



STROKE REGISTRY DATA DICTIONARY

I. AUTHORITY:

Health and Safety Code, Division 2.5, Section 1798.170.

II. APPLICATION:

This policy provides data standards and entry criteria for Orange County Stroke Registry reporting by hospital personnel and provider facilities. The resources listed below provide general guidelines and specifications for data submission and defines data collection requirements for designated Stroke-Neurology Receiving Centers (SNRC) as noted in Policy 650.00, Section VII.

III. DEFINITIONS:

The definitions listed below provide a description of the types of information that are available for each data element.

Data Element Name: The label provided for each data element to provide identification and reference.

Collected For: The designation of which registry and which performance measure (when applicable) the data element is necessary for.

Required: Indicates that hospitals participating in the Orange County Stroke Registry are required to submit the corresponding data element.

Recommended: Indicates that hospitals participating in the Orange County Stroke Registry are recommended (but not required) to submit the corresponding data element. If the data element is not specified as Required, then it is by default Recommended.

Format: Technical definition of the data element as expressed on the electronic registry form.

Allowable Values: The comprehensive list of values or entries from which a hospital may choose to submit data for each data element.

Notes for Abstraction: Guidelines designed to aid hospital personnel when reviewing suggested data sources for the purpose of obtaining appropriate data for submission.

Suggested Data Sources: A list of data sources which may contain requested information. These lists may contain exact specifications of which sources are valid and which sources are invalid.

Inclusion Guidelines for Abstraction: Several data elements may be Required for specific populations such as Ischemic Stroke Patients, but not for others such as Stroke Mimics. This section will provide details as to which populations are to be included for chart review and data submission.



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IV. PATIENT INCLUSION CRITERIA:

- A. Each patient received by a SNRC via an EMS provider with a field-based primary or secondary impression of "Stroke".
 - i. Each participating facility will implement a mechanism to ensure accurate and complete capture of this patient population segment.

- B. Each patient cared for at a SNRC with a diagnosis of ischemic or hemorrhagic stroke.
 - i. ICD-10, I60.00 – I60.9 Non-Traumatic Subarachnoid Hemorrhage (SAH)
 - ii. ICD-10, I61.0 – I61.9 Non-Traumatic Intracerebral Hemorrhage (ICH)
 - iii. ICD-10, I63.00 – I63.9 Cerebral Infarction (Ischemic Stroke)
 - iv. ICD-10, G45.0 – G45.2, G45.8 – G45.9 TIA and related syndromes.

- C. Each patient referred by a SNRC to another acute care facility for stroke-related purposes..
 - i. Each participating facility will implement a mechanism to ensure accurate and complete capture of this patient population segment.

- D. General Inclusion Provisions
 - i. Patients admitted for a diagnosis noted above who are later transferred or expire.
 - ii. Patient directly admitted to inpatient units without first being seen in the ED.
 - iii. Patients who refuse treatment, have DNR/comfort care orders.
 - iv. Patients cared for in the ED but not admitted, i.e. death, left against medical advice, were evaluated/treated then transferred ("drip and ship"), or discharged after observation.
 - v. Patients who underwent a non-elective stroke-related procedure at your facility.
 - vi. More provisions are detailed within the specific data element descriptions with important notations within the Diagnosis and Discharge elements.

- E. Optional Inclusion Provisions: You may elect to use these criteria to screen for additional patients.
 - i. ICD-10, O99.411 – O99.43 Diseases of the circulatory system complicating pregnancy, childbirth and puerperium.
 - ii. ICD-10, G97.31 – G97.32 Intraoperative hemorrhage and hematoma of a nervous system organ or structure complicating a procedure.
 - iii. ICD-10, G97.51 – G97.52 Post-procedural hemorrhage and hematoma of a nervous system organ or structure following a procedure.
 - iv. ICD-10, I97.810 – I97.821 Intraoperative and postoperative cerebrovascular infarction.
 - v. Patients who present with stroke-like symptoms but who do not end up being diagnosed with a stroke or TIA (stroke mimics).

**STROKE REGISTRY DATA DICTIONARY**V. LIST OF DATA ELEMENTS: Grouped by sections as presented in electronic registry form.

Data Element	Definition	Usage	Page
Arrival Information			
EMS Incident Number	The unique identification number for the EMS incident.	Required	6
Medical Record Number	Number assigned by your hospital for tracking each patient.	Optional	7
Account/Visit Number	Number assigned by your hospital for tracking each care episode.	Optional	8
Arrival at ED (Date and Time)	Date and Time that the patient arrived at your Emergency Dept.	Required	9
Method of Arrival	How the patient arrived at your hospital.	Required	11
Advanced Stroke Notification	Indication that advanced notification was provided to your hospital by EMS regarding a potential stroke patient.	Required	12
Referring Hospital	The hospital that transferred the patient to your facility.	Required	13
Patient Demographics			
Name	Last Name, First Name, Middle Initial	Optional	14
Date of Birth	Date of Birth	Optional	15
Age	Patient's age at the time of incident.	Required	16
Age Units	The unit associated with the numerical value recorded for the patient's age, i.e. days, weeks, months, or years.	Required	16
Race	Census defined standard for racial categories.	Optional	17
Ethnicity	Census defined standard for ethnicity.	Optional	17
Gender	The patients gender (male, female, or unknown).	Required	18
Address	Street Address, City, County, State, Country and Postal Code.	Optional	19
Alternative Residence	Documentation if the patient does not have a traditional home street address.	Optional	20



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Evaluation and Tracking			
Last Known Well (Date and Time)	The date and time prior to hospital arrival at which it was witnessed or reported that the patient was last known to be without signs and symptoms of the current stroke or at his/her baseline state of health.	Required	21
NIH Stroke Scale	For Ischemic Stroke, measured at hospital admission and discharge. Note that the NIHSS may be utilized for stroke not otherwise specified and hemorrhagic stroke; if used please document.	Required	23
Glasgow Coma Scale	For Hemorrhagic Stroke, measured at hospital admission and at hospital discharge.	Required	25
Hunt and Hess Stroke Scale	For Subarachnoid Hemorrhage (SAH) Stroke, measured prior to surgical intervention or within 6 hours of arrival for patients who do not undergo surgical intervention.	Optional	27
ICH Score	For Intracerebral Hemorrhage (ICH) Stroke, measured prior to surgical intervention or within 6 hours of arrival for patients who do not undergo surgical intervention.	Optional	29
Modified Rankin Scale	For Ischemic Stroke, measured Pre-Event and at 90 days after diagnosis of stroke (not days after discharge).	Required	31
Treatment			
Brain Imaging	Determination (Yes/No) if brain imaging was performed at your hospital for this episode of care, then Date and Time that the brain imaging was initiated.	Required	33
IV tPA Initiation	Yes/No, and Date and Time that IV tPA therapy was initiated for a patient with ischemic stroke at your hospital.	Required	35
IV tPA Contraindications	Reason for NOT initiating IV tPA therapy must be documented on the day of or day after arrival.	Required	37
IA tPA Initiation	Yes/No, then Date and Time that IA tPA therapy was initiated for a patient with ischemic stroke at your hospital.	Required	39
IA tPA Contraindications	Reason for NOT initiating IA tPA therapy must be documented on the day of or day after arrival.	Required	41
MER Initiation	Yes/No, then Date and Time that mechanical endovascular reperfusion (MER) therapy was initiated for a patient with ischemic stroke at your hospital.		43
MER Contraindications	Reason for NOT initiating MER therapy must be documented on the day of or day after hospital arrival.	Required	45
Reason for Delayed Initiation >60min	Reason for delaying/extending the initiation of thrombolytic therapy >60 min after arrival.	Required	47



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Complications of Therapy	Complications of IV tPA, IA tPA, or MER therapy. If patient experienced no complications please document as such.	Required	49
Clinical Trial Participant	Documentation that during this care episode the patient was enrolled in a stroke related clinical trial that affected the performance of standard stroke protocols or practices.	Optional	51
Telemedicine	Was telemedicine utilized during this episode of care. Telemedicine includes any remote diagnosis or treatment of the patient by means of telecommunications technology and specifically includes teleradiology services.	Required	53

Diagnosis and Discharge			
Final Clinical Diagnosis	Descriptive documentation of the final clinical diagnosis related to stroke. Please see element details for description of values.	Required	54
If No Stroke Related Diagnosis	Descriptive documentation of the final clinical diagnosis of stroke mimics that in this care episode caused Advanced Stroke Notification by EMS and/or activation of your ED stroke protocols.	Required	56
Discharge Disposition	Patient's final disposition upon discharge from your facility.	Required	57
Destination Determination	If the patient was transferred from your facility to another acute care hospital, please document the reason that this action was taken.	Required	59
Hospital Transferred To	If the patient was transferred from your facility to another acute care hospital, please document the receiving hospital name.	Required	60
ICD-10 Codes	The International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) code associated with the diagnosis established for this patient during this specific care episode.	Required	61

Full data specifications are provided on the following pages corresponding to the noted page numbers listed in the above table.

Approved:

Sam J. Stratton, MD, MPH
OCEMS Medical Director

Tammi McConnell, MSN, RN
OCEMS Administrator

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Data Element Name: EMS Incident Number

Collected For: OCEMS (Required)

Definition:

This is the identification number assigned by the 911 dispatch system. This is a unique number assigned by the 911 EMS dispatch agency for each call. The incident number is the most reliable number. When providers are not documenting in OC-MEDS-You should use the PCR number as an alternative. (This may also be referred to as the BLS Number, Call Number, or Incident Number depending on the provider)

Suggested Data Collection Question: What is the EMS Incident Number associated with this patient's transport to your facility?

Format:

Length: 1-20

Type: Alphanumeric

Occurs: 1

Allowable Values: All valid identifiers as defined by 911 dispatch and/or EMS providers.

Notes for Abstraction:

- Obtain from a valid data source and confirm through the OCEMS Hospital Hub or Stroke Registry EMS Search.

Suggested Data Sources:

- OCEMS Hospital Hub
- OCEMS Stroke Registry EMS Search
- Hospital or Health System Medical Records System

Inclusion Guidelines for Abstraction:

All patients who arrived via an EMS provider (911 Transport, Fire Service, Air Medical, IFT-ALS, BLS, etc) are required to have a documented EMS Incident Number. All patients transferred to your facility from another acute care facility via EMS Interfacility Transport should have a documented EMS Incident Number.

Exclusion Guidelines for Abstraction:

This element is to be left blank if the patient is a "walk-in" or if they arrived at your facility via private transport, taxi, or other non-EMS transport service.



STROKE REGISTRY DATA DICTIONARY

Data Element Name: Medical Record Number

Collected For: OCEMS (Optional)

Definition:

Number assigned by your hospital for tracking all medical care provided by your hospital and/or health system to each patient over an extended period of time typically consisting of multiple care episodes and multiple medical conditions.

Suggested Data Collection Question:

- What is the medical record number associated with this patient?

Format:

Length: 1-20

Type: Alphanumeric

Occurs: 1

Allowable Values: All pertinent identifiers as defined by hospital and health system standards.

Notes for Abstraction: None

Suggested Data Sources: Only acceptable sources

Inclusion Guidelines for Abstraction:

All patients included in this registry are required to have a documented Medical Record Number.

Exclusion Guidelines for Abstraction: No populations are excluded from this element.



STROKE REGISTRY DATA DICTIONARY

Data Element Name: Account/Visit Number

Collected For: OCEMS (Optional)

Definition:

Number assigned by your hospital in order to link a patient with this specific and unique episode of care. This number will only be associated with a single discrete care episode.

Suggested Data Collection Question:

What is the account number associated with this patient's particular episode of care?

Format:

Length: 1-20

Type: Alphanumeric

Occurs: 1

Allowable Values: All pertinent identifiers as defined by hospital and health system standards.

Notes for Abstraction: None

Suggested Data Sources: Only acceptable sources

Inclusion Guidelines for Abstraction:

All patients included in this registry are recommended to have a documented Account/Visit Number.

Exclusion Guidelines for Abstraction: No populations are excluded from this element.



STROKE REGISTRY DATA DICTIONARY

Data Element Name: Arrival at ED (Date and Time)

Collected For: OCEMS (Required), JC STK-4, JC CSTK-02,03,04,05,06,07

Definition:

The earliest documented date and time that the patient arrived at your emergency department or hospital if the patient was transferred directly to an inpatient unit.

Suggested Data Collection Question:

What was the earliest documented time that the patient arrived at your facility?

Format:

Length: Date: 10, MM-DD-YYYY

Time: 5, HH:MM (24hr/Military Time)

Type: Date and Time

Occurs: 1

Allowable Values:

MM = Month (01-12)

HH = Hour (00-23)

Must be in 24hr/Military Format

DD = Day (01-31)

MM = Minute (00-59)

If the time is 12hr p.m. format, add 12 to that number and record.

YYYY = Year (20xx)

Notes for Abstraction:

- 00:00 = midnight. If the time is documented as 12midnight review supporting documentation to determine correct date. Incorrect: 24:00 1/1/2016. Correct: 00:00 1/2/2016.
- For times that include seconds, remove the seconds and record the time as is. Do not round up. Example: 15:00:35 would be recorded as 15:00
- If you are unable to determine the time based on provided documentation, leave the field blank.
- The medical record must be abstracted as documented (taken at "face value"). When the time documented is obviously in error and no other documentation is found that provides this information, leave the field blank.
- Arrival time should not be abstracted simply as the earliest time in one of the acceptable sources, without regard to other substantiating documentation. If the earliest time documented appears to be an obvious error, this time should not be abstracted.
- Arrival time may be different than admission time.
- If the patient is in either an outpatient setting of the hospital other than observation status (e.g., dialysis, chemotherapy, cardiac cath) or a SNF unit of the hospital, and is subsequently admitted to acute inpatient, use the time the patient arrived at the ED or on the floor for acute inpatient care as the arrival time.
- Observation status:
 - If the patient was admitted to observation from an outpatient setting of the hospital, use the time the patient arrived at the ED or on the floor for observation care as the arrival time.
 - If the patient was admitted to observation from the ED of the hospital, use the time the patient arrived at the ED as the arrival time.
- Direct Admits:
 - If the patient is a "Direct Admit" to the cath lab, use the earliest time the patient arrived at the cath lab (or cath lab staging/holding area) as the arrival time.



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Data Element Name: Arrival at ED (Date and Time)

Notes for Abstraction (cont.):

- For "Direct Admits" to acute inpatient or observation, use the earliest time the patient arrived at the nursing floor or in observation (as documented in the Only Acceptable Sources) as the arrival time.
- If the patient was transferred from your hospital's satellite/free-standing ED or from another hospital within your hospital's system (as an inpatient or ED patient), and there is one medical record for the care provided at both facilities, use the arrival time at the first facility.

Suggested Data Sources:

Only Acceptable Sources

- Emergency department record
- Nursing admission assessment/admitting note
- Observation record
- Procedure notes
- Vital signs graphic record

Specifically Excluded Sources

- EMS Patient Care Report
- Physician Office Record
- H&P

Inclusion Guidelines for Abstraction:

All patients included in this registry are required to have an arrival time documented, however if no valid documentation is available leave the field blank.

Exclusion Guidelines for Abstraction: No populations are excluded from this element.



STROKE REGISTRY DATA DICTIONARY

Data Element Name: Method of Arrival

Collected For: OCEMS (Required)

Definition: The method by which the patient arrived at your hospital.

Suggested Data Collection Question: How did the patient arrive at your hospital?

Format:

Type: Single-Select

Occurs: 1

Allowable Values:

- EMS from home/scene
- Private transportation/taxi/other from home/scene
- Transfer from another hospital
- Not Documented (ND) or unknown

Notes for Abstraction:

- Choose "EMS from home/scene" whenever the patient arrived at your hospital by public or private EMS. This method includes ground or air transport, public or private transport service, and 911 Emergent or Non-emergent transports. However do not include those patients being transferred from another acute care hospital. Those patients are grouped under the value: "Transfer from another hospital".
- Choose "Transfer from another hospital" when they are arriving from another hospital.
- If the patient had a stroke while an inpatient please select "Transfer from another hospital" and then select your own hospital from the referring hospital list.
- "Private transportation" includes cab, bus, car, bike, walk-in, etc.

Suggested Data Sources: Only acceptable sources

Inclusion Guidelines for Abstraction:

All patients included in this registry are required to have this element documented. If no valid documentation is available please enter "Not Documented (ND) or unknown".

Exclusion Guidelines for Abstraction: No populations are excluded from this element.



STROKE REGISTRY DATA DICTIONARY

Data Element Name: Advanced Stroke Notification

Collected For: OCEMS (Required)

Definition:

Documentation that advanced notification was provided to your hospital by EMS regarding a potential stroke patient. Expectations in the prehospital environment are to test blood glucose, use a prehospital stroke assessment tool, and to notify appropriate receiving center of the incoming patient.

Suggested Data Collection Question:

Was advanced notification provided by the EMS crew or system that a stroke patient was en route to your facility?

Format:

Type: Single-Select

Occurs: 1

Allowable Values:

- Yes Advanced Notification is documented as received by your hospital from EMS including MICN or other contact from the EMS unit's base hospital.
- No/ND No Advanced Notification was received or is documented as received by your hospital from EMS including MICN or other contact from the EMS unit's base hospital.
- N/A Not Applicable, select this choice when the patient is a "walk-in", or arrived by other private transportation (non EMS).

Notes for Abstraction:

- See above definitions of allowable values.
- Patients who were transferred from another acute care hospital should have Advanced Notification provided by EMS regarding patient condition and estimated time of arrival.
- This element is applicable to patients who were transferred from another acute care hospital.

Suggested Data Sources:

Only Acceptable Sources

- Emergency department record
- Nursing admission assessment/admitting note

Specifically Excluded Sources

- EMS Patient Care Report

Inclusion Guidelines for Abstraction:

All patients who arrive by EMS from home/scene or who are transferred from another acute care hospital are required to have this element documented. If EMS was uninvolved in the patient's arrival at your facility you should document this element as "N/A".

Exclusion Guidelines for Abstraction: No populations are excluded from this element.



STROKE REGISTRY DATA DICTIONARY

Data Element Name: Referring Hospital

Collected For: OCEMS (Required)

Definition:

The hospital that transferred the patient to your facility. This field is pertinent when the patient is being transferred from another acute care hospital to your facility via a planned or 911 interfacility EMS transport.

Suggested Data Collection Question: From what hospital was this patient referred?

Format:

Length: 1-20

Type: Alphanumeric

Occurs: 1

Allowable Values:

All pertinent identifiers as defined by the state of California. Any acute care hospital transferring a patient to a facility participating in this registry will be assigned a pertinent identifier.

Notes for Abstraction:

- If the patient is not being transferred to your facility from another acute care hospital please disregard this element and leave the value field blank.

Suggested Data Sources: Only acceptable sources

Inclusion Guidelines for Abstraction:

All patients included in this registry who were transferred to your facility from another acute care hospital are required to have this element documented, however if no valid documentation is available leave the field blank.

Exclusion Guidelines for Abstraction:

For any patient not being transferred from another acute care hospital, please leave this field blank.



STROKE REGISTRY DATA DICTIONARY

Data Element Name: Patient Name (Last, First, Middle Initial)

Collected For: OCEMS (Optional)

Definition: The patient's full legal name.

Suggested Data Collection Question:

What is the patient's name documented as in your medical record, or associated medical documents?

Format:

Length: 1-20

Type: Alphanumeric

Occurs: 1

Allowable Values:

The patient's legal name or any valid identify uniformly used in a similar field in your facilities medical record or associated medical documents.

Notes for Abstraction:

- While this element is not required it is recommended for quality improvement purposes requiring documentation and data reconciliation.
- This element will auto-populate from the OCEMS Prehospital Care Report (PCR), however please validate manually if required by your facility.

Suggested Data Sources: Only acceptable sources

Inclusion Guidelines for Abstraction:

All patients included in this registry are recommended to have a documented name.

Exclusion Guidelines for Abstraction: No populations are excluded from this element.



STROKE REGISTRY DATA DICTIONARY

Data Element Name: Patient Date of Birth

Collected For: OCEMS (Optional)

Definition: The patient's date of birth.

Suggested Data Collection Question: What is the patient's date of birth?

Format:

Length: 10, MM-DD-YYYY

Type: Date

Occurs: 1

Allowable Values:

- MM = Month (01-12)
- DD = Day (01-31)
- YYYY = Year (20xx)

Notes for Abstraction:

- While this element is not required it is recommended for quality improvement purposes requiring documentation and data reconciliation.
- This element will auto-populate from the OCEMS Prehospital Care Report (PCR), however please validate manually if required by your facility.

Suggested Data Sources: Only acceptable sources

Inclusion Guidelines for Abstraction:

All patients included in this registry are recommended to have a documented date of birth.

Exclusion Guidelines for Abstraction: No populations are excluded from this element.



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Data Element Name: Patient Age and Age Units

Collected For: OCEMS (Required)

Definition: The patient's age in appropriate units.

Suggested Data Collection Question: What is the patient's age?

Format:

Length: 1-3

Type: Alphanumeric

Occurs: 1

Allowable Values: 0-120, Years, Month, Days, Hours

Notes for Abstraction:

- This element is required and should be validated by cross-referencing multiple acceptable sources of data documentation.
- This element will be auto-populated from the OCEMS Prehospital Care Report for applicable patients. Note that this field should be validated with your facilities documentation to ensure a correct value.
- This element will auto-calculate from the date of birth element.
- While it may not seem applicable to include Age Units in a Stroke Registry, the OCEMS Prehospital Care Report will serve to auto-populate this field and is necessary as such. For entries which do not have an associated OCEMS Prehospital Care Report, the unit will be defaulted to years.

Suggested Data Sources: Only acceptable sources

Inclusion Guidelines for Abstraction:

All patients included in this registry are required to have a documented age and age unit.

Exclusion Guidelines for Abstraction: No populations are excluded from this element.



STROKE REGISTRY DATA DICTIONARY

Data Element Name: Patient Race and Ethnicity

Collected For: OCEMS (Optional)

Definition:

Self-identification categories defined by the U.S Office of Management and Budget as race and ethnicity.

Suggested Data Collection Question: What is the patient's race?

Format:

Length: 1-20

Type: Multi-Select

Occurs: Multiple

Allowable Values:

Race	Ethnicity
American Indian or Alaska Native	Hispanic or Latino
Asian	Not Hispanic or Latino
Black or African American	Not Known
Native Hawaiian or Other Pacific Islander	
Other Race	
White	
Not Known	

Notes for Abstraction:

- People of any race may be of any ethnic origin and vice versa.

Suggested Data Sources: Only acceptable sources

Inclusion Guidelines for Abstraction:

All patients included in this registry are required to have a documented race and ethnicity. If documentation does not exist to categorize then please not as "Not Known."

Exclusion Guidelines for Abstraction: No populations are excluded from this element.

