NATIONAL QUALITY FORUM

Measure Evaluation 4.1
January 2010

This form contains the measure information submitted by stewards. Blank fields indicate no information was provided. Attachments also may have been submitted and are provided to reviewers. The sub-criteria and most of the footnotes from the evaluation criteria are provided in Word comments and will appear if your cursor is over the highlighted area (or in the margin if your Word program is set to show revisions in balloons). Hyperlinks to the evaluation criteria and ratings are provided in each section.

TAP/Workgroup (if utilized): Complete all yellow highlighted areas of the form. Evaluate the extent to which each sub-criterion is met. Based on your evaluation, summarize the strengths and weaknesses in each section.

Note: *If there is no TAP or workgroup, the SC also evaluates the* sub-criteria (*yellow highlighted areas*).

Steering Committee: Complete all pink highlighted areas of the form. Review the workgroup/TAP assessment of the sub-criterion, noting any areas of disagreement; then evaluate the extent to which each major criterion is met; and finally, indicate your recommendation for the endorsement. Provide the rationale for your ratings.

Evaluation ratings of the extent to which the criteria are met
C = Completely (unquestionably demonstrated to meet the criterion)
P = Partially (demonstrated to partially meet the criterion)
M = Minimally (addressed BUT demonstrated to only minimally meet the criterion)
N = Not at all (NOT addressed; OR incorrectly addressed; OR demonstrated to NOT meet the criterion)
NA = Not applicable (only an option for a few sub-criteria as indicated)

(for NQF staff use) **NQF Review #:** ACP-021-10 **NQF Project:** Ambulatory Care - Additional Outpatient Measures 2010
MEASURE DESCRIPTIVE INFORMATION
De.1 Measure Title: Head CT Scan Results for Acute Ischemic Stroke or Hemorrhagic stroke who Received Head CT Scan Interpretation Within 45 minutes of Arrival.
De.2 Brief description of measure*: Emergency Department Acute Ischemic Stroke or Hemorrhagic Stroke patients who arrive at the ED within 2 hours of the onset of symptoms who have a head CT scan performed during the stay and having a time from ED arrival to interpretation of the Head CT scan within 45 minutes of arrival.
1.1-2 Type of Measure: process   **De.3 If included in a composite or paired with another measure, please identify composite or paired measure** None
De.4 National Priority Partners Priority Area: safety   **De.5 IOM Quality Domain:** timeliness   **De.6 Consumer Care Need:** Getting Better

	NQF Staff
CONDITIONS FOR CONSIDERATION BY NQF	
Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards:	NQF Staff
A. The measure is in the public domain or an intellectual property (measure steward agreement) is signed. *Public domain only applies to governmental organizations. All non-government organizations must sign a measure steward agreement even if measures are made publicly and freely available.* **A.1** Do you attest that the measure steward holds intellectual property rights to the measure and the right to use aspects of the measure owned by another entity (e.g., risk model, code set)? Yes **A.2 Indicate if** Proprietary Measure (*as defined in measure steward agreement*):	A Y ☐ N ☐

A.3 Measure Steward Agreement: government entity- public domain- No Agreement **A.4** Measure Steward Agreement attached:	
B. The measure owner/steward verifies there is an identified responsible entity and process to maintain and update the measure on a schedule that is commensurate with the rate of clinical innovation, but at least every 3 years. Yes, information provided in contact section	**B** Y☐ N☐
C. The intended use of the measure includes <u>both</u> public reporting <u>and</u> quality improvement. ►**Purpose:** public reporting, quality improvement Payment Incentive, Accountability	**C** Y☐ N☐
D. The requested measure submission information is complete. Generally, measures should be fully developed and tested so that all the evaluation criteria have been addressed and information needed to evaluate the measure is provided. Measures that have not been tested are only potentially eligible for a time-limited endorsement and in that case, measure owners must verify that testing will be completed within 12 months of endorsement. **D.1**Testing: No, testing will be completed within 12 months **D.2** Have NQF-endorsed measures been reviewed to identify if there are similar or related measures? Yes	**D** Y☐ N☐
(for NQF staff use) **Have all conditions for consideration been met?** **Staff Notes to Steward** (*if submission returned*):	**Met** Y☐ N☐
Staff Notes to Reviewers (*issues or questions regarding any criteria*):	
Staff Reviewer Name(s):	

TAP/Workgroup Reviewer Name:	
Steering Committee Reviewer Name:	
1. IMPORTANCE TO MEASURE AND REPORT	
Extent to which the specific measure focus is important to making significant gains in health care quality (safety, timeliness, effectiveness, efficiency, equity, patient-centeredness) and improving health outcomes for a specific high impact aspect of healthcare where there is variation in or overall poor performance. *Measures must be judged to be important to measure and report in order to be evaluated against the remaining criteria.* (<u>evaluation criteria</u>) **1a. High Impact**	[Eval Ratin g]
(for NQF staff use) <u>Specific NPP goal</u>:	
1a.1 Demonstrated High Impact Aspect of Healthcare: affects large numbers **1a.2** **1a.3 Summary of Evidence of High Impact:** Improved access to diagnostic imaging assists clinicians in the decision making process and treatment plans. Over 143,579 people die each year from stroke (Stroke Center, 2009). Stroke is the third leading cause of death in the United States. Each year, about 795,000 people suffer a stroke. About 600,000 of these are first attacks, and 185,000 are recurrent attacks (AHA, 2009). Decreasing radiology turnaround times will enhance decision making capabilities for patients with TIA or Acute Ischemic Stroke. The Food and Drug Administration (FDA) approved the use of tissue plasminogen activator (t-PA) for treatment of acute ischemic stroke when given within three hours of stroke symptom onset (NSA, 2000). Of all strokes, 87 percent are ischemic, 10 percent are intracerebral hemorrhage, and 3 percent are subarachnoid hemorrhage (NINDS, 2004). Because of the therapeutic time window for treatment possibilities, timely completion and results of the CT scan are imperative and will directly impact the quality of care a patient receives. Improved access to diagnostics assists clinicians in decision making. Diagnostic imaging and laboratory reports are expected to increase length of stay in the emergency department. Radiology report turnaround time can impact patient throughput times in the emergency department (Delfino, 2008). Decreasing radiology report turnaround times can have impacts across the facility and assist in reducing the length of	**1a** C☐ P☐ M☐ N☐

Comment [KP1]: 1a. The measure focus addresses:
•a specific national health goal/priority identified by NQF's National Priorities Partners; OR
•a demonstrated high impact aspect of healthcare (e.g., affects large numbers, leading cause of morbidity/mortality, high resource use (current and/or future), severity of illness, and patient/societal consequences of poor quality).

Rating: C=Completely; P=Partially; M=Minimally; N=Not at all; NA=Not applicable

stay and enhancing decision making capabilities for patient treatment plans (Marquez, 2005). Efficiencies in throughput with tasks can lead to less diversion, less overcrowding, less elopements, and less financial loss (Falvo, 2007).

1a.4 Citations for Evidence of High Impact: • American Heart Association. Heart Disease and Stroke statistics, 2009 available at http://www.americanheart.org/downloadable/heart/123783441267009Heart%20and%20Stroke%20Update.pdf
•   DelFlorio R, Coughlin B, Coughlin R, Li H, Santoro J, Akey B and Favreau M. Process modification and emergency department radiology service. Emerg Radiol. 2008 Nov;15(6):405-12.
•   Falvo T, Grove L, Stachura R, and Zirkin W. The financial impact of ambulance diversions and patient elopements. Acad Emerg Med. 2007 Jan;14(1):58-62.
•   Marquez LO. Improving medical imaging report turnaround times. Radiol Mange. 2005 Jan-Feb;27(1):34-7.
•   Stoke Center. Stroke Statistics 2009. Available at http://www.strokecenter.org/patients/stats.htm
•   Stroke statistical information available at http://www.clivir.com/lessons/show/stroke-statistics-information-charts-and-graphs.html
•   STROKE the First Hours Guidelines for Acute Treatment, National Stroke Association, 2000.
•   The ATLANTIS, ECASS, and NINDS rt-PA Study Group Investigators. Association of Outcome with early stroke treatment: pooled analysis of ATLANTIS, ECASS, and NINDS rt-PA stroke Trials. Lancet 2004;363:768-774.

1b. Opportunity for Improvement

1b.1 Benefits (improvements in quality) envisioned by use of this measure: Delays in obtaining test results affect emergency department overcrowding (GAO, 2003). Reducing radiology turnaround time has been shown to assist in improving cycle times and timely completion of tasks, allowing potentially decreased patient wait times (Espinosa 1999 and X 1998). Improving efficiency in completion of tests promotes patient throughput.

> **Comment [KP2]:** 1b. Demonstration of quality problems and opportunity for improvement, i.e., data demonstrating considerable variation, or overall poor performance, in the quality of care across providers and/or population groups (disparities in care).

1b.2 Summary of data demonstrating performance gap (variation or overall poor performance) across providers:
A 2005 survey conducted by the Centers for Disease Control found that during 2003, an estimated 113.9 million visits were made to hospital EDs (about 38.9 visits per 100 persons). From 1993 to 2003, increasing trends in ED utilization rates were observed for people aged 22-49 years, 50-64 years, and 65 years and over. More than 16 million patients arrived by ambulance (14.2%). In approximately 3% of visits, the patient had been seen in the ED within the past 72 hours. In 2003, abdominal pain, chest pain, fever, and cough were the leading patient complaints, accounting for nearly one-fifth of all visits. Acute upper respiratory infection was the leading illness-related diagnosis at ED visits. There were an estimated 40.2 million injury-related visits during 2003, or 14.1 visits per 100 persons. Diagnostic and screening services, procedures, and medications were provided at 89.7%, 45.4%, and 77.3% of visits, respectively. In 2003, approximately 14% of ED visits resulted in hospital admission. On average, patients spent 3.2 hours in the ED, of which 46.5 minutes were spent waiting to see a physician.

A separate medical news article states that in 2008, the average time spent in the emergency department, including wait time and time spent with a doctor, was 243 minutes. This figure was down slightly from 245 the year before, but up from 216 in 2002.

> **Comment [k3]:** 1 Examples of data on opportunity for improvement include, but are not limited to: prior studies, epidemiologic data, measure data from pilot testing or implementation. If data are not available, the measure focus is systematically assessed (e.g., expert panel rating) and judged to be a quality problem.

1b
C☐
P☐
M☐
N☐

1b.3 Citations for data on performance gap:

McCaig LF, Burt CW. National Hospital Ambulatory Medical Care Survey: 2003 emergency department summary. Advance data from vital and health statistics; no 358. Hyattsville, Maryland: National Center for Health Statistics. 2005.

Neale, T. Medpage Today [Internet]. Location unknown: Emergency room wait times up, but so is patient satisfaction; 2009 Jun 22 [cited 2010 Jan 29]. Available from: http://www.medpagetoday.com/EmergencyMedicine/EmergencyMedicine/14820.

1b.4 Summary of Data on disparities by population group:
N/A

1b.5 Citations for data on Disparities:
N/A

1c. Outcome or Evidence to Support Measure Focus

1c.1 Relationship to Outcomes (*For non-outcome measures, briefly describe the relationship to desired outcome. For outcomes, describe why it is relevant to the target population*): Delays in obtaining test results affect emergency department overcrowding (GAO, 2003). Reducing radiology turnaround time has been shown to assist in improving cycle times and timely completion of tasks allows for potentially decreased patient wait times (Espinosa 1999). Improving efficiency in completion of tests promotes patient throughput.

1c.2-3. Type of Evidence: observational study

1c.4 Summary of Evidence (*as described in the criteria; for outcomes, summarize any evidence that healthcare services/care processes influence the outcome*):
Improved access to diagnostics assists clinicians in decision-making. Diagnostic imaging and laboratory reports are expected to increase length of stay in the emergency department. Radiology report turnaround time can affect patient throughput times in the emergency department (Delfino, 2008). Decreasing radiology report turnaround times can have effects across the facility and assist in reducing the length of stay and enhancing decisionmaking capabilities for patient treatment plans (Marquez, 2005). Efficiencies in throughput with tasks can lead to less diversion, less overcrowding, fewer elopements, and less financial loss (Falvo, 2007).

1c.5 Rating of strength/quality of evidence (*also provide narrative description of the rating and by whom*):
Studies regarding radiology turnaround time are primarily level B and level C.

1c.6 Method for rating evidence: ABC Scale
• Level A (randomized controlled trial/ meta-analysis):
High quality randomized controlled trial that considers all important outcomes. High-quality meta-analysis (quantitative systematic review) using comprehensive search strategies.
• Level B (other evidence):
A well-designed, nonrandomized clinical trial. A nonquantitative systematic review with appropriate search strategies and well-substantiated conclusions. Includes lower quality randomized controlled trials, clinical cohort studies, and case-controlled studies with nonbiased selection of study participants and consistent findings. Other evidence, such as high-quality, historical, uncontrolled studies, or well-designed epidemiologic studies with compelling findings, is also included.
• Level C (consensus/expert opinion):
Consensus viewpoint or expert opinion. Expert opinion is sometimes the best evidence available.

1c.7 Summary of Controversy/Contradictory Evidence: The risk in advancing measures that address timeliness is that there may be a decrease in testing performance to avoid measurement. However, this

1c
C ☐
P ☐
M ☐
N ☐

Comment [k4]: 1c. The measure focus is:
•an outcome (e.g., morbidity, mortality, function, health-related quality of life) that is relevant to, or associated with, a national health goal/priority, the condition, population, and/or care being addressed;
OR
•if an intermediate outcome, process, structure, etc., there is **evidence** that supports the specific measure focus as follows:
oIntermediate outcome – evidence that the measured intermediate outcome (e.g., blood pressure, Hba1c) leads to improved health/avoidance of harm or cost/benefit.
oProcess – evidence that the measured clinical or administrative process leads to improved health/avoidance of harm and
if the measure focus is on one step in a multi-step care process, it measures the step that has the greatest effect on improving the specified desired outcome(s).
oStructure – evidence that the measured structure supports the consistent delivery of effective processes or access that lead to improved health/avoidance of harm or cost/benefit.
oPatient experience – evidence that an association exists between the measure of patient experience of health care and the outcomes, values and preferences of individuals/ the public.
oAccess – evidence that an association exists between access to a health service and the outcomes of, or experience with, care.   [... [1]

Comment [k5]: 4 Clinical care processes typically include multiple steps: assess → identify problem/potential problem → choose/plan intervention (with patient input) → provide intervention → evaluate impact on health status. If the measure focus is one step in such a multi-step process, the step with the greatest effect on the desired outcome should be selected as the focus of measurement. For example, although assessment of immunization status and recommending immunization are necessary steps, they are not sufficient to achieve the desired impact on health status – patients must be vaccinated to achieve immunity. This does not preclude consideration of measures of preventive screening interventions where there is a strong link with desired outcomes (e.g., mammography) or measures for multiple care processes that affect a single outcome.

Comment [k6]: 3 The strength of the body of evidence for the specific measure focus should be systematically assessed and rated (e.g., USPSTF grading system http://www.ahrq.gov/clinic/uspstf07/methods/benefit.htm). If the USPSTF grading system was not used, the grading system is explained including how it relates to the USPSTF grades or why it does not. However, evidence is not limited to quantitative studies and the best type of evidence depends upon the question being studied (e.g., randomized controlled trials appropriate for studying drug efficacy are not well suited for complex system changes). When qualitative studies are used, appropriate qualitative research criteria are used to judge the strength of the evidence.

possibility is not likely due to the need to assess diagnostic results to ensure a proper diagnosis.

1c.8 Citations for Evidence (*other than guidelines*): DelFlorio R, Coughlin B, Coughlin R, Li H, Santoro J, Akey B, Favreau M. Process modification and emergency department radiology service. Emerg Radiol. 2008 Nov;15(6):405-12.

Marquez LO. Improving medical imaging report turnaround times. Radiol Mange. 2005 Jan-Feb;27(1):34-7.

Falvo T, Grove L, Stachura R, Zirkin W. The financial impact of ambulance diversions and patient elopements. Acad Emerg Med. 2007 Jan;14(1):58-62.

1c.9 Quote the Specific guideline recommendation (*including guideline number and/or page number*):
N/A

1c.10 Clinical Practice Guideline Citation: N/A
1c.11 National Guideline Clearinghouse or other URL: N/A

1c.12 Rating of strength of recommendation (*also provide narrative description of the rating and by whom*):
N/A

1c.13 Method for rating strength of recommendation (*If different from USPSTF system, also describe rating and how it relates to USPSTF*):
N/A

1c.14 Rationale for using this guideline over others:
N/A

TAP/Workgroup: What are the strengths and weaknesses in relation to the sub-criteria for *Importance to Measure and Report?*	1
Steering Committee: Was the threshold criterion, *Importance to Measure and Report*, met? Rationale:	1 Y☐ N☐

2. SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES

Extent to which the measure, <u>as specified</u>, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (evaluation criteria)	Eval Rating

2a. MEASURE SPECIFICATIONS

S.1 Do you have a web page where current detailed measure specifications can be obtained?
S.2 If yes, provide web page URL:

2a. Precisely Specified

2a.1 Numerator Statement (*Brief, text description of the numerator - what is being measured about the target population, e.g. target condition, event, or outcome*):
Emergency Department Acute Ischemic Stroke or Hemorrhagic Stroke patients arriving at the ED within 2 hours of the time last known well, with an order for a head CT scan whose time from ED arrival to interpretation of the Head CT scan is within 45 minutes of arrival

2a.2 Numerator Time Window (*The time period in which cases are eligible for inclusion in the numerator*):
45 minutes from time of arrival

2a-specs
C☐
P☐
M☐
N☐

Rating: C=Completely; P=Partially; M=Minimally; N=Not at all; NA=Not applicable

Comment [k7]: USPSTF grading system http://www.ahrq.gov/clinic/uspstf/grades.htm: **A** - The USPSTF recommends the service. There is high certainty that the net benefit is substantial. **B** - The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial. **C** - The USPSTF recommends against routinely providing the service. There may be considerations that support providing the service in an individual patient. There is at least moderate certainty that the net benefit is small. Offer or provide this service only if other considerations support the offering or providing the service in an individual patient. **D** - The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits. **I** - The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.

Comment [KP8]: 2a. The measure is well defined and precisely specified so that it can be implemented consistently within and across organizations and allow for comparability. The required data elements are of high quality as defined by NQF's Health Information Technology Expert Panel (HITEP) .

2a.3 Numerator Details (*All information required to collect/calculate the numerator, including all codes, logic, and definitions*):
Included Populations: Not Applicable

Excluded Populations: None

Data Elements:
- Arrival Time
- Head CT Scan Interpretation Date and Time
- Outpatient Encounter Date

2a.4 Denominator Statement (*Brief, text description of the denominator - target population being measured*):
Emergency Department Acute Ischemic Stroke or Hemorrhagic Stroke patients arriving at the ED within 2 hours of the time last known well with an order for a head CT scan.

2a.5 Target population gender: Female, Male
2a.6 Target population age range: Patients 18 years and older

2a.7 Denominator Time Window (*The time period in which cases are eligible for inclusion in the denominator*):

2a.8 Denominator Details (*All information required to collect/calculate the denominator - the target population being measured - including all codes, logic, and definitions*):
Included Populations:
- Patients with an ICD-9-CM Principal Diagnosis Code for acute ischemic stroke, or hemorrhagic stroke as defined in Appendix A, OP table 10.0; and
- Patients who had a Head CT Scan Order as defined in the Data Dictionary; and
- An E/M Code for emergency department encounter as defined in Appendix A, OP Table 1.1

2a.9 Denominator Exclusions (*Brief text description of exclusions from the target population*): •
- Patients less than 18 years of age
- Patients who expired in the emergency department
- Patients who left the emergency department against medical advice or discontinued care

2a.10 Denominator Exclusion Details (*All information required to collect exclusions to the denominator, including all codes, logic, and definitions*):
- Birthdate
- Date Last Known Well
- Discharge Status
- E/M Code
- Head CT Scan Order
- Head CT Scan Interpretation Date and Time
- ICD-9-CM Principal Diagnosis Code
- Last Known Well
- Outpatient Encounter Date
- Time Last Known Well

2a.11 Stratification Details/Variables (*All information required to stratify the measure including the stratification variables, all codes, logic, and definitions*):
Plan is to stratify measure by ED annual volume and the presence of race/ethnicity, age and gender demographics will allow for stratification of results.

> **Comment [k9]:** 11 Risk factors that influence outcomes should not be specified as exclusions.
> 12 Patient preference is not a clinical exception to eligibility and can be influenced by provider interventions.

2a.12-13 Risk Adjustment Type: no risk adjustment necessary

2a.14 Risk Adjustment Methodology/Variables (*List risk adjustment variables and describe conceptual models, statistical models, or other aspects of model or method*):
N/A

2a.15-17 Detailed risk model available Web page URL or attachment:

2a.18-19 Type of Score: rate/proportion
2a.20 Interpretation of Score: better quality = higher score
2a.21 Calculation Algorithm (*Describe the calculation of the measure as a flowchart or series of steps*):
Calculation algorithm can be found in the document uploaded for question '2a.29. Data Dictionary or Code Table'; please refer to pages 4-5 of the attached document.

2a.22 Describe the method for discriminating performance (*e.g., significance testing*):

2a.23 Sampling (Survey) Methodology *If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate)*:
If a measure is based on a sample (or survey), provide instructions for obtaining the sample and conducting the survey, and lend guidance on minimum sample size (response rate).
A sampling similar to that used for the Outpatient Prospective Payment System can be used if medical record implementation is utilized. For hospitals submitting electronic health records, all cases submitted will be utilized.

Sampling
Sampling is a process of selecting a representative part of a population in order to estimate the hospital's performance, without collecting data for the hospital's entire population. Using a statistically valid sample, a hospital can measure its performance in an effective and efficient manner. Sampling is a particularly useful technique for performance measures that require primary data collection from a source such as the medical record. Sampling should not be used unless the hospital has a large number of cases in the outpatient population because a fairly large number of sample cases are needed to achieve a representative sample of the population. For the purpose of sampling outpatient department quality measures, the terms "sample," "effective sample," and "case" are defined below:

•   The sample is the fraction of the population that is selected for further study.
•   Effective sample refers to the part of the sample that makes it into the denominator of an outpatient measure set. This term is defined as the sample for an outpatient measure set minus all the exclusions and contraindications for the outpatient measure set in the sample.
•   A case refers to a single record (or an encounter) within the population. For example, during the first quarter a hospital may have 100 patients who had a principal diagnosis associated with the OP-1, 2, 3, 4, and 5 measures. The hospital's outpatient population would include 100 cases or 100 outpatient records for these measures during the first quarter.
To obtain statistically valid sample data, the sample size should be carefully determined and the sample cases should be randomly selected in such a way that the individual cases in the population have an equal chance of being selected. Only when the sample data truly represent the whole population can the sample-based performance outpatient measure set data be meaningful and useful. Each hospital is ultimately responsible for adhering to the sampling requirements outlined in this manual.

As a general rule/policy of CMS, providers are encouraged to submit as many cases as possible up to the entire population of cases if reasonably feasible. For example, if the raw data can be easily extracted from an existing electronic database or the abstraction burden is manageable, providers should consider submitting the entire population of cases that meet the initial selection criteria. Otherwise, a statistically valid sample can be selected.

Note: Hospitals are NOT required to sample their data if they elect to include all eligible cases. For example, a hospital has 100 cases for the quarter and must select a sample of 80 cases. The hospital may choose to use all 100 cases given the minimal benefit sampling would offer.

2a.24 Data Source (*Check the source(s) for which the measure is specified and tested*)
Electronic adminstrative data/claims, Electronic clinical data, electronic Health/Medical Record, paper medical record/flowsheet, lab data

2a.25 Data source/data collection instrument (*Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.*):
The CMS Abstraction & Reporting Tool or Electronic Health Record

2a.26-28 Data source/data collection instrument reference web page URL or attachment:

2a.29-31 Data dictionary/code table web page URL or attachment: Attachment   Head CT MIF 2010 05 13.pdf

2a.32-35 Level of Measurement/Analysis (*Check the level(s) for which the measure is specified and tested*)
Facility/Agency

2a.36-37 Care Settings (*Check the setting(s) for which the measure is specified and tested*)
Ambulatory Care: Emergency Dept, Ambulatory Care: Hospital Outpatient

2a.38-41 Clinical Services (*Healthcare services being measured, check all that apply*)

TESTING/ANALYSIS

2b. Reliability testing

2b.1 Data/sample (*description of data/sample and size*): N/A

2b.2 Analytic Method (*type of reliability & rationale, method for testing*):
N/A

2b.3 Testing Results (*reliability statistics, assessment of adequacy in the context of norms for the test conducted*):
N/A

2b
C ☐
P ☐
M ☐
N ☐

2c. Validity testing

2c.1 Data/sample (*description of data/sample and size*): N/A

2c.2 Analytic Method (*type of validity & rationale, method for testing*):
N/A

2c.3 Testing Results (*statistical results, assessment of adequacy in the context of norms for the test conducted*):
N/A

2c
C ☐
P ☐
M ☐
N ☐

2d. Exclusions Justified

2d.1 Summary of Evidence supporting exclusion(s):
N/A

2d.2 Citations for Evidence:
N/A

2d.3 Data/sample (*description of data/sample and size*): N/A

2d.4 Analytic Method (*type analysis & rationale*):

2d
C ☐
P ☐
M ☐
N ☐
NA ☐

Rating: C=Completely; P=Partially; M=Minimally; N=Not at all; NA=Not applicable   8

Comment [KP10]: 2b. Reliability testing demonstrates the measure results are repeatable, producing the same results a high proportion of the time when assessed in the same population in the same time period.

Comment [k11]: 8 Examples of reliability testing include, but are not limited to: inter-rater/abstractor or intra-rater/abstractor studies; internal consistency for multi-item scales; test-retest for survey items. Reliability testing may address the data items or final measure score.

Comment [KP12]: 2c. Validity testing demonstrates that the measure reflects the quality of care provided, adequately distinguishing good and poor quality. If face validity is the only validity addressed, it is systematically assessed.

Comment [k13]: 9 Examples of validity testing include, but are not limited to: determining if measure scores adequately distinguish between providers known to have good or poor quality assessed by another valid method; correlation of measure scores with another valid indicator of quality for the specific topic; ability of measure scores to predict scores on some other related valid measure; content validity for multi-item scales/tests. Face validity is a subjective assessment by experts of whether the measure reflects the quality of care (e.g., whether the proportion of patients with BP < 140/90 is a marker of quality). If face validity is the only validity addressed, it is systematically assessed (e.g., ratings by relevant stakeholders) and the measure is judged to represent quality care for the specific topic and that the measure focus is the most important aspect of quality for the specific topic.

Comment [KP14]: 2d. Clinically necessary measure exclusions are identified and must be:
•supported by evidence of sufficient frequency of occurrence so that results are distorted without the exclusion;
AND
•a clinically appropriate exception (e.g., contraindication) to eligibility for the measure focus;
AND
•precisely defined and specified:
–if there is substantial variability in exclusions across providers, the measure is specified so that exclusions are computable and the effect on the measure is transparent (i.e., impact clearly delineated, such as number of cases excluded, exclusion rates by type of exclusion);
if patient preference (e.g., informed decision-making) is a basis for exclusion, there must be evidence that it strongly impacts performance on the measure and the measure must be specified so that the information about patient preference and the effect on the measure is transparent (e.g., numerator category [... [2]]

Comment [k15]: 10 Examples of evidence that an exclusion distorts measure results include, but are not limited to: frequency of occurrence, sensitivity analyses with and without the exclusion, and variability of exclusions across providers.

N/A

2d.5 Testing Results *(e.g., frequency, variability, sensitivity analyses)*:
N/A

2e. Risk Adjustment for Outcomes/ Resource Use Measures	
2e.1 Data/sample *(description of data/sample and size)*: N/A	
2e.2 Analytic Method *(type of risk adjustment, analysis, & rationale)*: N/A	2e C ☐ P ☐ M ☐ N ☐ NA ☐
2e.3 Testing Results *(risk model performance metrics)*: N/A	
2e.4 If outcome or resource use measure is not risk adjusted, provide rationale: N/A	
2f. Identification of Meaningful Differences in Performance	
2f.1 Data/sample from Testing or Current Use *(description of data/sample and size)*: N/A	
2f.2 Methods to identify statistically significant and practically/meaningfully differences in performance *(type of analysis & rationale)*: N/A	2f C ☐ P ☐ M ☐ N ☐
2f.3 Provide Measure Scores from Testing or Current Use *(description of scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance)*: N/A	
2g. Comparability of Multiple Data Sources/Methods	
2g.1 Data/sample *(description of data/sample and size)*: N/A	
2g.2 Analytic Method *(type of analysis & rationale)*: N/A	2g C ☐ P ☐ M ☐ N ☐ NA ☐
2g.3 Testing Results *(e.g., correlation statistics, comparison of rankings)*: N/A	
2h. Disparities in Care	
2h.1 If measure is stratified, provide stratified results *(scores by stratified categories/cohorts)*: N/A	2h C ☐ P ☐ M ☐ N ☐ NA ☐
2h.2 If disparities have been reported/identified, but measure is not specified to detect disparities, provide follow-up plans: N/A	
TAP/Workgroup: What are the strengths and weaknesses in relation to the sub-criteria for *Scientific Acceptability of Measure Properties?*	2
Steering Committee: Overall, to what extent was the criterion, *Scientific Acceptability of Measure Properties***, met?** **Rationale:**	*2* C ☐ P ☐ M ☐ N ☐
3. USABILITY	
Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (evaluation criteria)	Eval Rating

Comment [KP16]: 2e. For outcome measures and other measures (e.g., resource use) when indicated:
•an evidence-based risk-adjustment strategy (e.g., risk models, risk stratification) is specified and is based on patient clinical factors that influence the measured outcome (but not disparities in care) and are present at start of care;Error! Bookmark not defined. OR rationale/data support no risk adjustment.

Comment [k17]: 13 Risk models should not obscure disparities in care for populations by including factors that are associated with differences/inequalities in care such as race, socioeconomic status, gender (e.g., poorer treatment outcomes of African American men with prostate cancer, inequalities in treatment for CVD risk factors between men and women). It is preferable to stratify measures by race and socioeconomic status rather than adjusting out differences.

Comment [KP18]: 2f. Data analysis demonstrates that methods for scoring and analysis of the specified measure allow for identification of statistically significant and practically/clinically meaningful differences in performance.

Comment [k19]: 14 With large enough sample sizes, small differences that are statistically significant may or may not be practically or clinically meaningful. The substantive question may be, for example, whether a statistically significant difference of one percentage point in the percentage of patients who received smoking cessation counseling (e.g., 74% v. 75%) is clinically meaningful; or whether a statistically significant difference of $25 in cost for an episode of care (e.g., $5,000 v. $5,025) is practically meaningful. Measures with overall poor performance may not demonstrate much variability across providers.

Comment [KP20]: 2g. If multiple data sources/methods are allowed, there is demonstration they produce comparable results.

Comment [KP21]: 2h. If disparities in care have been identified, measure specifications, scoring, and analysis allow for identification of disparities through stratification of results (e.g., by race, ethnicity, socioeconomic status, gender);OR rationale/data justifies why stratification is not necessary or not feasible.

3a. Meaningful, Understandable, and Useful Information

3a.1 Current Use: testing not yet completed

3a.2 Use in a public reporting initiative (disclosure of performance results to the public at large) (*If used in a public reporting initiative, provide name of initiative(s), locations, Web page URL(s). If not publicly reported, state the plans to achieve public reporting within 3 years*):
Plan for Public Reporting via Hospital Compare

3a.3 If used in other programs/initiatives (*If used in quality improvement or other programs/initiatives, name of initiative(s), locations, Web page URL(s). If not used for QI, state the plans to achieve use for QI within 3 years*):
Plan for implementation in the Hospital Outpatient Department Quality Data Reporting Program.

Testing of Interpretability   (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*)
3a.4 Data/sample (*description of data/sample and size*): N/A

3a.5 Methods (*e.g., focus group, survey, QI project*):
N/A

3a.6 Results (*qualitative and/or quantitative results and conclusions*):
N/A

	3a
	C ☐
	P ☐
	M ☐
	N ☐

3b/3c. Relation to other NQF-endorsed measures

3b.1 NQF # and Title of similar or related measures:

(for NQF staff use) Notes on similar/related underlined endorsed or submitted measures:

3b. Harmonization
If this measure is related to measure(s) already endorsed by NQF (e.g., same topic, but different target population/setting/data source or different topic but same target population):
3b.2 Are the measure specifications harmonized? If not, why?

	3b
	C ☐
	P ☐
	M ☐
	N ☐
	NA ☐

3c. Distinctive or Additive Value
3c.1 Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:

5.1 Competing Measures If this measure is similar to measure(s) already endorsed by NQF (i.e., on the same topic and the same target population), describe why it is a more valid or efficient way to measure quality:

	3c
	C ☐
	P ☐
	M ☐
	N ☐

TAP/Workgroup: What are the strengths and weaknesses in relation to the sub-criteria for *Usability*?

	3

Steering Committee: Overall, to what extent was the criterion, *Usability*, met?
Rationale:

	3
	C ☐
	P ☐
	M ☐
	N ☐

4. FEASIBILITY

Extent to which the required data are readily available, retrievable without undue burden, and can be

	Eval

Comment [KP22]: 3a. Demonstration that information produced by the measure is meaningful, understandable, and useful to the intended audience(s) for both public reporting (e.g., focus group, cognitive testing) and informing quality improvement (e.g., quality improvement initiatives). An important outcome that may not have an identified improvement strategy still can be useful for informing quality improvement by identifying the need for and stimulating new approaches to improvement.

Comment [KP23]: 3b. The measure specifications are harmonized with other measures, and are applicable to multiple levels and settings.

Comment [k24]: 16 Measure harmonization refers to the standardization of specifications for similar measures on the same topic (e.g., *influenza immunization* of patients in hospitals or nursing homes), or related measures for the same target population (e.g., eye exam and HbA1c for *patients with diabetes*), or definitions applicable to many measures (e.g., age designation for children) so that they are uniform or compatible, unless differences are dictated by the evidence. The dimensions of harmonization can include numerator, denominator, exclusions, and data source and collection instructions. The extent of harmonization depends on the relationship of the measures, the evidence for the specific measure focus, and differences in data sources.

Comment [KP25]: 3c. Review of existing endorsed measures and measure sets demonstrates that the measure provides a distinctive or additive value to existing NQF-endorsed measures (e.g., provides a more complete picture of quality for a particular condition or aspect of healthcare).

Comment [k26]: 5. Demonstration that the measure is superior to competing measures - new submissions and/or endorsed measures (e.g., is a more valid or efficient way to measure).

implemented for performance measurement. (evaluation criteria)	Rating

4a. Data Generated as a Byproduct of Care Processes

4a.1-2 How are the data elements that are needed to compute measure scores generated?
coding/abstraction performed by someone other than person obtaining original information,

	4a
	C ☐
	P ☐
	M ☐
	N ☐

> **Comment [KP27]:** 4a. For clinical measures, required data elements are routinely generated concurrent with and as a byproduct of care processes during care delivery. (e.g., BP recorded in the electronic record, not abstracted from the record later by other personnel; patient self-assessment tools, e.g., depression scale; lab values, meds, etc.)

4b. Electronic Sources

4b.1 Are all the data elements available electronically? (*elements that are needed to compute measure scores are in defined, computer-readable fields, e.g., electronic health record, electronic claims*)
No

4b.2 If not, specify the near-term path to achieve electronic capture by most providers.
No, however work is progressing to make all elements should be available with the implementation of HITSP Panel recommendations.

	4b
	C ☐
	P ☐
	M ☐
	N ☐

> **Comment [KP28]:** 4b. The required data elements are available in electronic sources. If the required data are not in existing electronic sources, a credible, near-term path to electronic collection by most providers is specified and clinical data elements are specified for transition to the electronic health record.

4c. Exclusions

4c.1 Do the specified exclusions require additional data sources beyond what is required for the numerator and denominator specifications?
No

4c.2 If yes, provide justification.

	4c
	C ☐
	P ☐
	M ☐
	N ☐
	NA ☐

> **Comment [KP29]:** 4c. Exclusions should not require additional data sources beyond what is required for scoring the measure (e.g., numerator and denominator) unless justified as supporting measure validity.

4d. Susceptibility to Inaccuracies, Errors, or Unintended Consequences

4d.1 Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure and describe how these potential problems could be audited. If audited, provide results.
The risk in advancing measures that address timeliness is that there may be a decrease in testing performance to avoid measurement, however this is not likely due to the need to assess diagnostic results to ensure a proper diagnosis.

	4d
	C ☐
	P ☐
	M ☐
	N ☐

> **Comment [KP30]:** 4d. Susceptibility to inaccuracies, errors, or unintended consequences and the ability to audit the data items to detect such problems are identified.

4e. Data Collection Strategy/Implementation

4e.1 Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues:
N/A

4e.2 Costs to implement the measure (*costs of data collection, fees associated with proprietary measures*):
Cost/administrative burden has not been assessed, however it is expected facilities with dedicated EHRs will experience less burden in the collection of data.

4e.3 Evidence for costs:
N/A

4e.4 Business case documentation: N/A

	4e
	C ☐
	P ☐
	M ☐
	N ☐

> **Comment [KP31]:** 4e. Demonstration that the data collection strategy (e.g., source, timing, frequency, sampling, patient confidentiality, etc.) can be implemented (e.g., already in operational use, or testing demonstrates that it is ready to put into operational use).

TAP/Workgroup: What are the strengths and weaknesses in relation to the sub-criteria for *Feasibility?*	4

Rating: C=Completely; P=Partially; M=Minimally; N=Not at all; NA=Not applicable   11

Steering Committee: Overall, to what extent was the criterion, *Feasibility*, met? Rationale:	4 C ☐ P ☐ M ☐ N ☐

RECOMMENDATION	
(for NQF staff use) Check if measure is untested and only eligible for time-limited endorsement.	Time-limited ☐
Steering Committee: Do you recommend for endorsement? Comments:	Y ☐ N ☐ A ☐

CONTACT INFORMATION

Co.1 Measure Steward (Intellectual Property Owner)
Co.1 <u>Organization</u>
Centers for Medicare & Medicaid Services | 7500 Securty Blvd | Baltimore | Maryland | 21244

Co.2 <u>Point of Contact</u>
Wanda | Govan-Jenkins, MS, MBA, RN | Wanda.Govan-Jenkins@cms.hhs.gov | 410-786-2699

Measure Developer If different from Measure Steward
Co.3 <u>Organization</u>
Optimal Solutions Group | 5825 University Research Court, Suite 2800 | College Park | Maryland | 20740-9998

Co.4 <u>Point of Contact</u>
Kianna | Banks | kbanks@optimalsolutionsgruop.com | 301-306-1170

Co.5 Submitter If different from Measure Steward POC
Kianna | Banks | kbanks@optimalsolutionsgruop.com | 301-306-1170- |Optimal Solutions Group

Co.6 Additional organizations that sponsored/participated in measure development
Oklahoma Foundation of Medical Quality

ADDITIONAL INFORMATION

Workgroup/Expert Panel involved in measure development
Ad.1 Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.

Dr. Jim Adams Northwest University
Dr. Brent Asplin	Regions Hospital St. Paul
Dr. James Augustine	EMP Management Group
Kristie Baus	CMS
Dr. Dale Bratzler	Oklahoma Foundation for Medical Quality
Katherine Brown	Consumer Purchaser Disclosure Project
Dr. Stephen Cantrill	Denver Health
Joyce Dubow	AARP
Jennifer Eames	Consumer Purchaser Disclosure Project
Jennifer Faerberg	AAMC
Brent Fisher	EMPATH
Nancy Foster	American Hospital Association AHA
Irene Fraser	AHRQ
Dr. Leon Haley Jr.	Emory
Dr. Howard Isenstein	FAH
Rebecca Jones	Oklahoma Foundation for Medical Quality
Dr. Rahul Khare	Northwestern University
Dr. Jon Krohmer	Department of Homeland Security
Dr. Jim Leo	Long Beach Memorial Medical Center
Donna Mason	Vanderbilt University Medical Center

Rating: C=Completely; P=Partially; M=Minimally; N=Not at all; NA=Not applicable   12

Pamela Owens AHRQ
Dr. Michael Rapp   CMS
Dr. Charles Reece   Christiana Care Health System
Dr. Matt Rice   Team Health
Tiffany Sanders CMS
Robert Schafermeyer   Carolinas Medical Center
Dr. David Sklar University of New Mexico Medical Center
Sharon Sprenger   The Joint Commission
Dr. Shari Welch IHI
Marcia Wilson   Urgent Matters-George Washington University

Ad.2 If adapted, provide name of original measure:
Ad.3-5 If adapted, provide original specifications URL or attachment

Measure Developer/Steward Updates and Ongoing Maintenance
Ad.6 Year the measure was first released:
Ad.7 Month and Year of most recent revision: 2010-05
Ad.8 What is your frequency for review/update of this measure? Once implemented, every 6 months
Ad.9 When is the next scheduled review/update for this measure? 2011-01

Ad.10 Copyright statement/disclaimers: Measure is to be released in the public domain.

Ad.11 -13 Additional Information web page URL or attachment:

Date of Submission (*MM/DD/YY*): 05/13/2010

1c. The measure focus is:

- an outcome (e.g., morbidity, mortality, function, health-related quality of life) that is relevant to, or associated with, a national health goal/priority, the condition, population, and/or care being addressed;

OR

- if an intermediate outcome, process, structure, etc., there is **evidence** that supports the specific measure focus as follows:
    - Intermediate outcome - evidence that the measured intermediate outcome (e.g., blood pressure, Hba1c) leads to improved health/avoidance of harm or cost/benefit.
    - Process – evidence that the measured clinical or administrative process leads to improved health/avoidance of harm and
    if the measure focus is on one step in a multi-step care process, it measures the step that has the greatest effect on improving the specified desired outcome(s).
    - Structure - evidence that the measured structure supports the consistent delivery of effective processes or access that lead to improved health/avoidance of harm or cost/benefit.
    - Patient experience – evidence that an association exists between the measure of patient experience of health care and the outcomes, values and preferences of individuals/ the public.
    - Access – evidence that an association exists between access to a health service and the outcomes of, or experience with, care.
    - Efficiency - demonstration of an association between the measured resource use and level of performance with respect to one or more of the other five IOM aims of quality.

2d. Clinically necessary measure exclusions are identified and must be:

- supported by evidence of sufficient frequency of occurrence so that results are distorted without the exclusion; AND

- a clinically appropriate exception (e.g., contraindication) to eligibility for the measure focus; AND

- precisely defined and specified:
    - if there is substantial variability in exclusions across providers, the measure is specified so that exclusions are computable and the effect on the measure is transparent (i.e., impact clearly delineated, such as number of cases excluded, exclusion rates by type of exclusion);

if patient preference (e.g., informed decision-making) is a basis for exclusion, there must be evidence that it strongly impacts performance on the measure and the measure must be specified so that the information about patient preference and the effect on the measure is transparent (e.g., numerator category computed separately, denominator exclusion category computed separately).

Measure Information Form

Measure Set: Emergency Department

Set Measure ID #: ED

Performance Measure Name: Head CT Scan Results for Acute Ischemic Stroke or Hemorrhagic Stroke patients who Received Head CT or MRI Scan Interpretation Within 45 minutes of ED Arrival.
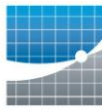
Description: Emergency Department Acute Ischemic Stroke or Hemorrhagic Stroke patients who arrive at the ED within 2 hours of the onset of symptoms who have a head CT or MRI scan performed during the stay and having a time from ED arrival to interpretation of the Head CT or MRI scan within 45 minutes of arrival.

Rationale: Improved access to diagnostic imaging assists clinicians in the decision making process and treatment plans. Over 143,579 people die each year from stroke (Stroke Center, 2009). Stroke is the third leading cause of death in the United States. Each year, about 795,000 people suffer a stroke. About 600,000 of these are first attacks, and 185,000 are recurrent attacks (AHA, 2009). Decreasing radiology turnaround times will enhance decision making capabilities for patients with TIA or Acute Ischemic Stroke. The Food and Drug Administration (FDA) approved the use of tissue plasminogen activator (t-PA) for treatment of acute ischemic stroke when given within three hours of stroke symptom onset (NSA, 2000). Of all strokes, 87 percent are ischemic, 10 percent are intracerebral hemorrhage, and 3 percent are subarachnoid hemorrhage (NINDS, 2004). Because of the therapeutic time window for treatment possibilities, timely completion and results of the CT or MRI scan are imperative and will directly impact the quality of care a patient receives.

Improved access to diagnostics assists clinicians in decision making. Diagnostic imaging and laboratory reports are expected to increase length of stay in the emergency department. Radiology report turnaround time can impact patient throughput times in the emergency department (Delfino, 2008). Decreasing radiology report turnaround times can have impacts across the facility and assist in reducing the length of stay and enhancing decision making capabilities for patient treatment plans (Marquez, 2005). Efficiencies in throughput with tasks can lead to less diversion, less overcrowding, less elopements, and less financial loss (Falvo, 2007).

Type of Measure: Process

Improvement Noted As: An increase in the rate

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Numerator Statement: Emergency Department Acute Ischemic Stroke or Hemorrhagic Stroke patients arriving at the ED within 2 hours of the time last known well, with an order for a head CT or MRI scan whose time from ED arrival to interpretation of the Head CT scan is within 45 minutes of arrival

Included Populations: Not Applicable

Excluded Populations: None

Data Elements:
- *Arrival Time*
- *Head CT or MRI Scan Interpretation Date and Time*
- *Outpatient Encounter Date*

Denominator Statement: Emergency Department Acute Ischemic Stroke or Hemorrhagic Stroke patients arriving at the ED within 2 hours of the time last known well with an order for a head CT or MRI scan.

Included Populations:
- Patients with an *ICD-9-CM Principal Diagnosis Code* for acute ischemic stroke, or hemorrhagic stroke as defined in Appendix A, OP table 10.0; and
- Patients who had a *Head CT or MRI Scan Order* as defined in the Data Dictionary; and
- An *E/M Code* for emergency department encounter as defined in Appendix A, OP Table 1.1

Excluded Populations:
- Patients less than 18 years of age
- Patients who expired in the emergency department
- Patients who left the emergency department against medical advice or discontinued care

Data Elements:
- *Birthdate*
- *Date Last Known Well*
- *Discharge Status*
- *E/M Code*
- *Head CT or MRI Scan Order*
- *Head CT or MRI Scan Interpretation Date and Time*
- *ICD-9-CM Principal Diagnosis Code*
- *Last Known Well*
- *Outpatient Encounter Date*
- *Time Last Known Well*
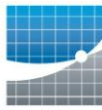
Risk Adjustment: No

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records. Some facilities may prefer to gather data concurrently by identifying patients in the population of interest. This approach provides opportunity for improvement at the point of care/service.
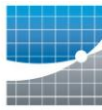
Data Accuracy: N/A

Measure Analysis Suggestions: None

Sampling: Yes, for additional information see the Population and Sampling Specifications section.

**Data Reported As:** Aggregate measure of central tendency

Suggested References:

- American Heart Association. Heart Disease and Stroke statistics, 2009 available at http://www.americanheart.org/downloadable/heart/123783441267009Heart%20and%20Stroke%20Update.pdf
- DelFlorio R, Coughlin B, Coughlin R, Li H, Santoro J, Akey B and Favreau M. Process modification and emergency department radiology service. Emerg Radiol. 2008 Nov;15(6):405-12.
- Falvo T, Grove L, Stachura R, and Zirkin W. The financial impact of ambulance diversions and patient elopements. Acad Emerg Med. 2007 Jan;14(1):58-62.
- Marquez LO. Improving medical imaging report turnaround times. Radiol Mange. 2005 Jan-Feb;27(1):34-7.
- Stoke Center. Stroke Statistics 2009. Available at http://www.strokecenter.org/patients/stats.htm
- Stroke statistical information available at http://www.clivir.com/lessons/show/stroke-statistics-information-charts-and-graphs.html
- STROKE the First Hours Guidelines for Acute Treatment, National Stroke Association, 2000.
- The ATLANTIS, ECASS, and NINDS rt-PA Study Group Investigators. Association of Outcome with early stroke treatment: pooled analysis of ATLANTIS, ECASS, and NINDS rt-PA stroke Trials. Lancet 2004;363:768-774.

Table 10.0 - ICD-9-CM Codes - Ischemic and Hemorrhagic Stroke

Code	ICD-9CM Description	Shortened description
430	Subarachnoid hemorrhage, Meningeal hemorrhage, Ruptured: berry aneurysm, (congenital) cerebral aneurysm NOS,	SUBARACHNOID HEMORRHAGE
431	Intracerebral hemorrhage, Hemorrhage (of): basilar, bulbar, cerebellar, cerebral, cerebromeningeal, cortical, internal capsule, intrapontine, pontine, subcortical, ventricular, Rupture of brain	INTRACEREBRAL HEMORRHAGE
432	Other and unspecified intracranial hemorrhage	INTRCRANIAL HEMORRHAGE
432.9	Unspecified intracranial hemorrhage, Intracranial hemorrhage NOS	INTRACRANIAL HEMORR NOS
433.01	Basilar artery with mention of cerebral infarction	OCL BSLR ART W INFRCT
433.10	Carotid artery without mention of cerebral infarction	OCL CRTD ART WO INFRCT
433.11	Carotid artery with cerebral infarction	OCL CRTD ART W INFRCT
433.21	Vertebral artery with cerebral infarction	OCL VRTB ART W INFRCT
433.31	Multiple and bilateral with cerebral infarction	OCL MLT BI ART W INFRCT
433.81	Other specified precerebral artery with cerebral infarction	OCL SPCF ART W INFRCT
433.91	Unspecified precerebral artery with cerebral infarction	CRBL ART OCL NOS W INFRC
434.00	Cerebral thrombosis; without mention of cerebral infarction	CRBL THRMBS WO INFRCT
434.01	Cerebral thrombosis; with cerebral infarction	CRBL THRMBS W INFRCT
434.11	Cerebral embolism with cerebral infarction	CRBL EMBLSM W INFRCT
434.91	Cerebral artery occlusion, unspecified; with cerebral infarction	CRBL ART OCL NOS W INFRC
436	Acute, but ill-defined cerebrovascular disease	CVA
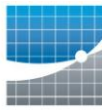
National Quality Forum Steering Committee for the *National Voluntary Consensus Standards for Ambulatory Care – Outpatient Measures 2010*

Measure Revisions

Point-of-Contact:

Kianna Banks, Optimal Solutions Group
Phone: 301.918.7307 Fax: 301.306.1197
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May 17, 2010

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NQF Measure ID: ACP-019-10
Measure Title: Median time to troponin results
Measure revisions: • Title of measure changed to "Troponin Results for Emergency Department acute myocardial infarction (AMI) patients or chest pain patients (with *Probable Cardiac Chest Pain*) Received within 60 minutes of arrival;" • Results for Non-Traumatic Chest Pain Received within 60 minutes of arrival; • Denominator was revised to only include those patients with non-traumatic chest pain and AMI; and • The time frame was revised to capture time of arrival to time the test is complete.
NQF Measure ID: ACP-021-10
Measure Title: Median time from head CT scan order to head CT scan interpretation
Measure revisions: • Title of measure changed to "Head CT Scan Results for Acute Ischemic Stroke or Hemorrhagic stroke who Received Head CT Scan Interpretation within 45 minutes of Arrival;" • Optimal revised the measure to capture Acute Ischemic Stroke and Hemorrhagic Stroke patients who arrive at the ED within 2 hours of the onset of symptoms who have a head CT scan performed during the stay and having a time from ED arrival to interpretation of the Head CT scan within 45 minutes of arrival.
NQF Measure ID: ACP-023-10
Measure Title: Time to pain management for long bone fracture
Measure revisions: • Measure now includes ages >= age 2; • Measure specifications were revised to include parenteral pain medications for patients with shaft fractures of the tibia, femur, and humerus with a median time with a range.

Measure Information Form

Measure Set: Emergency Department

Set Measure ID #: OP-ED-3

Performance Measure Name: Median Time from Head CT Scan Order to Head CT Scan Interpretation

Description: Median time from initial Head CT Scan Order to time Head CT Scan results are reported to emergency department staff.

Rationale: Improved access to diagnostics assists clinicians in decision making. Diagnostic imaging and laboratory reports are expected to increase length of stay in the emergency department. Radiology report turnaround time can impact patient throughput times in the emergency department (DeFlorio, 2008). Decreasing radiology report turnaround times can have impacts across the facility and assist in reducing the length of stay and enhancing decision making capabilities for patient treatment plans (Marquez, 2005). Efficiencies in throughput with tasks can lead to less diversion, less overcrowding, less elopements, and less financial loss (Falvo, 2007).

Type of Measure: Process

Improvement Noted As: A decrease in the median value

Continuous Variable Statement: Time (in minutes) from initial Head CT Scan Order to time Head CT Scan results are reported to emergency department staff.

Included Populations:
- Patients with a patient age on *Outpatient Encounter Date* (*Outpatient Encounter Date – Birthdate*) >= 18 years, and
- Patients who had a *Head CT Scan Order* as defined in the Data Dictionary, and
- An *E/M Code* for emergency department encounter as defined in Appendix A, OP Table 1.0

Excluded Populations:
- Patients less than 18 years of age
- Patients who expired in the emergency department
- Patients who left the emergency department against medical advice or discontinued care

Data Elements:
- *Birthdate*

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- *Discharge Status*
- *E/M Code*
- *Head CT Scan Order*
- *Head CT Scan Order Date and Time*
- *Head CT Scan Interpretation Date and Time*
- *Outpatient Encounter Date*

Risk Adjustment: No

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records. Some facilities may prefer to gather data concurrently by identifying patients in the population of interest. This approach provides opportunity for improvement at the point of care/service.

Data Accuracy:

Measure Analysis Suggestions: None

Sampling: Yes, for additional information see the Population and Sampling Specifications section.

Data Reported As: Aggregate measure of central tendency

Suggested References:

- DeFlorio R, Coughlin B, Coughlin R, Li H, Santoro J, Akey B and Favreau M. Process modification and emergency department radiology service. Emerg Radiol. 2008 Nov;15(6):405-12.
- Marquez LO. Improving medical imaging report turnaround times. Radiol Mange. 2005 Jan-Feb;27(1):34-7.
- Falvo T, Grove L, Stachura R, and Zirkin W. The financial impact of ambulance diversions and patient elopements. Acad Emerg Med. 2007 Jan;14(1):58-62.
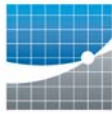
OP-ED-3: Median Time to Chest X-Ray
Continuous Variable Statement: Time (in minutes) from initial chest x-ray order to time chest x-ray exam is completed.
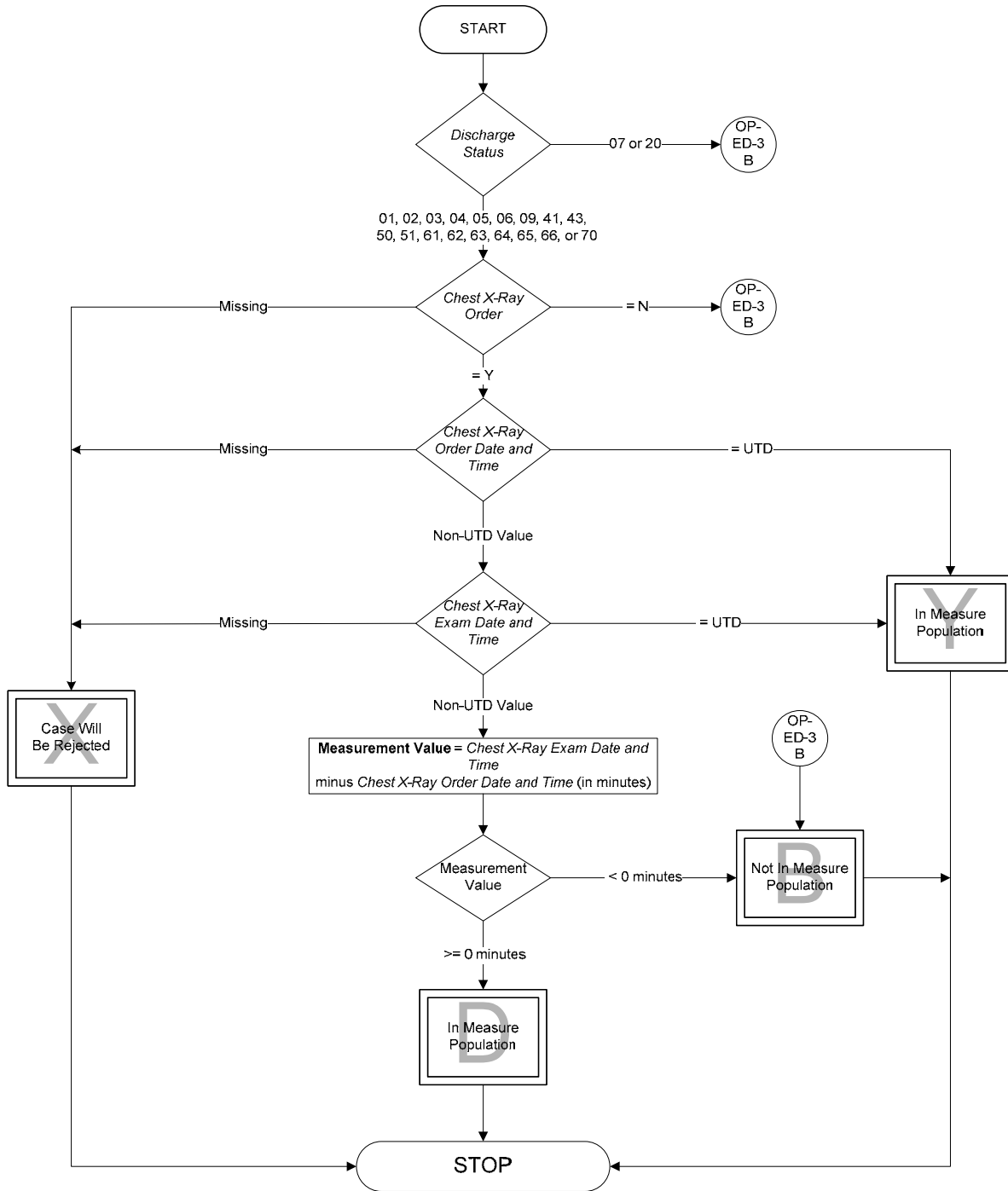
Data Elements

Data Element Name:	*Arrival Time*

Collected For: All Records (used in algorithm for OP-1, OP-2, OP-3, OP-5)

Definition: The earliest documented time (military time) the patient arrived at the outpatient or emergency department.

Suggested Data Collection Question: What was the **earliest** documented time the patient arrived at the outpatient or emergency department?

Format:

Length: 5 - HH:MM (with or without colon) or UTD
Type: Time
Occurs: 1

Allowable Values:

Enter the earliest documented time of arrival
HH   =   Hour (00-23)
MM   =   Minutes (00-59)

UTD   =   Unable to Determine

Time must be recorded in military time format.
With the exception of Midnight and Noon:
- If the time is in the a.m., conversion is not required.
- If the time is in the p.m., add 12 to the clock time hour.

Examples:
Midnight - 00:00   Noon - 12:00
5:31 am - 05:31   5:31 pm - 17:31
11:59 am - 11:59   11:59 pm - 23:59

Note:
00:00 = midnight. If the time is documented as 00:00 11-24-20XX, review supporting documentation to determine if the *Outpatient Encounter Date* should remain 11-24-20XX or if it should be converted to 11-25-20XX.

When converting Midnight or 24:00 to 00:00 do not forget to change the *Outpatient Encounter Date*.
    Example: Midnight or 24:00 on 11-24-20XX= 00:00 on

11-25-20XX

For times that include "seconds," remove the seconds and record the military time.
Example: 15:00:35 would be recorded as 15:00

Note:
Transmission of a case with an invalid time will be rejected from the OPPS Clinical Warehouse. Use of "UTD" for *Arrival Time* allows the case to be accepted into the warehouse, but should only be used when all efforts to locate or determine an *Arrival Time* have been exhausted.

Notes for Abstraction:
- If the time of the outpatient or emergency department arrival is unable to be determined from medical record documentation, enter UTD.
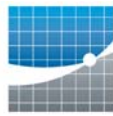- The medical record must be abstracted as documented (taken at "face value"). When the time documented is obviously in error (not a valid time) **and** no other documentation is found that provides this information, the abstractor should select "UTD."
  Example:
  o Documentation indicates that the arrival time was 3300. No other documentation in the medical record provides a valid time. Since the arrival time is outside of the range listed in the Allowable Values for "Hour," it is not a valid time and the abstractor should select "UTD."
- When reviewing records for arrival time do NOT include any documentation from external sources (e.g., ambulance records, physician/advanced practice nurse/physician assistant [physician/APN/PA] office record, laboratory reports, or ECGs) obtained prior to arrival. The intent is to utilize any documentation which reflects processes that occurred after arrival.

NOTE: Medical record documentation should be carefully examined in determining the most correct time of the outpatient or emergency department arrival. The arrival time should NOT be abstracted simply as the earliest time in the acceptable sources, without regard to other (i.e., ancillary services) substantiating documentation. If documentation suggests that the earliest time in the acceptable sources does not reflect the time the patient arrived at the outpatient or emergency department, this time should not be used.

Suggested Data Sources:
- Emergency Department record
- Outpatient record
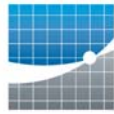
Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Data Element Name: *Birthdate*

Collected For: All Records

Definition: The month, day, and year the patient was born.

NOTE: Patient Age on Outpatient Encounter Date (in years) is calculated by *Outpatient Encounter Date* minus *Birthdate*. The algorithm to calculate age must use the month and day portion of encounter date and birthdate to yield the most accurate age.

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

Format:

Length: 10 – MM-DD-YYYY (includes dashes)
Type: Date
Occurs: 1

Allowable Values:

MM   = Month (01-12)
DD   = Day (01-31)
YYYY   = Year (1880-Current Year)

Notes for Abstraction: Because this data element is critical in determining the population for all measures, the abstractor should NOT assume that the claim information for the birthdate is correct. If the abstractor determines through chart review that the date is incorrect, correct and override the downloaded value. If the abstractor is unable to determine the correct birthdate through chart review, default to the date of birth on the claim information.

Suggested Data Sources:
- Outpatient record
- Emergency Department record

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

DATA ELEMENT NAME: *BMP Order*

COLLECTED FOR: ED

DEFINITION: Documentation in the medical record a Basic Metabolic Panel (BMP) or Electrolyte panel was ordered during emergency department visit.

SUGGESTED DATA COLLECTION QUESTION: Was a BMP or electrolyte panel ordered by the physician/APN/PA during the emergency department visit?

FORMAT: **Length:** 1
Type: Alphanumeric
Occurs: 1

ALLOWABLE VALUES: Y (Yes) There is documentation the physician/APN/PA ordered a BMP or electrolyte panel during the emergency department visit.

N (No)   There is no documentation the physician/APN/PA ordered a BMP or electrolyte panel during the emergency department visit or unable to determine (UTD).

NOTES FOR ABSTRACTION: If there is documentation a BMP or electrolyte panel was ordered and then the test was cancelled by the physician/APN/PA, select NO.

DATA SOURCES: Nurses Notes
Physician Notes/Orders
Radiology Notes

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

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Data Element Name: *BMP Order Date and Time*

Collected For: ED

Definition: The month, day, year and the exact time (military time) represented in hours and minutes at which the earliest BMP or electrolyte panel was ordered.

Suggested Data Collection Question: What is the date and time of the earliest BMP or electrolyte panel order?

Format: **Length:** 16 – MM-DD-YYYY (includes dashes) and HH:MM (with or without colon) or UTD
Type: Date/Time
Occurs: 1

Allowable Values:

MM	=	Month (01-12)
DD	=	Day (01-31)
YYYY	=	Year (2000-Current Year)
HH	=	Hour (00-23)
MM	=	Minutes (00-59)
UTD	=	Unable to Determine

Time must be recorded in military time format.
With the exception of Midnight and Noon:
- If the time is in the a.m., conversion is not required.
- If the time is in the p.m., add 12 to the clock time hour.
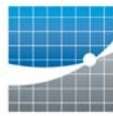
> Examples:
> Midnight - 00:00   Noon - 12:00
> 5:31 am - 05:31   5:31 pm - 17:31
> 11:59 am - 11:59   11:59 pm - 23:59

Note:
00:00 = midnight. If the time is documented as 00:00 11-24-20XX, review supporting documentation to determine if the Discharge Date should remain 11-24-20XX or if it should be converted to 11-25-20XX.

When converting Midnight or 24:00 to 00:00 do not forget to

change the Discharge Date.
Example: Midnight or 24:00 on 11-24-20XX = 00:00 on 11-25-20XX

Note:
Transmission of a case with an invalid date will be rejected from the OPPS Clinical Warehouse. Use of "UTD" for *BMP Order Date and Time* allows the case to be accepted into the warehouse.

Notes for Abstraction:

For times that include "seconds", remove the seconds and record the military time
Example:
15:00:35 would be recorded as 15:00

If the date and/or time of the BMP or electrolyte panel order is unable to be determined from medical record documentation, abstract UTD.

Abstract the order of the earliest BMP or electrolyte panel ordered (closest to arrival).

If there are multiple order times documented for the same BMP or electrolyte panel order, use the earliest order time.

Suggested Data Sources:

- Emergency Department record

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Data Element Name: *BMP Results Date and Time*

Collected For: ED

Definition: The month, day, year and the exact time (military time) represented in hours and minutes at which the earliest BMP or electrolyte panel results were reported.

Suggested Data Collection Question: What is the date and time of the earliest BMP or electrolyte panel results?

Format: **Length:** 16 – MM-DD-YYYY (includes dashes) and HH:MM (with or without colon) or UTD
Type: Date/Time
Occurs: 1

Allowable Values:

MM = Month (01-12)
DD = Day (01-31)
YYYY = Year (2000-Current Year)

HH = Hour (00-23)
MM = Minutes (00-59)

UTD = Unable to Determine

Time must be recorded in military time format.
With the exception of Midnight and Noon:
- If the time is in the a.m., conversion is not required.
- If the time is in the p.m., add 12 to the clock time hour.

Examples:
Midnight - 00:00   Noon - 12:00
5:31 am - 05:31   5:31 pm - 17:31
11:59 am - 11:59   11:59 pm - 23:59

Note:
00:00 = midnight. If the time is documented as 00:00 11-24-20XX, review supporting documentation to determine if the Discharge Date should remain 11-24-20XX or if it should be converted to 11-25-20XX.

When converting Midnight or 24:00 to 00:00 do not forget to

change the Discharge Date.
Example: Midnight or 24:00 on 11-24-20XX = 00:00 on 11-25-20XX

Note:
Transmission of a case with an invalid date will be rejected from the OPPS Clinical Warehouse. Use of "UTD" for *BMP Results Date and Time* allows the case to be accepted into the warehouse.

Notes for Abstraction:

For times that include "seconds", remove the seconds and record the military time
Example:
15:00:35 would be recorded as 15:00

If the date and/or time of the BMP or electrolyte panel result is unable to be determined from medical record documentation, abstract UTD.

Abstract the result of the earliest BMP or electrolyte panel ordered (closest to arrival).

If there are multiple result times documented for the same BMP or electrolyte panel, use the earliest result time.

Suggested Data Sources:

- Emergency Department record

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

DATA ELEMENT NAME: *CBC Order*

COLLECTED FOR: ED

DEFINITION: Documentation in the medical record a Completed Blood Count (CBC) was ordered during the emergency department visit.

SUGGESTED DATA COLLECTION QUESTION: Was a CBC ordered by the physician/APN/PA during the emergency department visit?

FORMAT: **Length:** 1
Type: Alphanumeric
Occurs: 1

ALLOWABLE VALUES: Y (Yes) There is documentation a CBC was ordered by the physician/APN/PA during the emergency department visit.

N (No) There is no documentation a CBC was ordered by the physician/APN/PA during the emergency department visit.

NOTES FOR ABSTRACTION: If there is documentation a CBC was ordered and then the test was cancelled by the physician/APN/PA, select NO.

DATA SOURCES: Nurses Notes
Physician Notes/Orders
Radiology Notes

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Data Element Name: *CBC Order Date and Time*

Collected For: ED

Definition: The month, day, year and the exact time (military time) represented in hours and minutes at which the earliest Complete Blood Count (CBC) was ordered.

Suggested Data Collection Question: What is the date and time of the earliest CBC order?

Format: **Length:** 16 – MM-DD-YYYY (includes dashes) and HH:MM (with or without colon) or UTD
Type: Date/Time
Occurs: 1

Allowable Values:
MM   =   Month (01-12)
DD   =   Day (01-31)
YYYY   =   Year (2000-Current Year)

HH   =   Hour (00-23)
MM   =   Minutes (00-59)

UTD   =   Unable to Determine

Time must be recorded in military time format.
With the exception of Midnight and Noon:
- If the time is in the a.m., conversion is not required.
- If the time is in the p.m., add 12 to the clock time hour.

   Examples:
   Midnight - 00:00   Noon - 12:00
   5:31 am - 05:31   5:31 pm - 17:31
   11:59 am - 11:59   11:59 pm - 23:59

Note:
00:00 = midnight. If the time is documented as 00:00 11-24-20XX, review supporting documentation to determine if the Discharge Date should remain 11-24-20XX or if it should be converted to 11-25-20XX.

When converting Midnight or 24:00 to 00:00 do not forget to change the Discharge Date.
Example: Midnight or 24:00 on 11-24-20XX = 00:00 on 11-25-20XX

Note:
Transmission of a case with an invalid date will be rejected from the OPPS Clinical Warehouse. Use of "UTD" for *CBC Order Date and Time* allows the case to be accepted into the warehouse.

Notes for Abstraction:

For times that include "seconds", remove the seconds and record the military time
Example:
15:00:35 would be recorded as 15:00

If the date and/or time of the CBC order is unable to be determined from medical record documentation, abstract UTD.

Abstract the order of the earliest CBC ordered (closest to arrival).

If there are multiple order times documented for the same CBC order, use the earliest order time.

Suggested Data Sources:
- Emergency Department record

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Data Element Name: *CBC Results Date and Time*

Collected For: ED

Definition: The month, day, year and the exact time (military time) represented in hours and minutes at which the earliest Completed Blood Count (CBC) results were reported.

Suggested Data Collection Question: What is the date and time of the earliest CBC results?

Format: **Length:** 16 – MM-DD-YYYY (includes dashes) and HH:MM (with or without colon) or UTD
Type: Date/Time
Occurs: 1

Allowable Values:

MM = Month (01-12)
DD = Day (01-31)
YYYY = Year (2000-Current Year)

HH = Hour (00-23)
MM = Minutes (00-59)

UTD = Unable to Determine

Time must be recorded in military time format.
With the exception of Midnight and Noon:
- If the time is in the a.m., conversion is not required.
- If the time is in the p.m., add 12 to the clock time hour.

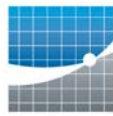Examples:
Midnight - 00:00   Noon - 12:00
5:31 am - 05:31   5:31 pm - 17:31
11:59 am - 11:59   11:59 pm - 23:59

Note:
00:00 = midnight. If the time is documented as 00:00 11-24-20XX, review supporting documentation to determine if the Discharge Date should remain 11-24-20XX or if it should be converted to 11-25-20XX.

When converting Midnight or 24:00 to 00:00 do not forget to

change the Discharge Date.
Example: Midnight or 24:00 on 11-24-20XX = 00:00 on 11-25-20XX

Note:
Transmission of a case with an invalid date will be rejected from the OPPS Clinical Warehouse. Use of "UTD" for *CBC Results Date and Time* allows the case to be accepted into the warehouse.

Notes for Abstraction:

For times that include "seconds", remove the seconds and record the military time
Example:
15:00:35 would be recorded as 15:00

If the date and/or time of the CBC result is unable to be determined from medical record documentation, abstract UTD.

Abstract the result of the earliest CBC ordered (closest to arrival).

If there are multiple result times documented for the same CBC, use the earliest result time.

Suggested Data Sources:
- Emergency Department record

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

DATA ELEMENT NAME: *Chest X-Ray Order*

COLLECTED FOR: ED

DEFINITION: Documentation in the medical record a chest x-ray was ordered during the emergency department visit.

SUGGESTED DATA COLLECTION QUESTION: Was a chest x-ray ordered by the physician/APN/PA during the emergency department visit?

FORMAT:

     Length: 1
     Type: Alphanumeric
     Occurs: 1

ALLOWABLE VALUES: Y (Yes) There is documentation a chest x-ray was ordered by the physician/APN/PA during the emergency department visit.

     N (No) There is no documentation a chest x-ray was ordered by the physician/APN/PA during the emergency department visit.

NOTES FOR ABSTRACTION: For purposes of the chest x-ray order use these priority sources:

- Nurses notes
- Physician notes/orders
- Radiology notes

DATA SOURCES: Nurses Notes
Physician Notes/Orders
Radiology Notes

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Data Element Name: *Chest X-Ray Order Date and Time*

Collected For:	ED
Definition:	The month, day, year and the exact time (military time) represented in hours and minutes at which the earliest Chest X-Ray (CXR) panel was ordered.
Suggested Data Collection Question:	What is the date and time of the earliest CXR order?

Format:

Length: 16 – MM-DD-YYYY (includes dashes) and HH:MM (with or without colon) or UTD
Type: Date/Time
Occurs: 1

Allowable Values:

MM	=	Month (01-12)
DD	=	Day (01-31)
YYYY	=	Year (2000-Current Year)
HH	=	Hour (00-23)
MM	=	Minutes (00-59)
UTD	=	Unable to Determine

Time must be recorded in military time format.
With the exception of Midnight and Noon:
- If the time is in the a.m., conversion is not required.
- If the time is in the p.m., add 12 to the clock time hour.

Examples:
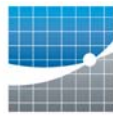|	
Midnight - 00:00	Noon - 12:00
5:31 am - 05:31	5:31 pm - 17:31
11:59 am - 11:59	11:59 pm - 23:59

Note:
00:00 = midnight. If the time is documented as 00:00 11-24-20XX, review supporting documentation to determine if the Discharge Date should remain 11-24-20XX or if it should be converted to 11-25-20XX.

When converting Midnight or 24:00 to 00:00 do not forget to change the Discharge Date.
Example: Midnight or 24:00 on 11-24-20XX = 00:00 on 11-

25-20XX

Note:
Transmission of a case with an invalid date will be rejected from the OPPS Clinical Warehouse. Use of "UTD" for *CXR Order Date and Time* allows the case to be accepted into the warehouse.

Notes for Abstraction:

For times that include "seconds", remove the seconds and record the military time
Example:
15:00:35 would be recorded as 15:00

If the date and/or time of the CXR order is unable to be determined from medical record documentation, abstract UTD.

Abstract the order of the earliest CXR ordered (closest to arrival).

If there are multiple order times documented for the same CXR order, use the earliest order time.

Suggested Data Sources:
- Emergency Department record

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Data Element Name: *Chest X-Ray Exam Date and Time*

Collected For: ED

Definition: The month, day, year and the exact time (military time) represented in hours and minutes at which the earliest Chest X-Ray exam was completed.

Suggested Data Collection Question: What is the date and time of the earliest Chest X-Ray exam was completed?

Format: **Length:** 16 – MM-DD-YYYY (includes dashes) and HH:MM (with or without colon) or UTD
Type: Date/Time
Occurs: 1

Allowable Values:

MM   =   Month (01-12)
DD   =   Day (01-31)
YYYY   =   Year (2000-Current Year)

HH   =   Hour (00-23)
MM   =   Minutes (00-59)

UTD   =   Unable to Determine

Time must be recorded in military time format.
With the exception of Midnight and Noon:
- If the time is in the a.m., conversion is not required.
- If the time is in the p.m., add 12 to the clock time hour.

> Examples:
> Midnight - 00:00   Noon - 12:00
> 5:31 am - 05:31   5:31 pm - 17:31
> 11:59 am - 11:59   11:59 pm - 23:59

Note:
00:00 = midnight. If the time is documented as 00:00 11-24-20XX, review supporting documentation to determine if the Discharge Date should remain 11-24-20XX or if it should be converted to 11-25-20XX.

When converting Midnight or 24:00 to 00:00 do not forget to

change the Discharge Date.
Example: Midnight or 24:00 on 11-24-20XX = 00:00 on 11-25-20XX

Note:
Transmission of a case with an invalid date will be rejected from the OPPS Clinical Warehouse. Use of "UTD" for *Chest X-Ray Exam Date and Time* allows the case to be accepted into the warehouse.

Notes for Abstraction:

For times that include "seconds", remove the seconds and record the military time
Example:
15:00:35 would be recorded as 15:00

If the date and/or time of the Chest X-Ray exam is unable to be determined from medical record documentation, abstract UTD.

Abstract the result of the earliest Chest X-Ray exam ordered (closest to arrival).

If there are multiple result times documented for the same Chest X-Ray exam, use the earliest time.

Suggested Data Sources:

- Emergency Department record

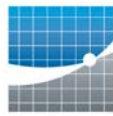**Guidelines for Abstraction:**

Inclusion	Exclusion
None	None

Data Element Name: *Discharge Status*

Collected For: ED

Definition: The place or setting to which the patient was discharged from the emergency department.

Suggested Data
Collection Question: What was the patient's discharge disposition from the emergency department?

Format: **Length:**   2
Type: Alphanumeric
Occurs: 1

Allowable Values: 01   **Discharged to home care or self care (routine discharge)**
Usage Note: Includes discharge to home; home on oxygen if DME only; any other DME only; group home, foster care, independent living and other residential care arrangements; outpatient programs, such as partial hospitalization or outpatient chemical dependency programs.

02   **Discharged/transferred to a short term general hospital for inpatient care (Acute Care Facility)**

03   **Discharged/transferred to skilled nursing facility (SNF) with Medicare certification in anticipation of covered skilled care**
Usage Note: Medicare indicates that the patient is discharged/transferred to a Medicare certified nursing facility. For hospitals with an approved swing bed arrangement, use Code 61-Swing Bed. For reporting other discharges/transfers to nursing facilities, see 04 and 64.

04   **Discharged/transferred to a facility that provides custodial or supportive care**
Usage Note: Includes intermediate care facilities (ICFs) if specifically designated at the state level. Also used to designate patients that are discharged/transferred to a nursing facility with neither Medicare nor Medicaid certification and for discharges/transfers to Assisted
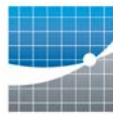
Living Facilities.

05 **Discharged/transferred to a designate cancer center or children's hospital**
Usage Note: Transfers to non-designated cancer hospitals should use Code 02. A list of (National Cancer Institute) Designated Cancer Centers can be found at
http://www3.cancer.gov/cancercenters/centerslist.html

06 **Discharged/transferred to home under care of organized home health service organization in anticipation of covered skilled care**
Usage Note: Report this code when the patient is discharged/transferred to home **with a written plan of care** (tailored to the patient's medical needs) **for home care services.**

07 **Left against medical advice or discontinued care**

09 **Admitted as an inpatient to this hospital**
Usage Note: For use only on Medicare outpatient claims. Applies only to those Medicare outpatient services that begin greater than three days prior to an admission.

20 **Expired**

21 **Discharged/transferred to court/law enforcement**
Usage Note: Includes transfers to incarceration facilities such as jail, prison, or other detention facilities.

41 **Expired in a medical facility (e.g., hospital, SNF, ICF or freestanding hospice)**
Usage Note: For use only on Medicare and TRICARE claims for hospice care.

43 **Discharged/transferred to a Federal health care facility**

Usage Note: Discharges and transfers to a government operated health care facility such as a Department of Defense hospital, a Veteran's Administration hospital or a Veteran's Administration nursing facility. To be used whenever the destination at discharge is a federal health care facility, whether the patient resides there or not.

50 **Hospice - home**

51 **Hospice - medical facility (certified) providing hospice level of care**

61 **Discharged/transferred to hospital-based Medicare approved swing bed**
Usage Note: Medicare-used for reporting patients discharged/ transferred to a SNF level of care within the hospital's approved swing bed arrangement.

62 **Discharged/transferred to an inpatient rehabilitation facility (IRF) including rehabilitation distinct part units of a hospital**

63 **Discharged/transferred to a Medicare certified long term care hospital (LTCH)**
Usage Note: For hospitals that meet the Medicare criteria for LTCH certification.

64 **Discharged/transferred to a nursing facility certified under Medicaid but not certified under Medicare**

65 **Discharged/transferred to a psychiatric hospital or psychiatric distinct part of a hospital**

66 **Discharged/transferred to a Critical Access Hospital (CAH)**

70 **Discharged/transferred to another type of Health Care Institution not Defined Elsewhere in this Code List (see code 05)**

Note:
CMS is aware that there are additional UB-04 allowable values for this data element; however, they are not used for

the hospital outpatient measures at this time.

Notes for Abstraction:	• The values for *Discharge Status* are taken from the National Uniform Billing Committee (NUBC) manual which is used by the billing/HIM to complete the UB-04.
	• Because this data element is critical in determining the population for these measures, the abstractor should NOT assume that the UB-04 value is what is reflected in the medical record. For abstraction purposes, it is important that the medical record reflect the appropriate discharge status. If the abstractor determines through chart review that the claim information discharge status is not what is reflected in the medical record, correct and override the downloaded value.
Suggested Data Sources:	• Emergency Department record
	• UB-04

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Data Element Name: *E/M Code*

Collected For: OP-1, OP-2, OP-3, OP-4, OP-5

Definition: The code used to report evaluation and management services provided in the hospital outpatient department clinic or emergency department.

Suggested Data Collection Question: What was the E/M Code documented for this outpatient encounter?

Format:
Length: 5
Type: Alphanumeric
Occurs: 1

Allowable Values: Select the E/M code from Appendix A, OP Table 1.0.

Suggested Data Sources:
- Outpatient record

Guidelines for Abstraction:

Inclusion	Exclusion
Refer to Appendix A, OP Table 1.0, E/M Codes.	None

DATA ELEMENT NAME:	Head *CT Scan Order*
COLLECTED FOR:	ED
DEFINITION:	Documentation in the medical record that a computed topography (CT) scan of the head was ordered during emergency department visit.
SUGGESTED DATA COLLECTION QUESTION:	Was a Head CT scan ordered by the physician during the emergency department visit?
FORMAT:	**Length:** 1 **Type:** Alphanumeric **Occurs:** 1

ALLOWABLE VALUES:

Y (Yes) There is documentation a Head CT scan was ordered by the physician/PA/APN during the emergency department visit.

was
emergency

N (No)   There is no documentation a Head CT scan ordered by the physician/PA/APN during the department visit.

NOTES FOR ABSTRACTION: For purposes of the Head CT Scan Order use these priority sources:

- Nurses notes
- Physician notes/orders
- Radiology notes

DATA SOURCES: Nurses Notes
Physician Notes/Orders
Radiology Notes

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Data Element Name: *Head CT Scan Interpretation Date and Time*

Collected For: ED

Definition: The month, day, year and the exact time (military time) represented in hours and minutes at which the earliest Head CT Scan Interpretation was completed.

Suggested Data Collection Question: What is the date and time of the earliest Head CT Scan Intepretation exam was completed?

Format: **Length:** 16 –   MM-DD-YYYY (includes dashes) and
    HH:MM (with or without colon) or UTD
    Type: Date/Time
    Occurs: 1

Allowable Values: MM   =   Month (01-12)
    DD   =   Day (01-31)
    YYYY   =   Year (2000-Current Year)

    HH   =   Hour (00-23)
    MM   =   Minutes (00-59)

    UTD   =   Unable to Determine

    Time must be recorded in military time format.
    With the exception of Midnight and Noon:
    - If the time is in the a.m., conversion is not required.
    - If the time is in the p.m., add 12 to the clock time hour.

        Examples:
        Midnight - 00:00   Noon - 12:00
        5:31 am - 05:31   5:31 pm - 17:31
        11:59 am - 11:59   11:59 pm - 23:59

    Note:
    00:00 = midnight. If the time is documented as 00:00 11-24-20XX, review supporting documentation to determine if the Discharge Date should remain 11-24-20XX or if it should be converted to 11-25-20XX.

    When converting Midnight or 24:00 to 00:00 do not forget to

change the Discharge Date.
Example: Midnight or 24:00 on 11-24-20XX = 00:00 on 11-25-20XX

Note:
Transmission of a case with an invalid date will be rejected from the OPPS Clinical Warehouse. Use of "UTD" for *Head CT Scan Interpretation Date and Time* allows the case to be accepted into the warehouse.

Notes for Abstraction:

For times that include "seconds", remove the seconds and record the military time
Example:
15:00:35 would be recorded as 15:00

If the date and/or time of the Head CT Scan Interpretation results is unable to be determined from medical record documentation, abstract UTD.

Abstract the result of the earliest Head Ct Scan Interpretation ordered (closest to arrival).

If there are multiple result times documented for the same Head CT Scan, use the earliest time.

Suggested Data Sources:

- Emergency Department record

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Data Element Name: *Heat CT Scan Order Date and Time*

Collected For: ED

Definition: The month, day, year and the exact time (military time) represented in hours and minutes at which the earliest Head CT Scan was ordered.

Suggested Data Collection Question: What is the date and time of the earliest Head CT Scan order?

Format: **Length:**   16 – MM-DD-YYYY (includes dashes) and HH:MM (with or without colon) or UTD
Type: Date/Time
Occurs: 1

Allowable Values:

MM   =   Month (01-12)
DD   =   Day (01-31)
YYYY   =   Year (2000-Current Year)

HH   =   Hour (00-23)
MM   =   Minutes (00-59)

UTD   =   Unable to Determine

Time must be recorded in military time format.
With the exception of Midnight and Noon:
- If the time is in the a.m., conversion is not required.
- If the time is in the p.m., add 12 to the clock time hour.

Examples:
Midnight - 00:00   Noon - 12:00
5:31 am - 05:31   5:31 pm - 17:31
11:59 am - 11:59   11:59 pm - 23:59

Note:
00:00 = midnight. If the time is documented as 00:00 11-24-20XX, review supporting documentation to determine if the Discharge Date should remain 11-24-20XX or if it should be converted to 11-25-20XX.

When converting Midnight or 24:00 to 00:00 do not forget to

change the Discharge Date.
Example: Midnight or 24:00 on 11-24-20XX = 00:00 on 11-25-20XX

Note:
Transmission of a case with an invalid date will be rejected from the OPPS Clinical Warehouse. Use of "UTD" for *Head CT Scan Order Date and Time* allows the case to be accepted into the warehouse.

Notes for Abstraction:

For times that include "seconds", remove the seconds and record the military time
Example:
15:00:35 would be recorded as 15:00

If the date and/or time of the Head CT Scan order is unable to be determined from medical record documentation, abstract UTD.

Abstract the order of the earliest Head CT Scan ordered (closest to arrival).

If there are multiple order times documented for the same Head CT Scan order, use the earliest order time.

Suggested Data Sources:

- Emergency Department record

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Data Element Name: *ICD-9-CM Principal Diagnosis Code*

Collected For: ED

Definition: The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) code associated with the diagnosis established after study to be chiefly responsible for the outpatient encounter.

Suggested Data Collection Question: What was the ICD-9-CM code selected as the principal diagnosis for this record?

Format:
Length: 6 (with or without a decimal point)
Type: Alphanumeric
Occurs: 1

Allowable Values: Any valid ICD-9-CM diagnosis code

Notes for Abstraction: The principal diagnosis is defined in the Uniform Hospital Discharge Data Set (UHDDS) as "that condition established after study to be chiefly responsible for occasioning the admission of the patient to the hospital for care."

Suggested Data Sources:
- Outpatient record
- Emergency Department record
- UB-04, Field Location: 67

Guidelines for Abstraction:

Inclusion	Exclusion
Refer to Appendix A, ICD-9-CM Code tables	None

DATA ELEMENT NAME: *Left Before Seen by Physician*

COLLECTED FOR: ED

DEFINITION: There is documentation the patient left the emergency department prior to being seen by the physician/APN/PA.

SUGGESTED DATA COLLECTION QUESTION: Was there documentation the patient left the emergency department before being seen by the physician/PA/APN?

FORMAT: **Length:** 1
Type: Alphanumeric
Occurs: 1

ALLOWABLE VALUES: Y (Yes) There is documentation the patient left the emergency department prior to being seen by the physician/PA/APN.

N (No) There is no documentation the patient left the emergency department prior to being seen by the physician/PA/APN or unable to determine (UTD).

NOTES FOR ABSTRACTION: If there is physician/PA/APN documentation of patient assessment select NO.

Left before seen by the physician/APN/PA is different than leaving against medical advice (AMA) or leaving before treatment is complete. If there is documentation of the patient leaving AMA or leaving before treatment complete, select NO.

DATA SOURCES: Nurses Notes
Physician Notes

Guidelines for Abstraction:

Inclusion	Exclusion
Refer to Appendix A, ICD-9-CM Code tables	None

Data Element Name: *Observation Services*

Collected For: Informational Only: ED-1, ED-2

Definition: Observation services are those services furnished by a hospital on the hospital's premises, including use of a bed and periodic monitoring by a hospital's nursing or other staff, which are reasonable and necessary to evaluate an outpatient's condition or determine the need for a possible admission to the hospital as an inpatient.

Suggested Data Collection Question: Was there documentation the patient was placed in observation services during the encounter or hospitalization?

Format:
  Length: 1
  Type: Alphanumeric
  Occurs: 1

Allowable Values:

Y (Yes)   There was documentation the patient was placed into observation services in this facility's emergency department.

N (No)   There was no documentation the patient was placed into observation services in this facility's emergency department or unable to determine from medical record documentation.

Notes for Abstraction:
- If there is documentation the patient was placed into observation services and received care in observation provide by the emergency department or an observation unit of the emergency department, select "Yes."
- If there is documentation the patient is being admitted for observation outside the emergency department, select "No."
- If there is no documentation the patient received services in observation either in the emergency department or was to be admitted to another department for observation, select "No."
- The intent is to capture emergency department patients placed into observation services prior to admission to the facility as an inpatient.

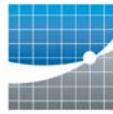**Suggested Data Sources:**
ONLY ALLOWABLE SOURCES:
Emergency Department record

Inclusion Guidelines for Abstraction:
None

Exclusion Guidelines for Abstraction:
None

Data Element Name: *Outpatient Encounter Date*

Collected For: All Records

Definition: The documented month, day and year the patient arrived in the hospital outpatient setting.

Suggested Data Collection Question: What was date the patient arrived in the hospital outpatient setting?

Format:
Length: 10 – MM-DD-YYYY (includes dashes)
Type: Date
Occurs: 1

Allowable Values:
MM = Month (01-12)
DD = Day (01-31)
YYYY = Year (2008-Current Year)

Notes for Abstraction:
- The intent of this data element is to determine the date the patient arrived in the hospital outpatient setting.
- UTD is NOT an allowable value.
- Consider the outpatient encounter date as the earliest documented date the patient arrived in the applicable hospital outpatient setting.

Suggested Data Sources:
- Outpatient record
- Emergency Department record

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

DATA ELEMENT NAME: *Pain Medication*

COLLECTED FOR: ED

DEFINITION: Documentation the patient was administered oral or parenteral pain medication. Assessment and relief of pain is an expectation patients have when they visit the ED. Documentation of medication administration is a standard of care.

SUGGESTED DATA COLLECTION QUESTION: Was there documentation the patient received oral or parenteral pain medication during this emergency department visit?

FORMAT:
 Length: 1
Type: Alphanumeric
Occurs: 1

ALLOWABLE VALUES: Y (Yes) There is documentation the patient received oral or parenteral pain medication or there is documentation the patient refused the pain medication during this emergency department visit.

N (No) There is no documentation the patient received oral of parenteral pain medication during this emergency department visit or unable to determine from medical record documentation.

NOTES FOR ABSTRACTION: **In order to select "yes":**
- There must be documentation in the medical record the medication was administered in the emergency department, not just ordered.
- There must be documentation in the medical record of the medication route either in the physician orders or the medication administration documentation.
- Medication administration documentation must include the signature or initials of the person administering the medication.
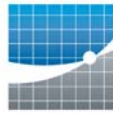
- If there is documentation in the medical record the patient received pain medication prior to arrival, abstract as "yes".
- If there is physician/PA/APN documentation of a reason for not administering pain medication, select "No". E.g. pt unconscious, decreased respiratory rate, patient refusal.

DATA SOURCES: Nurses Notes
Physician Notes

Guidelines for Abstraction:

Inclusion	Exclusion
See Appendix C, OP Table 8.1 for a list of pain medications	None

Data Element Name: *Pain Medication Date and Time*

Collected For: ED

Definition: The month, day, year and the exact time (military time) represented in hours and minutes at which the earliest oral or parenteral pain medication was administered.

Suggested Data Collection Question: What is the date and time of the earliest pain medication administration?

Format: **Length:** 16 – MM-DD-YYYY (includes dashes) and HH:MM (with or without colon) or UTD
Type: Date/Time
Occurs: 1

Allowable Values:

MM   =   Month (01-12)
DD   =   Day (01-31)
YYYY   =   Year (2000-Current Year)

HH   =   Hour (00-23)
MM   =   Minutes (00-59)

UTD   =   Unable to Determine

Time must be recorded in military time format.
With the exception of Midnight and Noon:
- If the time is in the a.m., conversion is not required.
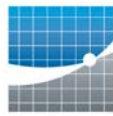- If the time is in the p.m., add 12 to the clock time hour.

> Examples:
> Midnight - 00:00   Noon - 12:00
> 5:31 am - 05:31   5:31 pm - 17:31
> 11:59 am - 11:59   11:59 pm - 23:59

Note:
00:00 = midnight. If the time is documented as 00:00 11-24-20XX, review supporting documentation to determine if the Discharge Date should remain 11-24-20XX or if it should be converted to 11-25-20XX.

When converting Midnight or 24:00 to 00:00 do not forget to

change the Discharge Date.
Example: Midnight or 24:00 on 11-24-20XX = 00:00 on 11-25-20XX

Note:
Transmission of a case with an invalid date will be rejected from the OPPS Clinical Warehouse. Use of "UTD" for *Pain Medication Date and Time* allows the case to be accepted into the warehouse.

Notes for Abstraction:

For times that include "seconds", remove the seconds and record the military time
Example:
15:00:35 would be recorded as 15:00

If the date and/or time of the pain medication administration is unable to be determined from medical record documentation, abstract UTD.

If there are multiple medication administration times documented, use the earliest result time.

If there is documentation in the medical record the paitent received pain medication prior to arrival abstract the pain medication date and time as the patient arrival date and time.

Suggested Data Sources:

- Emergency Department record

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

DATA ELEMENT NAME: *Troponin Order*

COLLECTED FOR: ED

DEFINITION: Documentation in the medical record a Troponin was ordered during emergency department visit.

SUGGESTED DATA COLLECTION QUESTION: Was a Troponin ordered by the physician/APN/PA during the emergency department visit?

FORMAT: **Length:** 1
Type: Alphanumeric
Occurs: 1

ALLOWABLE VALUES: Y (Yes) There is documentation the physician/APN/PA ordered a Troponin during the emergency department visit.

N (No)   There is no documentation the physician/APN/PA ordered a Troponin during the emergency department visit or unable to determine (UTD).

NOTES FOR ABSTRACTION: If there is documentation a Troponin was ordered and then the test was cancelled by the physician/APN/PA, select NO.

DATA SOURCES: Nurses Notes
Physician Notes/Orders
Radiology Notes

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Data Element Name: *Troponin Order Date and Time*

Collected For: ED

Definition: The month, day, year and the exact time (military time) represented in hours and minutes at which the earliest Troponin was ordered.

Suggested Data Collection Question: What is the date and time of the earliest Troponin order?

Format: **Length:** 16 – MM-DD-YYYY (includes dashes) and HH:MM (with or without colon) or UTD
Type: Date/Time
Occurs: 1

Allowable Values:

MM = Month (01-12)
DD = Day (01-31)
YYYY = Year (2000-Current Year)

HH = Hour (00-23)
MM = Minutes (00-59)

UTD = Unable to Determine

Time must be recorded in military time format.
With the exception of Midnight and Noon:
- If the time is in the a.m., conversion is not required.
- If the time is in the p.m., add 12 to the clock time hour.

    Examples:
    Midnight - 00:00   Noon - 12:00
    5:31 am - 05:31   5:31 pm - 17:31
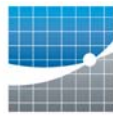   11:59 am - 11:59   11:59 pm - 23:59

Note:
00:00 = midnight. If the time is documented as 00:00 11-24-20XX, review supporting documentation to determine if the Discharge Date should remain 11-24-20XX or if it should be converted to 11-25-20XX.

When converting Midnight or 24:00 to 00:00 do not forget to

change the Discharge Date.
Example: Midnight or 24:00 on 11-24-20XX = 00:00 on 11-25-20XX

Note:
Transmission of a case with an invalid date will be rejected from the OPPS Clinical Warehouse. Use of "UTD" for *Troponin Order Date and Time* allows the case to be accepted into the warehouse.

Notes for Abstraction:

For times that include "seconds", remove the seconds and record the military time
Example:
15:00:35 would be recorded as 15:00

If the date and/or time of the Troponin order is unable to be determined from medical record documentation, abstract UTD.

Abstract the order of the earliest Troponin ordered (closest to arrival).

If there are multiple order times documented for the same Troponin order, use the earliest order time.

Suggested Data Sources:

- Emergency Department record

Guidelines for Abstraction:

Inclusion	Exclusion
None	None

Data Element Name: *Troponin Results Date and Time*

Collected For: ED

Definition: The month, day, year and the exact time (military time) represented in hours and minutes at which the earliest Troponin results were reported.

Suggested Data
Collection Question: What is the date and time of the earliest Troponin results?

Format: **Length:**   16 – MM-DD-YYYY (includes dashes) and
                                    HH:MM (with or without colon) or UTD
   Type: Date/Time
   Occurs: 1

Allowable Values: MM   =   Month (01-12)
   DD   =   Day (01-31)
   YYYY   =   Year (2000-Current Year)

   HH   =   Hour (00-23)
   MM   =   Minutes (00-59)

   UTD   =   Unable to Determine

   Time must be recorded in military time format.
   With the exception of Midnight and Noon:
   - If the time is in the a.m., conversion is not required.
   - If the time is in the p.m., add 12 to the clock time hour.

         Examples:
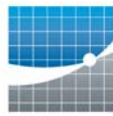   Midnight - 00:00   Noon - 12:00
         5:31 am - 05:31   5:31 pm - 17:31
         11:59 am - 11:59   11:59 pm - 23:59

   Note:
   00:00 = midnight. If the time is documented as 00:00 11-24-20XX, review supporting documentation to determine if the Discharge Date should remain 11-24-20XX or if it should be converted to 11-25-20XX.

   When converting Midnight or 24:00 to 00:00 do not forget to

change the Discharge Date.
Example: Midnight or 24:00 on 11-24-20XX = 00:00 on 11-25-20XX

Note:
Transmission of a case with an invalid date will be rejected from the OPPS Clinical Warehouse. Use of "UTD" for *Troponin Results Date and Time* allows the case to be accepted into the warehouse.

Notes for Abstraction:

For times that include "seconds", remove the seconds and record the military time
Example:
15:00:35 would be recorded as 15:00

If the date and/or time of the Troponin result is unable to be determined from medical record documentation, abstract UTD.

Abstract the result of the earliest Troponin ordered (closest to arrival).

If there are multiple result times documented for the same Troponin, use the earliest result time.

Suggested Data Sources:

- Emergency Department record

Guidelines for Abstraction:

Inclusion	Exclusion
None	None