stroke Center
Santa Clara	O'Connor Hospital	Advanced Primary Stroke Center
Santa Clara	Regional Medical Center of San Jose	Advanced Comprehensive Stroke Center
Santa Clara	Stanford Hospital	Advanced Comprehensive Stroke Center

LEMSA Name	Hospital Name	Stroke Certification Program
Sierra-Sacramento Valley	Enloe Medical Center, Esplanade Campus	Advanced Primary Stroke Center
Sierra-Sacramento Valley	Oroville Hospital	Advanced Primary Stroke Center
Sierra-Sacramento Valley	Shasta Regional Medical Center	Advanced Comprehensive Stroke Center
Ventura	Los Robles Hospital and Medical Center	Advanced Comprehensive Stroke Center

All of the 67 partner hospitals are certified by TJC as either advanced primary (53), advanced comprehensive (11), and (3) advanced thrombectomy capable stroke center. Per CDC requirements, in lieu of conducting additional chart audits specific to the CSR/CCP, it is acceptable to request and submit hospital-specific documentation that was generated and used in reporting on data validity to TJC. Therefore, the CSR/CCP requested this information from these TJC-certified stroke centers.

To determine the minimum number of charts to require for re-abstraction at each partner hospital per year, we are using the following criteria as defined in the PCSNAP Resource Guide 2015-2020 v2.11 (See Table 2).

Table 2. PCNSAP annual minimum number of charts to re-abstract by stroke case volume.

Total Stroke Cases per Year*	Minimum # Charts to Re-abstract per Year
1 – 100	5
101 – 200	7
> 200	10

* assumes the hospital is not sampling, but based on hospital case volume

Inter-rater reliability and concordance methodology

CSR/CCP has assessed the level of completeness and accuracy of data collected by employing an aggregated inter-rater reliability (IRR) methodology for stroke data abstraction. This is presented in terms of a concordance percentage. Chart re-abstractions are submitted by each partner hospital to the CSR/CCP in the form of concordance percentages. An aggregation of hospital re-abstraction data is compiled by the CSR/CCP and reported to the CDC in the annual progress report and as reported in this document.

Table 3. FY 2018-19 Inter-rater reliability agreement score by CSR/CCP partner hospital.⁶

Hospitals	IRR agreement score		Total of scores (sum of all submitted scores for 2018-19)	Average score for 2018-19
HOSPITAL 1	99		725	99
HOSPITAL 2	93		651	93
HOSPITAL 3	99		398	99
HOSPITAL 4	97		775	97
HOSPITAL 5	99		789	99
HOSPITAL 6	97		400	97
HOSPITAL 7	96		289	96
HOSPITAL 8	98		294	98
HOSPITAL 9	98		786	98
HOSPITAL 10	96		382	96
HOSPITAL 11	95		664	95
HOSPITAL 12	90		269	90
HOSPITAL 13	100		798	100
HOSPITAL 14	97		295	97
HOSPITAL 15	98		745	98
HOSPITAL 16	98		724	98
HOSPITAL 17	97		724	97
HOSPITAL 18	98		768	98
HOSPITAL 19	100		687	100
HOSPITAL 20	99		822	99
HOSPITAL 21	100		825	100
HOSPITAL 22	100		872	100
HOSPITAL 23	100		400	100
HOSPITAL 24	97		420	97
HOSPITAL 25	96		569	96

⁶ Of these 67 CSR/CCP partner hospitals, 65 were able to provide their IRR agreement score.

Hospitals	IRR agreement score		Total of scores (sum of all submitted scores for 2018-19)	Average score for 2018-19
HOSPITAL 26	97		100	97
HOSPITAL 27	96		100	96
HOSPITAL 28	98		978	98
HOSPITAL 29	96		670	96
HOSPITAL 30	84		168	84
HOSPITAL 31	100		798	100
HOSPITAL 32	93		722	93
HOSPITAL 33	92		721	92
HOSPITAL 34	96		383	96
HOSPITAL 35	99		382	99
HOSPITAL 36	98		664	98
HOSPITAL 37	98		269	98
HOSPITAL 38	97		798	97
HOSPITAL 39	98		295	98
HOSPITAL 40	100		745	100
HOSPITAL 41	99		724	99
HOSPITAL 42	100		759	100
HOSPITAL 43	98		788	98
HOSPITAL 44	98		795	98
HOSPITAL 45	92		745	92
HOSPITAL 46	92		724	92
HOSPITAL 47	93		702	93
HOSPITAL 48	93		680	93
HOSPITAL 49	93		659	93
HOSPITAL 50	93		637	93
HOSPITAL 51	93		615	93
HOSPITAL 52	93		593	93
HOSPITAL 53	93		572	93
HOSPITAL 54	93		550	93
HOSPITAL 55	94		528	94
HOSPITAL 56	94		507	94
HOSPITAL 57	94		485	94
HOSPITAL 58	94		463	94
HOSPITAL 59	94		441	94
HOSPITAL 60	98		420	98
HOSPITAL 61	98		398	98

Hospitals	IRR agreement score	Total of scores (sum of all submitted scores for 2018-19)	Average score for 2018-19
HOSPITAL 62	97	376	97
HOSPITAL 63	98	355	98
HOSPITAL 64	100	333	100
HOSPITAL 65	99	311	99
TOTAL	6267	(sum of all average IRR scores)	
Average Score for 2018-19	96	(sum of all average scores/# hospitals that responded)	

National Quality Forum Measures

The National Quality Forum (NQF) has a portfolio of endorsed performance measures that can be used to measure and quantify healthcare processes, outcomes, patient perceptions, and organizational structure and/or systems that are associated with the ability to provide high-quality care. There are eight nationally implemented measures that address stroke care starting with STK⁷-01: Venous Thromboembolism (VTE) Prophylaxis, STK-2: Discharged on Antithrombotic Therapy, STK-3: Anticoagulation Therapy for Atrial Fibrillation/Flutter, STK-4: Thrombolytic Therapy, STK-5: Antithrombotic Therapy By End of Hospital Day 2, STK-6 Discharged on Statin Medication, STK-8: Stroke Education, and STK-10: Assessed for Rehabilitation. These NQF Measures are used in TJC hospital accreditation and Disease-Specific Care certification programs. For more information on the NQF Measures, please visit their website at <http://www.qualityforum.org/Home.aspx>.

During 2017-18, the CSR/CCP aggregated results for re-abstractions from FY 2015/16 to FY 2017/18 for the CDC. This included the average agreement for each data element among most hospitals (some hospitals report the newer set measures Core STK-1a - VTE Prophylaxis⁸ - Ischemic Stroke vs the more common STK1-VTE Prophylaxis). The CSR/CCP utilized these eight stroke performance measures and aggregated these measures for each hospital reporting these measures to TJC to ensure consistency among the results. This includes the average for each stroke performance measure. From the analysis, the mean of scores indicated that STK2-DC on Antithrombotic Therapy and STK10-Assessed for Rehabilitation were 100%, thus these elements on average had a higher concordance percentage, while STK4-Thrombolytic Therapy and STK8-Stroke Education, were 84% and 88% respectively (See Table 2).

⁷ Stroke (STK)

⁸ Venous thromboembolism (VTE) prophylaxis consists of pharmacologic and nonpharmacologic measures to diminish the risk of deep vein thrombosis (DVT) and pulmonary embolism (PE).

Table 4. Annual and three-year average performance measure results for eight NQF stroke performance measures among CSR/CCP partner hospitals.

	FY 15 - 16	FY 16 - 17	FY 17-18	
NQF Stroke Performance Measures	AVERAGE	AVERAGE	AVERAGE	Average for 3 Years
STK1-VTE Prophylaxis	100%	97%	99%	96%
STK2- DC on Antithrombotic Therapy	99%	100%	100%	100%
STK3-Anticoagulation Therapy for Atrial Fibrillation/ Flutter	100%	96%	100%	98%
STK4-Thrombolytic Therapy	100%	50%	100%	84%
STK5-Antithrombotic Therapy By End of Hospital Day 2	99%	99%	99%	97%
STK6-Discharged on Statin Medication	100%	99%	100%	98%
STK8-Stroke Education	93%	90%	91%	88%
STK10-Assessed for Rehabilitation	100%	100%	100%	100%

Hospital Specific Documentation

Included below in the following tables and pages are hospital specific documentation. All names of the 12 hospitals' have been redacted per CDC guidelines and to protect the hospitals confidentiality. The CSR/CCP used a convenience sampling method when deciding which hospital specific documentation to use. The CSR/CCP intention of this document is provide guidance to hospitals that would like to understand various methods used during retrospective chart audits, in particular reporting NQF measures and other data elements to TJC.

Additionally, the CSR/CCP would like to improve the consistency and quality in data reporting across all hospitals in the State. The CSR/CCP reviewed certain data elements from one hospital that appeared to have a lower concordance percentage; this included such elements as (dyslipidemia, previous stroke, previous TIA) and ambulatory status prior to current event. Table 5, below is an example of concordance rates for each data element at the aggregated level.

Table 5. FY 2018-19 calculated concordance rate for PCNASP performance measures for six randomly selected CSR/CCP partner hospitals.

Data Element	Q1 2018	Q2 2018	Q1 2019	Q2 2019	Year 4 Average
Final clinical diagnosis related to stroke	97	99	98	98	98
Discharge date (only, not time)	97	99	99	97	98
Patient's discharge disposition	97	99	98	98	98

Data Element	Q1 2018	Q2 2018	Q1 2019	Q2 2019	Year 4 Average
How patient arrived at hospital	96	94	95	94	94.75
Dyslipidemia, previous stroke, previous TIA	86	88	89	85	87
Ambulatory status prior to current event	93	93	88	86	90
Initial NIH stroke scale	99	98	98	97	98
Total NIH score	94	95	94	93	94
Prior cholesterol reducer	91	93	95	94	93.25
Date/time patient LKW	82	78	79	85	81
IV tPA initiated at this hospital	99	99	99	97	98.5
Date/time IV tPA initiated	98	98	98	98	98
Complications of thrombolytic therapy	88	93	88	94	90.75
Was patient screened for dysphagia prior to oral intake including water and meds?	85	91	92	79	86.75
What date was the initial VTE prophylaxis administered after hospital admission?	85	91	90	85	87.75
Was antithrombotic therapy administered by the end of hospital day 2?	91	94	90	89	91
Modified Rankin scale at discharge	90	94	94	92	92.5
Rankin score	90	94	92	93	92.25
Antithrombotic at discharge	94	91	90	92	91.75

Data Element	Q1 2018	Q2 2018	Q1 2019	Q2 2019	Year 4 Average
Persistent or paroxysmal atrial fibrillation/flutter	90	90	96	95	92.75
If atrial fib/flutter or history of PAF, was patient discharged on anticoagulation	93	96	97	97	95.75
Cholesterol-reducing Tx	91	85	94	93	90.75
Risk factors for stroke	93	88	93	91	91.25
Stroke warning signs and symptoms	95	89	93	91	92
How to activate EMS	95	88	94	91	92
Need for follow-up after discharge	95	87	93	92	91.75
Their prescribed medications	95	87	93	92	91.75
Patient assessed for and/or received rehabilitation services during this hospitalization	92	99	96	93	95

Chart Audit Process for Hospital 1:

Stroke IRR Process

1. Run STK population sample after abstraction deadline date.
2. Random sample 10 charts per quarter.
3. Review and abstract charts by service area.
4. Verify Completeness and Lock Down Initial Score.
5. Run Core IRR Report and save by facility to shared drive.
6. When a mismatch occurs
 - Email abstractor
 - Ask [REDACTED]
 - Query TJC.
7. If abstractor agrees, change entry in GWTG-S.
8. Re-run Core IRR Report and save by facility with final revised to shared drive.
9. Update my spreadsheet with both pre- and post- case percentage.
10. Final step, complete remediation tab once stroke coordinator and abstractor agree on mismatch.

Chart Audit Process for Hospital 2:

Data is captured and reviewed concurrently and retrospectively for stroke patients. Immediate real-time feedback is provided to staff and physicians to optimize care being provided. This concurrent review is performed on 100% of patients admitted for ischemic and hemorrhagic stroke.

Health System Quality Management uses TJC Performance Measures and GWTG-S Specification Manuals to standardize our data, definitions, and measure specifications. These guidelines and specifications are also used to guide the review process.

All fields related to stroke core measures are independently abstracted by a second nurse coordinator for 12 cases per year using the using the same measure specifications and data definitions as the initial, concurrent review. The secondary review is completed within 14 days of the patient discharge. There are 38 fields/measures reviewed per audit. Any differences are identified and any systematic reasons for data variances are identified and resolved.

Table 6. FY 2017-18 Advanced Comprehensive Stroke Center Concordance Rates for Stroke Core Measures by Quarter.

Time Period	Number of Reviewed measures	Number of Matching Measures	Concordance Percentage
Q3 2017	54	54	100%
Q4 2017	43	43	100%
Q1 2018	45	45	100%
Q2 2018	40	40	100%
TOTAL	182	182	100%

Table 7. FY 2018-19 Advanced Comprehensive Stroke Center Concordance Rates for Stroke Core Measures by Quarter.

Time Period	Number of Reviewed measures	Number of Matching Measures	Concordance Percentage
Q3 2018	169	169	100%
Q4 2018	477	458	96%
Q1 2019	389	380	98%
Q2 2019	435	427	98%
TOTAL	1470	1434	98%

For Stroke Core Measures, a weekly under-sampling review is also performed per the QualityNet Specification Manual of the UnitedHealthcare (UHC) data submitted via ORYX, which stands for the ORYX Performance Measurement Initiative. A monthly “sweep” process identifies cases for monthly sampling requirements. All eligible cases are included in this random sampling procedure, which typically occurs 1-2 weeks after the close of the month.

A Medical Coding Reviewer refers cases that are identified as ineligible during this sampling process for review. If the Medical Coding Reviewer agrees that the case does not meet coding inclusion criteria, then a replacement case is selected from amongst cases in the same target week using the same process for selection. If no further eligible cases are available for that week, then re-sampling is deferred to the monthly sweep.

Chart Audit Process for Hospital 3:

Data is captured and reviewed concurrently and retrospectively for all potential stroke patients. Immediate real-time feedback is provided to staff and physicians to optimize care being provided. This concurrent review is performed on 100% of patients admitted for ischemic and hemorrhagic stroke and transient ischemic attack (TIA). This hospital uses TJC Performance Measures and GWTG-S Specification Manuals to standardize our data, definitions, and measure specifications. These guidelines and specifications are also used to guide the review process.

Table 8. Time Period 3rd Quarter, 2018.

Random Sample Number	GWTG-S Number	Arrival Date	Numerator	Denominator	Concordance Percentage
4.62E-05	1814	7/15/2017	134	137	98%
0.018226	1838	7/24/2017	137	137	100%
0.033709	1878	8/7/2017	135	137	99%
0.016064	1884	8/16/2017	135	137	99%
0.00955	1889	8/20/2017	134	137	98%
0.00565	1887	8/29/2017	134	137	98%
0.001634	1903	8/31/2017	135	137	99%
0.038724	1560	9/14/2017	135	137	99%
0.033582	1971	9/20/2017	137	137	100%
0.001119	1380	9/26/2017	137	137	100%
			1353	1370	99%

Table 9. Time Period 4th Quarter, 2018.

Random Sample Number	GWTG-S Number	Arrival Date	Numerator	Denominator	Concordance Percentage
0.999434	2132	12/21/2017	135	137	98.54%
0.993955	2020	10/25/2017	136	137	99.27%
0.985973	1994	10/11/2017	135	137	98.54%
0.9813	2026	10/24/2017	137	137	100.00%
0.97597	2061	11/27/2017	136	137	99.27%
0.971271	2137	12/15/2017	137	137	100.00%
0.96606	1980	10/10/2017	136	137	99.27%
0.964975	2029	11/2/2017	135	137	98.54%
0.960117	2063	11/18/2017	135	137	98.54%
0.943375	1963	9/24/2017	136	137	99.27%
			1358	1370	99.00%

Table 10. Time Period 1st Quarter, 2019.

Random Sample Number	GWTG-S Number	Arrival Date	Numerator	Denominator	Concordance Percentage
0.034085324	2164	12/30/2018	8	11	73%
0.089763195	2153	1/3/2018	9	9	100%
0.016108539	2224	1/6/2018	12	13	92%
0.057539823	2173	1/8/2018	12	13	92%
0.071875512	2174	1/15/2018	12	13	92%
0.007272737	1730	1/18/2018	13	13	100%
0.108836904	2253	1/21/2018	10	13	77%
0.013509847	2196	1/24/2018	13	13	100%
0.152260912	2203	1/30/2018	11	13	85%
0.055580742	2206	2/2/2018	10	11	91%
0.097188302	2228	2/6/2018	8	11	73%
0.147978466	2232	2/7/2018	11	12	92%
0.115912112	2266	2/15/2018	9	12	75%
0.003313222	2270	2/24/2018	8	11	73%
0.005929644	2288	3/13/2018	13	13	100%
0.037952852	2256	3/1/2018	12	14	86%
0.056295981	2281	3/12/2018	8	9	89%
0.285155849	2274	3/10/2018	8	9	89%
0.285661243	2299	3/19/2018	13	14	93%
0.379140697	2278	3/7/2018	14	14	100%

Table 11. Time Period 2nd Quarter, 2019.

Random Sample Number	GWTG-S Number	Arrival Date	Numerator	Denominator	Concordance Percentage
0.001907721	2450	5/29/2018	9	9	100%
0.01617343	1172	3/30/2018	12	13	92%
0.017399936	2497	6/21/2018	11	12	92%
0.018741328	2398	4/29/2018	12	12	100%
0.018930977	2401	5/2/2018	10	11	91%
0.02040937	2344	4/11/2018	14	14	100%
0.020883246	2475	6/14/2018	12	13	92%
0.022366274	2112	5/19/2018	11	12	92%
0.02296665	2425	5/17/2018	13	13	100%

Random Sample Number	GWTG-S Number	Arrival Date	Numerator	Denominator	Concordance Percentage
0.023292898	2474	6/3/2018	11	12	92%
0.024174664	2347	4/12/2018	11	13	85%
0.025667829	2407	5/2/2018	11	11	100%
0.031871923	2422	5/18/2018	12	13	92%
0.045110736	2484	6/12/2018	11	13	85%
0.033926969	2370	4/22/2018	13	13	100%
0.036543935	701	4/6/2018	9	9	100%
0.036953994	2359	4/19/2018	13	13	100%
0.037459114	2494	6/21/2018	11	11	100%
0.039861454	2362	4/18/2018	13	13	100%
0.044713451	2381	4/27/2018	13	13	100%
			232	243	95%

Chart Audit Process for Hospital 4:

In brief, two separate teams abstract our data; one team abstracts our data directly into MIDAS. This data is then submitted to TJC through MIDAS. Then, our GWTG-S data is abstracted by stroke coordinators and occasionally, by our quality coordinators as needed. We verify our interrater reliability through comparison of the two databases. Please note the data submitted to TJC represents patients with confirmed stroke diagnosis. The GWTG-S data reflects both stroke and TIA populations. Therefore, the numerators and denominators may be slightly different.

Table 12. Hospital 4 Stroke Core Measures.

Hospital 4 - Stroke Core Measures 2018						
	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18
STK1-VTE Prophylaxis						
%	100	100	97	100	100	100
Numerator	33	26	28	22	28	30
Denominator	33	26	29	22	28	30
STK2- DC on Antithrombotic Therapy						
%	100	100	100	100	100	100
Numerator	32	25	23	23	24	28
Denominator	32	25	23	23	24	28
STK3-Anticoagulation Therapy for Atrial Fibrillation/ Flutter						
%	100	100	100	100	100	75
Numerator	2	2	2	2	7	3
Denominator	2	2	2	2	7	4
STK4-Thrombolytic Therapy						
%	100	100	100	100	100	100
Numerator	1	3	3	1	2	3
Denominator	1	3	3	1	2	3
STK5-Antithrombotic Therapy By End of Hospital Day 2						
%	97	100	100	94	100	100
Numerator	28	22	23	17	22	21
Denominator	29	22	23	18	22	21
STK6-Discharged on Statin Medication						
%	100	100	90	100	100	100
Numerator	33	26	18	23	23	26
Denominator	33	26	20	23	23	26
STK8-Stroke Education						
%	100	100	100	100	100	100
Numerator	9	9	7	12	7	9
Denominator	9	9	7	12	7	9
STK10-Assessed for Rehabilitation						
%	100	100	100	100	100	100
Numerator	23	26	24	23	25	29
Denominator	23	26	24	23	25	29

Chart Audit Process for Hospital 5:

1. A patient list for the third and fourth quarters of 2018 and first quarter of 2019 was pulled from the inpatient measures data in Vizient (Vizient, Inc. is a health care performance company).
2. Using a formula in a spreadsheet, the list was randomly sorted.
3. The first 10 patients from the list were picked for 100% chart re-abstraction.
4. Correctly abstracted fields are identified as “yes”.
5. Discrepancies were noted in red print on the spreadsheet and reviewed with the stroke core measures analyst.
6. Results of the audit are highlighted at the bottom of the spreadsheet.
7. The data was de-identified prior to submission by removing encounter numbers, medical record numbers, and all dates that related to that encounter.
8. Chart Audit Process for Hospital 5 hospital had a > 94% agreement rate with the re-abstraction of the 10 randomly selected charts for the identified time period.

Table 13. STK Measures for Re-abstraction.

Indicator	Jan	Feb	Mar	Apr	May	Jun	Total
Core Stroke - Cases selected in sample	31	34	32	23	32	36	355
Core STK-1 - VTE Prophylaxis	100	100	100	100	100	97	100
Core STK-1 - OFI Group: VTE Prophylaxis	0	0	0	0	0	1	1
Core STK-1 - numerator	25	32	25	20	30	29	293
Core STK-1 - Denominator	25	32	25	20	30	30	294
Core STK-1a - VTE Prophylaxis - Ischemic Stroke	100	100	100	100	100	97	100
Core STK-1a - OFI Group: VTE Prophylaxis - Ischemic Stroke	0	0	0	0	0	1	1
Core STK-1a - numerator	19	28	23	16	25	28	254
Core STK-1a - Denominator	19	28	23	16	25	29	255
Core STK-1b - VTE Prophylaxis - Hemorrhagic Stroke	100	100	100	100	100	100	100
Core STK-1b - OFI Group: VTE Prophylaxis - Hemorrhagic Stroke	0	0	0	0	0	0	0
Core STK-1b - numerator	6	4	2	4	5	1	39
Core STK-1b - Denominator	6	4	2	4	5	1	39
Core STK-2 - Discharged on Antithrombotic Therapy	100	100	100	100	100	100	100

Indicator	Jan	Feb	Mar	Apr	May	Jun	Total
Core STK-2 - OFI Group: Discharged on Antithrombotic Therapy	0	0	0	0	0	0	0
Core STK-2 - numerator	14	27	27	15	26	27	253
Core STK-2 - Denominator	14	27	27	15	26	27	253
Core STK-3 - Anticoagulation Therapy for Atrial Fibrillation/Flutter	100	100	100	100	100	100	100
Core STK-3 - OFI Group: Anticoagulation Therapy for Atrial Fibrillation/Flutter	0	0	0	0	0	0	0
Core STK-3 - Numerator	2	3	3	3	5	4	40
Core STK-3 - Denominator	2	3	3	3	5	4	40
Core STK-4 - Thrombolytic Therapy	100	100	0	0	100	67	95
Core STK-4 - OFI Group: Thrombolytic Therapy	0	0	0	0	0	1	1
Core STK-4 - Numerator	2	3	0	0	3	2	21
Core STK-4 - Denominator	2	3	0	0	3	3	22
Core STK-5 - Antithrombotic Therapy By End of Hospital Day 2	94	96	96	94	85	100	96
Core STK-5 - OFI Group: Antithrombotic Therapy By End of Hospital Day 2	1	1	1	1	3	0	9
Core STK-5 - Numerator	16	23	23	15	17	25	218
Core STK-5 - Denominator	17	24	24	16	20	25	227
Core STK-6 - Discharged on Statin Medication	91	100	96	100	100	100	99
Core STK-6 - OFI Group: Discharged on Statin Medication	1	0	1	0	0	0	3
Core STK-6 - Numerator	10	25	25	14	21	26	225
Core STK-6 - Denominator	11	25	26	14	21	26	228
Core STK-8 - Stroke Education	100	100	100	100	100	100	99
Core STK-8 - OFI Group: Stroke Education	0	0	0	0	0	0	1
Core STK-8 - Numerator	9	15	19	5	13	15	148
Core STK-8 - Denominator	9	15	19	5	13	15	149
Core STK-8a - Stroke Education - Ischemic Stroke	100	100	100	100	100	100	99
Core STK-8a - OFI Group: Stroke Education - Ischemic Stroke	0	0	0	0	0	0	1
Core STK-8a - Numerator	7	13	19	5	12	15	138
Core STK-8a - Denominator	7	13	19	5	12	15	139
Core STK-8b - Stroke Education - Hemorrhagic Stroke	100	100	0	0	100	0	100
Core STK-8b - OFI Group: Stroke Education - Hemorrhagic Stroke	0	0	0	0	0	0	0
Core STK-8b - Numerator	2	2	0	0	1	0	10
Core STK-8b - Denominator	2	2	0	0	1	0	10
Core STK-10 - Assessed for Rehabilitation	100	100	100	94	100	100	100

Indicator	Jan	Feb	Mar	Apr	May	Jun	Total
Core STK-10 - OFI Group: Assessed for Rehabilitation - overall	0	0	0	1	0	0	1
Core STK-10 - Numerator	18	31	30	15	30	29	285
Core STK-10 - Denominator	18	31	30	16	30	29	286
Core Stroke All-or-None Bundle	92	97	94	90	90	94	95
Core Stroke All-or-None Bundle -OFI Group:	2	1	2	2	3	2	16
Core Stroke All-or-None Bundle - Numerator	24	33	29	19	28	33	309
Core Stroke All-or-None Bundle - Denominator	26	34	31	21	31	35	325

Chart Audit Process for Hospital 6:

Medical Center Re-abstractation Process

Currently, Hospital 6 abstracts 100% of the patient population of all strokes through Quantros, which is their current vendor for abstraction. Quantros is a leading provider of software-based solutions and services to healthcare. Every quarter, inter-rater reliability is performed on a random sample of the initial population and Tenet Healthcare Corporation expects greater than or equal to 90% reliability. Measure sets with a category assignment rate (CARR) score below 90% are required to submit a plan with identified trends in IRR sample, corrections and corrective actions. We have consistently exceeded this expectation and have scored 100% during our quarterly reliability reports.

Table 14. Quarter 1 2017 Hospital Data Approval.

MEASURE SET	CAPTURE RATE	IRR	C.A.A.R. SCORE*	MEASURES TAKEN TO CORRECT DATA SET IF C.A.A.R. BELOW 90%
	(MUST BE 100%)			
IP-VTE-6	100%	Required	100%	
IP-PCM	100%	Required	100%	
IP-ED Throughput	100%	Required	100%	
IP-Immunization	100%	Required	100%	
IP-SEPSIS	100%	Required	100%	
OP-AMI	NA	Required	NA	
OP-Chest Pain	100%	Required	100%	
OP-ED Throughput	100%	Required	100%	
OP-Pain Management	100%	Required	100%	
OP-Stroke	100%	Required	100%	
OP-29	100%	Required	100%	

MEASURE SET	CAPTURE RATE	IRR	C.A.A.R. SCORE*	MEASURES TAKEN TO CORRECT DATA SET IF C.A.A.R. BELOW 90%
	(MUST BE 100%)			
OP-30	100%	Required	100%	
OP-33	NA	Required	NA	
CABG (ACS)	Not required	Optional	Not required	Manual IRR validation, highly recommended but not mandatory.
ACC-NCDR CATH PCI	Not Required	Optional	Not required	Utilize Audit tool for 10% of charts (up to 20), highly recommended but not mandatory.
HBIPS	NA	Required	NA	
Psych IMM	NA	Required	NA	
TOB	NA	Required	NA	
SUB	NA	Required	NA	
SCR-MetS	NA	Required	NA	
TRA	NA	Required	NA	

* CAAR should be 90% or better. If NOT, please identify trends in IRR sample, correct in entire data set for this measure timeframe, and include corrective actions in report.

Chart Audit Process for Hospital 7:

Data Re-abstraction for Validity Purpose

Inter-rater reliability report (IRR) – Patient Level Data Element Agreement Rate

This report illustrates the data element agreement rate between the original abstraction and the Inter-rater Reliability (IRR) abstraction for TJC measure sets. Mismatched abstractions are indicated as mismatched from the original abstractor. This report will be used to evaluate our data abstraction process to ensure that all abstractors perform consistently and to identify areas or measures of abstraction quality concern.

Tool

For the purpose of IRR, we will use Premier Software program. Premier Software randomly selects one IRR stroke patient each month for analysis.

Methodology and Analysis

The third party vendor contracted by the Hospital does the initial abstraction. The Stroke Program Coordinator, a Data Analyst and Director of Quality Management will do the IRR study in the Quality Department. The report will be run using the Premier IRR tool and analysis will be done using the data to compare for any mismatch. The goal is to meet the IRR summary rate of 90% and above. For the rate below 90% or for any mismatch, the patient chart will be reevaluated for clarification. If it is the initial abstraction error, the vendor will be contacted for correction and action will be taken to improve the process. If it is the re-abstraction error, the Stroke Coordinator and Director of Quality Department will review the abstraction guidelines included in the American Stroke Association, CMS Specification Manual, and GWTG-S to clarify the inclusion and exclusion criteria for abstraction. Report will be shared in the Stroke Team meeting for any process improvement.

Table 15. Measure Algorithms – Technical (Chart Abstracted).

Measure Algorithms – Technical (Chart Abstracted)			
Measure Set	Numerator	Denominator	Rate
IP Stroke (STK)	54	58	93.1
IP Venous thromboembolism prophylaxis (VTE)	0	23	0
IP Posterior Circulation (PC)	3	9	33.33
IP ED	0	9	0
IP Immunization (IMM)	0	3	0

Chart Audit Process for Hospital 8:

This hospital utilizes the inter-rater reliability methodology for the stroke data abstraction. The performance improvement coordinator completes the initial abstraction of the stroke data for core measures. The stroke coordinator proceeds with re-abstracting the stroke data done by the performance improvement coordinator as part of the inter-rater reliability process. The stroke coordinator will not only resolve but also discusses any discrepancy findings with the performance improvement coordinator. Any unresolved discrepancy is presented to the stroke committee for resolution.

Table 16. NQF Performance Measures Used in Re-abstraction.

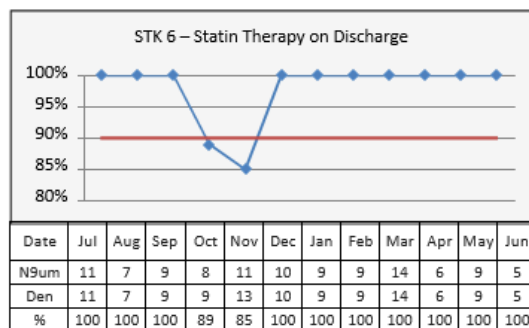
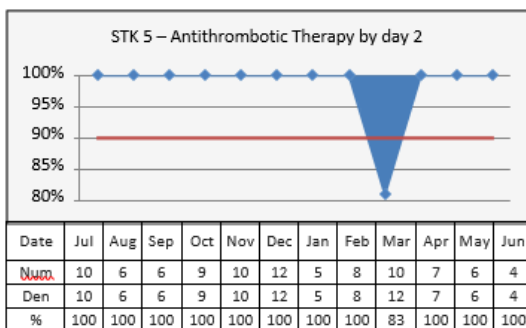
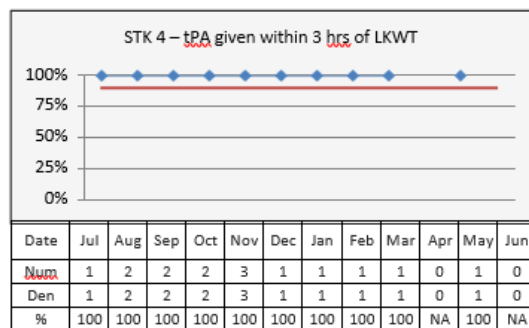
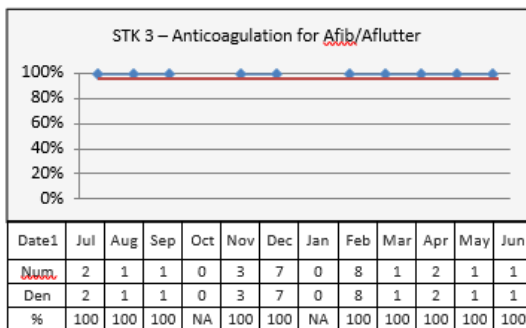
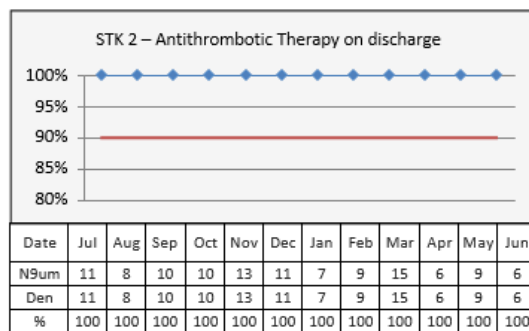
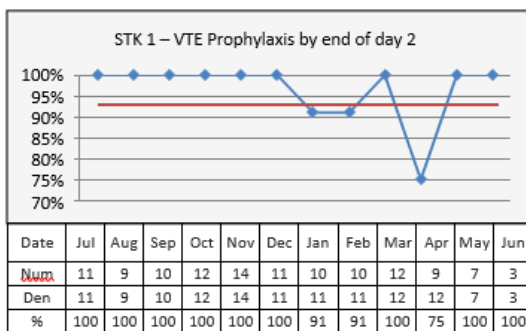
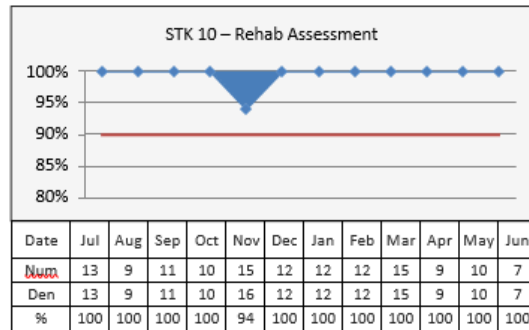
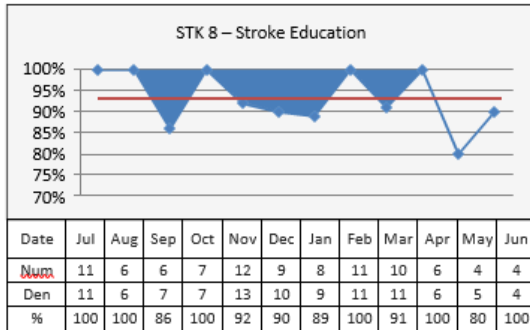
Performance Measures – Advance Primary Stroke Center
Benchmark – 85%

Reporting Time Period	Collecting Time Period	STK-1			STK-2			STK-3			STK-4			STK-5			STK-6			STK-8			STK-10		
		Num	Den	Result	Num	Den	Result	Num	Den	Result	Num	Den	Result	Num	Den	Result	Num	Den	Result	Num	Den	Result	Num	Den	Result
Q3 2017	JUL	3	3	100%	2	2	100%	0	0	N/A	0	0	N/A	3	3	100%	3	3	100%	3	3	100%	3	3	100%
	AUG	15	15	100%	12	12	100%	1	1	100%	0	0	N/A	12	12	100%	13	15	87%	15	15	100%	12	12	100%
	SEP	4	4	100%	2	2	100%	1	1	100%	0	0	N/A	4	4	100%	1	1	100%	4	4	100%	4	4	100%
Q4 2017	OCT	3	3	100%	3	3	100%	0	0	N/A	0	0	N/A	3	3	100%	3	3	100%	3	3	100%	3	3	100%
	NOV	4	4	100%	4	4	100%	0	0	N/A	0	0	N/A	4	4	100%	3	3	100%	4	4	100%	4	4	100%
	DEC	5	5	100%	5	5	100%	0	0	N/A	0	0	N/A	5	5	100%	4	5	80%	4	4	100%	4	4	100%
Q1 2018	JAN	3	3	100%	3	3	100%	0	0	N/A	0	0	N/A	3	3	100%	3	3	100%	3	3	100%	3	3	100%
	FEB	2	2	100%	2	2	100%	1	1	100%	0	0	N/A	2	2	100%	2	2	100%	2	2	100%	1	2	50%
	MAR	4	4	100%	5	5	100%	0	0	N/A	0	0	N/A	5	5	100%	5	5	100%	4	5	80%	4	5	80%
Q2 2018	APR	7	8	88%	7	7	100%	0	0	N/A	0	0	N/A	7	8	88%	7	7	100%	8	8	100%	7	8	88%
	MAY	3	3	100%	1	1	100%	0	0	N/A	0	0	N/A	1	1	100%	1	1	100%	0	1	0%	2	2	100%
	JUN	4	4	100%	4	4	100%	0	0	N/A	0	0	N/A	3	4	75%	1	4	25%	2	4	50%	3	4	75%
Q3 2018	JUL	2	2	100%	1	1	100%	0	0	N/A	0	0	N/A	2	2	100%	1	1	100%	0	0	N/A	2	2	100%
	AUG																								
	SEP																								

Legend: **Numerator** – hospital’s number of compliance with the respective stroke core measure in a month’s period of time
Denominator – total qualified number of hospital discharged stroke patients with the respective stroke core measure in a month’s period of time
Result – percentage of compliance (numerator divided by denominator)

Chart Audit Process for Hospital 9:

Table 17. NQF Performance Measures Used in Re-abstraction.



Inter-Rater Reliability Process

Hospital 9 had a regional core measures team who would abstract 15 stroke cases each month for all eight STK measures. The lead would then compare the results with their own abstraction. If there were any discrepancies, the lead would discuss, compare notes, and review supporting evidence. The result was to achieve 100% inter-rater reliability. That data then was reported to TJC.

Beginning Jan 2016, that process was taken over by a nurse from the emergency department who would abstract stroke cases. The team lead would then review her results and discuss any discrepancies. The result was to achieve 100% inter-rater reliability.

Hospital 9 now has a new process for inter-rater reliability. The 11 stroke coordinators will validate each other's abstractions. Team members will each pair with another coordinator on a rotating basis and abstract five cases each month for each other. The discrepancy resolution process would be the same as described above, resulting in 100% agreement. The team is still refining this process.

Hospital 9 is also exploring the possibility of automating the core measures abstraction from their electronic medical records. The stroke coordinator would still be required to review the automated results and resolve any discrepancies.

Chart Audit Process for Hospital 10:

Table 18. Inter-Rater Reliability for Data Abstraction Stroke Care.

Quality Indicator:	Inter-Rater Reliability for Data Abstraction
Relevance:	Data Abstraction Consistency/Accuracy
Monitor/ Review Frequency:	Quarterly
Data Source:	IQVIA
Metric:	% reliability based on elements in agreement divided by total number of elements on GWTG-S PMT
Performance Threshold:	> 90.0%
Date of Abstraction	4/2018
Date Range	1st Quarter
Elements Agreement/Total	735/760
Inter-rater Reliability	97%

Data Metrics			
PATIENT	Accuracy		% Reliability
	Numerator	Denominator	
1x	40	40	100%
2x	38	40	95%
3x	36	40	90%
4x	38	40	95%
5x	39	40	98%
6x	36	40	90%
7x	36	40	90%
8x	40	40	100%
9x	40	40	100%
10x	39	40	98%
11x	40	40	100%
12x	40	40	100%
13x	38	40	95%
14x	39	40	98%
15x	40	40	100%
16x	39	40	98%
17x	39	40	98%
18x	40	40	100%
19x	39	40	98%
20x	39	40	98%
Totals	735	760	97%

Chart Audit Process for Hospital 11:

Table 19. Chart Audit Process for Hospital 11.

Subject: Inter- Rater Reliability for stroke data abstraction.	
Dept: Neurosciences-Stroke Program	
Applies To:	<input checked="" type="checkbox"/> [REDACTED] <input type="checkbox"/> [REDACTED]

I. Purpose:

To ensure accuracy for stroke data management.

Definitions:

Inter-Rater Reliability is the degree of agreement among raters.

II. Policy:

- A. At least two stroke program staff members will be trained to use the stroke data abstraction tool, currently the Stroke Patient Management Tool (Stroke PMT) from Outcome Science and AHA.
- B. Data will be collected and entered into the Outcome Sciences® Database for 100% of stroke discharges by the data abstractor.
- C. Each Quarter, 10% of stroke discharges entered will be selected randomly for review by at least two data abstractors. For example, if there were 50 discharges for the quarter, 5 would be selected for review.
- D. Each abstractor will independently collect data to complete the Stroke PMT and meet to compare data for agreement.
- E. Percent reliability will be based upon number of required elements in agreement divided by total number of elements on Stroke PMT. For example, if abstractors agree on 48 out of 50 total elements, inter-rater reliability = 96%.
- F. Number of total required elements is subject to change based upon updates to the stroke PMT, so abstractors should stay alert to new tool and recount total elements with each new form.
- G. Areas of non-agreement will be assessed by the abstractors by reviewing the medical record and /or stroke coding instructions provided with the data tool in order to promote consistency for future data collection.
- H. The goal for inter-rater reliability will be $\geq 90\%$

III. Patient/Family Education: N/A

IV. Documentation: A quarterly report of analysis will be provided to the stroke program Coordinator.

Reference/Regulations:		
<ul style="list-style-type: none"> Stroke Patient Management Tool (Standard) - Outcome Sciences Get with the Guidelines- Stroke PMT Coding Instructions- IQVIA. The Joint Commission Disease Specific Care Certification Manual. 		
Sponsor(s) Name & Title		Origination Date:
[REDACTED]		[REDACTED]
Supersedes (with date of last approval):		
None		
Record of Review Dates		
Review Only Dates:		Revision Dates:
List Committee, Medical Staff, etc. Reviews:		
Record of Approval Dates		
Dept. Director(s)		Medical Director(s)
VP/Designee(s)		CAO (s)
MEC-WC	MEC-CC	Board Keep history

Chart Audit Process for Hospital 12:

Re-abstraction Process

At the end of each month, the stroke coordinator re-abstracts one chart by random selection. The focus has been on all IV tPA patients, so the selection is still random but from the group of IV tPA patients each month. The stroke coordinator also reviews all GWTG-S fallouts for accuracy and reports monthly to the program. The hospital stroke coordinator shares an office with their data abstractor, thus they are in constant communication regarding any questionable elements. See details in Table 20 below.

Table 20. Data Re-abstraction Stroke Q 1- 2018

Stroke patient	Arrival Time	Last known well date & time	IV tPA administered?	IV tPA date and time	VTE Prophylaxis	Anti-thrombotic by end hospital day 2	DC Statin Med	LDL w/in 1st 48 hrs	DC Intensive Statin Therapy	Rehab	Anti-thrombotic at DC	afib	A-Fib DC'ed on anti-coag	Stroke Educ. All 5 areas
██████████	18:08	17:00	y	18:54	y	y	y	y	y	y	y	n	na	y
██████████														
██████████	18:08	17:00	y	18:54	y	y	y	y	y	y	y	n	na	y
Data Element Agreement Rate														
Paired records														
Matches =														
DEAR =	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Analysis	45/45 = 100% agreement													

Contact Information:

California Stroke Registry/California Coverdell Program
California Department of Public Health
Chronic Disease Control Branch
P.O. Box 997377 MS-7208
Sacramento, CA 95899-7377
(916) 552-9900 or email: CSR@cdph.ca.gov