NATIONAL QUALITY FORUM

Measure Submission and Evaluation Worksheet 5.0

This form contains the information submitted by measure developers/stewards, organized according to NQF's measure evaluation criteria and process. The evaluation criteria, evaluation guidance documents, and a blank online submission form are available on the submitting standards web page.

NQF #: 0373 **NQF Project:** Patient Safety Measures-Complications Project

(for Endorsement Maintenance Review)
Original Endorsement Date: May 15, 2008 **Most Recent Endorsement Date:** May 15, 2008

BRIEF MEASURE INFORMATION

De.1 **Measure Title:** Venous Thromboembolism Patients with Anticoagulant Overlap Therapy

Co.1.1 **Measure Steward:** The Joint Commission

De.2 **Brief Description of Measure:** This measure assesses the number of patients diagnosed with confirmed VTE who received an overlap of Parenteral (intravenous [IV] or subcutaneous [subcu]) anticoagulation and warfarin therapy. For patients who received less than five days of overlap therapy, they should be discharged on both medications and have a Reason for Discontinuation of Overlap Therapy. Overlap therapy should be administered for at least five days with an international normalized ratio (INR) greater than or equal to 2 prior to discontinuation of the parenteral anticoagulation therapy, or INR less than 2 but discharged on both medications or have a Reason for Discontinuation of Overlap Therapy. This measure is part of a set of six prevention and treatment measures that address VTE (VTE-1: VTE Prophylaxis, VTE-2: ICU VTE Prophylaxis, VTE-4: VTE Patients Receiving UFH with Dosages/Platelet Count Monitoring, VTE-5: VTE Warfarin Therapy Discharge Instructions and VTE-6: Incidence of Potentially-Preventable VTE).

2a1.1 **Numerator Statement:** Patients who received overlap therapy:
Included Populations: Patients who received warfarin and parenteral anticoagulation:

- Five or more days, with an INR greater than or equal to 2 prior to discontinuation of parenteral therapy OR
- Five or more days, with an INR less than 2 and discharged on overlap therapy OR
- Less than five days and discharged on overlap therapy OR
- With documentation of reason for discontinuation of overlap therapy OR
- With documentation of a reason for no overlap therapy

2a1.4 **Denominator Statement:** Patients with confirmed VTE who received warfarin. The target population includes patients discharged with an ICD-9-CM Principal or Other Diagnosis Codes for VTE as defined in Table 7.03 or Table 7.04.

2a1.8 **Denominator Exclusions:** • Patients less than 18 years of age

- Patients who have a length of stay greater than 120 days
- Patients with Comfort Measures Only documented
- Patients enrolled in clinical trials
- Patients discharged to a health care facility for hospice care
- Patients discharged to home for hospice care
- Patients who expired
- Patients who left against medical advice
- Patients discharged to another hospital
- Patients without warfarin therapy during hospitalization
- Patients without VTE confirmed by diagnostic testing

1.1 **Measure Type:** Process

2a1. 25-26 Data Source: Administrative claims, Electronic Clinical Data, Paper Records
2a1.33 Level of Analysis: Facility, Population : National

1.2-1.4 Is this measure paired with another measure? No

De.3 If included in a composite, please identify the composite measure (*title and NQF number if endorsed*)**:**
Not applicable

STAFF NOTES (*issues or questions regarding any criteria*)

Comments on Conditions for Consideration:

Is the measure untested? Yes☐ No☐ If untested, explain how it meets criteria for consideration for time-limited endorsement:

1a. Specific national health goal/priority identified by DHHS or NPP addressed by the measure (*check De.5*)**:**
5. Similar/related endorsed or submitted measures (*check 5.1*)**:**
Other Criteria:

Staff Reviewer Name(s):

1. IMPACT, OPPORTUITY, EVIDENCE - IMPORTANCE TO MEASURE AND REPORT

Importance to Measure and Report is a threshold criterion that must be met in order to recommend a measure for endorsement. All three subcriteria must be met to pass this criterion. See guidance on evidence.
Measures must be judged to be important to measure and report in order to be evaluated against the remaining criteria.
(evaluation criteria)

1a. High Impact: H☐ M☐ L☐ I☐
(*The measure directly addresses a specific national health goal/priority identified by DHHS or NPP, or some other high impact aspect of healthcare.*)

De.4 Subject/Topic Areas (*Check all the areas that apply*)**:** Prevention : Development/Wellness
De.5 Cross Cutting Areas (*Check all the areas that apply*)**:** Safety, Safety : Medication Safety, Safety : Venous Thromboembolism

1a.1 Demonstrated High Impact Aspect of Healthcare: A leading cause of morbidity/mortality, Patient/societal consequences of poor quality

1a.2 If "Other," please describe:

1a.3 Summary of Evidence of High Impact (*Provide epidemiologic or resource use data*)**:**
The estimated annual incidence of deep-vein thrombosis (DVT) and pulmonary embolism (PE), known collectively as venous thromboembolism (VTE), is approximately 900,000 cases. Of these, approximately one third of the cases (300,000) are fatal PE, and the remaining two-thirds are non-fatal episodes of DVT or PE. The majority of fatal events occur as sudden or abrupt death, underscoring the importance of prevention as the most critical action step for reducing death from PE. Of the estimated 600,000 cases of non-fatal venous thromboembolism each year, about 60% are cases of DVT, and 40% are episodes of non-fatal PE. Among patients who present with symptomatic DVT as the chief presenting complaint, 50% or more have evidence of pulmonary embolism (mostly asymptomatic) by diagnostic imaging procedures such as radionuclide lung scanning or CT imaging .The incidence of venous thromboembolism increases markedly in patients of age 60 years or more.

VTE is responsible for the acute care hospitalization of approximately 250,000 Americans annually and represents a significant risk for morbidity and mortality. Despite the publication of evidence-based clinical practice guidelines to aid in the management of VTE in its acute and chronic forms, medical record audits have consistently found evidence of management that is not consistent with guideline recommendations. This is true for recommendations to overlap therapy with a parenteral anticoagulant with vitamin K antagonists (VKA) such as warfarin at the initiation of treatment.

While guideline recommendations give strong support to overlap of parenteral anticoagulation with oral VKA treatment during the initial treatment of VTE events, there are few studies that specifically address this need for overlap. Perhaps the most important study was completed in 1992. In a randomized, double-blind study Brandjes and colleagues compared the efficacy and safety of continuous intravenous heparin plus acenocoumarol with the efficacy and safety of acenocoumarol alone in the initial treatment of outpatients with proximal-vein thrombosis. The principal study end point was a confirmed symptomatic extension or recurrence of venous thromboembolism during six months of follow-up. The study was terminated early by the Data Safety and Monitoring Committee because of an excess of symptomatic events in the group that received acenocoumarol alone (in 12 of 60 patients [20 percent], as compared with 4 of 60 patients [6.7 percent] in the combined-therapy group by intention-to-treat analysis; P = 0.058). Asymptomatic extension of venous thrombosis was observed in 39.6 percent of the patients in the acenocoumarol group and in 8.2 percent of patients treated with heparin plus acenocoumarol (P < 0.001). The results of this study were so compelling that there have been no additional randomized trials using VKAs without parenteral anticoagulation to our knowledge.

A recent observational study completed by Aujesky and colleagues demonstrated that overlap of heparin and warfarin treatment for four days or more in the initial treatment of VTE events resulted in a dramatic reduction in complications that included death, bleeding, or recurrent VTE events (OR 0.09, 95% CI: 0.02-0.50).

The strong (Level I) recommendations to overlap parenteral anticoagulation with oral warfarin therapy in the initial treatment of VTE events is based in part on the known effect of warfarin on the coagulation cascade. The early increase in the PT/INR often reflects the laboratory finding of initial reduction in clotting factors of the extrinsic pathway of coagulation resulting in prolongation of the PT/INR, while the patient is still at risk of thromboembolic events due to persistent levels of coagulation factors of the intrinsic pathway and common pathways of coagulation.

1a.4 Citations for Evidence of High Impact cited in 1a.3:

1. Dunn AS, Brenner A, Halm EA. The magnitude of an iatrogenic disorder: a systematic review of the incidence of venous thromboembolism for general medical inpatients. Thromb Haemost. 2006; 95:758-62.
2. Raskob GE, Silverstein R, Bratzler DW, Heit JA, White RH. Surveillance for deep-vein thrombosis and pulmonary embolism: recommendations from a national workshop. Am J Prev Med. 2010: 38(4 Suppl):S502-9.
3. Kearon C, Kahn SR, Agnelli G, et al. Antithrombotic therapy for venous thromboembolic disease: American College of Chest Physicians Evidence-based Clinical Practice Guidelines (8th Edition). Chest 2008; 133:454S-545S.
4. Stein PD, Matta F. Epidemiology and incidence: the scope of the problem and risk factors for development of venous thromboembolism. Clin Chest Med. 2010; 31:611-28.
5. Lloyd-Jones D, Adams RJ, Brown TM, et al; on behalf of the American Heart Association Statistics Committee and Stroke Statistics Subcommittee. Heart disease and stroke statistics: 2010 update: a report from the American Heart Association [published correction appears in Circulation. 2010;121:e260]. Circulation. 2010; 121: e46–e215.
6. Jaff MR, McMurtry MS, Archer SL, et al. Management of massive and submassive pulmonary embolism, iliofemoral deep vein thrombosis, and chronic thromboembolic pulmonary hypertension: a scientific statement from the American Heart Association. Circulation. 2011; 123:1788-830.
7. Brandjes DP, Heijboer H, Büller HR, et al. Acenocoumarol and heparin compared with acenocoumarol alone in the initial treatment of proximal-vein thrombosis. N Engl J Med. 1992; 327:1485-9.
8. Aujesky D, Long JA, Fine MJ, Ibrahim SA. African American race was associated with an increased risk of complications following venous thromboembolism. J Clin Epidemiol. 2007; 60:410-6.
9. Hayes R, Bratzler DW, Armour B, et al. Comparison of an enhanced versus a written feedback model on the management of Medicare inpatients with venous thromboembolism. Jt Comm J Qual Improv. 2001; 27:155-68.

1b. Opportunity for Improvement: H☐ M☐ L☐ I ☐
(*There is a demonstrated performance gap - variability or overall less than optimal performance*)

1b.1 Briefly explain the benefits (improvements in quality) envisioned by use of this measure:
Based on previous studies, implementation in the clinical setting of appropriate overlap therapy with parenteral anticoagulants and warfarin would be expected to decrease the rate of recurrent thromboembolic events in patients who are being treated for an acute episode of VTE. The measure requires that for patients being treated with both a parenteral anticoagulant (heparin, LMWH, or fondaparinux) and warfarin, that there be at least 5 days of overlap of the two agents AND an INR of 2.0 or greater at the time of discontinuation of parenteral therapy. For those patients who are discharged in less than 5 days, the measure requires that the patient be discharged on therapy with both a parenteral agent and warfarin. (The patient must be receiving a parenteral agent and warfarin to be eligible for the measure.)

1b.2 Summary of Data Demonstrating Performance Gap *(Variation or overall less than optimal performance across providers)*: **[*For Maintenance* –** *Descriptive statistics for performance results for this measure - distribution of scores for measured entities by quartile/decile, mean, median, SD, min, max, etc.***]**
Inconsistent practice regarding discontinuation of the use of UFH or LMWH was noted in a study of 38 US hospitals. Only 50.6% (246) of the 486 patients that received overlap therapy had an INR of at least 2 for two consecutive days before discontinuation of the parenteral agent. According to the National Anticoagulation Benchmark and Outcomes Report (NABOR), 61% without a therapeutic INR were discharged on overlap therapy.10 DVT is a challenge for doctors of all disciplines that results in variation in care due to inconsistent adherence to guidelines and antithrombotic therapy regimens that may reflect differences in physician knowledge, attitudes, system inefficiencies, organizational culture or deference to patient preference.11

Based on 5 quarters of data reported to The Joint Commission, VTE 3 has an aggregate performance rate of 79.7 %, indicating a potential performance gap of 20.3%. There is no reportable benchmark to compare the performance rate. Since this measure was introduced nationally in 2009, aggregate performance has improved. VTE 3 began with 2009 Quarter 4 reporting data at 68.7% or a performance gap of 31.3 %, There has been consistent improvement in aggregate performance rates for the following consecutive four quarters, with the most recent 2010 Quarter 4 reportable performance at 90.0 %.

1b.3 Citations for Data on Performance Gap: [*For Maintenance* – *Description of the data or sample for measure results reported in 1b.2 including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included***]**
1. Caprini JA, Tapson VF, Hyers TM, et al. Treatment of venous thromboembolism: adherence to guidelines and impact of physician knowledge, attitudes, and beliefs. J Vasc Surg. 2005; 42:726-33.
2. Vats V, Nutescu EA, Theobald JC, et al. Survey of hospitals for guidelines, policies, and protocols for anticoagulants. Am J Health Syst Pharm. 2007; 64:1203-8.
3. Tiryaki F, Nutescu EA, Hennenfent JA, et al. Anticoagulation therapy for hospitalized patients: Patterns of use, compliance with national guidelines, and performance on quality measures. Am J Health Syst Pharm. 2011; 68:1239-44.

1b.4 Summary of Data on Disparities by Population Group: [*For Maintenance* –*Descriptive statistics for performance results for this measure by population group***]**
There is no literature on disparities for this measure.

1b.5 Citations for Data on Disparities Cited in 1b.4: [*For Maintenance* – *Description of the data or sample for measure results reported in 1b.4 including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included***]**
None

1c. Evidence (*Measure focus is a health outcome OR meets the criteria for quantity, quality, consistency of the body of evidence.*)
Is the measure focus a health outcome? Yes☐ No☐ If not a health outcome, rate the body of evidence.

Quantity: H☐ M☐ L☐ I☐ Quality: H☐ M☐ L☐ I☐ Consistency: H☐ M☐ L☐ I☐

Quantity	Quality	Consistency	Does the measure pass subcriterion1c?
M-H	M-H	M-H	**Yes**☐
L	M-H	M	**Yes**☐ IF additional research unlikely to change conclusion that benefits to patients outweigh harms: otherwise **No**☐
M-H	L	M-H	**Yes**☐ IF potential benefits to patients clearly outweigh potential harms: otherwise **No**☐
L-M-H	L-M-H	L	**No** ☐

Health outcome – rationale supports relationship to at least one healthcare structure, process, intervention, or service	**Does the measure pass subcriterion1c?** **Yes**☐ IF rationale supports relationship

1c.1 Structure-Process-Outcome Relationship *(Briefly state the measure focus, e.g., health outcome, intermediate clinical outcome, process, structure; then identify the appropriate links, e.g., structure-process-health outcome; process- health outcome; intermediate clinical outcome-health outcome)*:
The focus of the measure is appropriate treatment of VTE. Patient diagnosed with VTE>>appropriate parenteral and warfarin

treatment started and INR appropriately monitored>> >>decreased incidence of VTE extension>>decreased morbidity and mortality>>improved health of patients and the community.

1c.2-3 Type of Evidence *(Check all that apply)*:
Clinical Practice Guideline, Other, Systematic review of body of evidence (other than within guideline development)
NQF Safe Pracitce

1c.4 Directness of Evidence to the Specified Measure *(State the central topic, population, and outcomes addressed in the body of evidence and identify any differences from the measure focus and measure target population)*:
The central topic of the evidence is to describe the role of antithrombotic agents that are used in the treatment of patients with Deep Vein Thrombosis (DVT) and Pulmonary Emboli (PE), consistent with the definition of VTE for this measure.

The measure focus of both the evidence and the measure is on the use of anticoagulation for the main therapy for acute DVT of the leg. Both the evidence and the measure support the use of overlap therapy for minimum of 5 days or until INR is > 2.0 for at least 24 hours.

In addition to appropriate overlap therapy, the evidence examined treatment of VTE using other methods of anticoagulation. However, none of these are pertinent to this measure, nor were they found to be superior to overlap therapy. Measure VTE 3 is consistent with the guidelines recommended by ACCP in maintaining overlap therapy, but not limiting options of medical regimen.

1c.5 Quantity of Studies in the Body of Evidence *(Total number of studies, not articles)*: There are very few studies that directly addressed the question of overlap therapy. After publication of the Brandjes study, it was largely considered unethical to initiate anticoagulation therapy with warfarin without overlap with a parenteral anticoagulant. Studies reviewed that focused on anticoagulation and overlap therapy are as follows:
9 RCT studies reviewed Iliofemoral Deep Vein Thrombosis (IFDVT) with oral warfarin and overlapped therapy for 5 days and until INR > 2.0, for at least 24 hrs
1 RCT study reviewed IV UFH or LMWH, fondaparinux and VKA
4 RCT studies reviewed the risk of recurrent DVT and PTS in IFDVT patients
6 RCT studies reviewed timing of anticoagulation discontinuation for first episode of DVT with long term anticoagulation therapy

1c.6 Quality of Body of Evidence (*Summarize the certainty or confidence in the estimates of benefits and harms to patients across studies in the body of evidence resulting from study factors. Please address: a) study design/flaws; b) directness/indirectness of the evidence to this measure (e.g., interventions, comparisons, outcomes assessed, population included in the evidence); and c) imprecision/wide confidence intervals due to few patients or events*): The quality of the body of evidence was evaluated by the guideline panel. Information relative to the quality of each NRCT was kept on a table of findings. Attempts to retrieve the original study documents were not successful. Therefore, the body of evidence was not graded, however, it was determined through our literature review that the guideline developers accounted for a balanced representation of information and looked beyond one specialty group or discipline.

Strong evidence by Hull R.D., Raskob, G.E., and Hirsh J., et al., reveals that UFH administered by continuous intravenous infusion has been shown to reduce extension and recurrence of symptomatic proximal and calf vein DVT, and mortality in patients with PE. The recommendation that heparins and warfarin overlap for a five-day period is based on pharmacokinetic, pharmacologic, pathophysiologic, and clinical evidence as noted by Wittkowsky A.K.(2005). All studies support the pharmacokinetic characteristics of warfarin and the time delay in achieving an antithrombotic effect suggesting the need for overlap of heparin during initial warfarin dosing in order to prevent thrombus extension, embolization to the lungs, death due to PE, and the development of complications such as recurrent thromboembolic events and the postthrombotic syndrome.

Strong clinical evidence from Brandjes D.P et al., reveals a randomized trial of warfarin alone compared to warfarin with heparin for acute VTE confirming that overlap therapy is required until the therapeutic effect of warfarin is gradually reached, and is necessary to prevent recurrent thrombosis. There is sparse information as noted by Francis C.W. regarding the effect of treatment on the most important outcomes, fatal and nonfatal PE, but findings suggest improvement in these outcomes.

Weakness in the body of evidence related to this measure are lack of generalizability of the study findings. Comparisons of individual studies of acute PE alone, or DVT alone, with differing anticoagulation medical regimens, are not compiled into a meta-

analysis to ensure generalizability of the results, to this VTE measure, and the public population as a whole.

A review of the literature reveals study design flaws consist mostly of the designation that majority of studies are RCT and Cohort, and only 35% are purely RCT.

1c.7 Consistency of Results across Studies *(Summarize the consistency of the magnitude and direction of the effect):* As noted previously, the quantity of studies addressing this topic is limited, but results across studies have been consistent as to the efficacy of the use of overlap therapy with appropriate monitoring.

1c.8 Net Benefit *(Provide estimates of effect for benefit/outcome; identify harms addressed and estimates of effect; and net benefit - benefit over harms)***:**
As noted above, based on studies that have evaluated overlap, a 60-80% reduction in adverse events has been reported when patients received at least four days of overlap anticoagulation.

1c.9 Grading of Strength/Quality of the Body of Evidence. Has the body of evidence been graded? Yes

1c.10 If body of evidence graded, identify the entity that graded the evidence including balance of representation and any disclosures regarding bias: American College of Chest Physicians

1c.11 System Used for Grading the Body of Evidence: GRADE

1c.12 If other, identify and describe the grading scale with definitions:

1c.13 Grade Assigned to the Body of Evidence: 1A

1c.14 Summary of Controversy/Contradictory Evidence: No controversy found relating directly to this measure.

1c.15 Citations for Evidence other than Guidelines*(Guidelines addressed below)*:
1. Wittkowsky AK. Why warfarin and heparin need to overlap when treating acute venous thromboembolism. Dis Mon 2005;51:112-115.
2. Brandjes DPM, Heijboer H, Buller HR, et al. Acenocoumarol and heparin compared to acenocoumarol alone in the initial treatment of proximal vein thrombosis. New Engl J Med 1992;327:1485-9.
3. Francis CW. Prophylaxis for thromboembolism in hospitalized medical patients. N Engl J Med 2007;356:1438-44.
4. Geerts WH, Pineo GF, Heit JA, et al. Prevention of venous thromboembolism: the Seventh ACCP Conference on Antithrombotic and Thrombolytic Therapy. Chest. 2004 Sep; 126(3 Suppl):338S-400S.
5. Anderson FA, Wheeler HB, Goldberg RJ, et al. A population-based perspective of the hospital incidence and case-fatality rates of deep vein thrombosis and pulmonary embolism: The Worchester DVT Study. Arch Intern Med 1991; 151:933-938.
6. Thromboembolic Risk Factors(THRIFT) Consensus Group. Risk of and prohylxis for venous thromboembolism, in hospital patients. BMJ 1992;305:567-574.
7. Hull RD, Feldstein W, Stein PD, et al. Cost-effectiveness of pulmonary embolism diagnosis. Arch Intern Med. 1996;156:68-72.
8. National Quality Forum. National Voluntary Consensus Standards for Prevention and Care of Venous Thromboembolism: Policy, Preferred Practices, and Initial Performance Measures. A Consensus Report. 2006. Washington, DC.
9. The Joint Commission. 2008 National Patient Safety Goals. Retrieved from the world wide web on July 9, 2007. http://www.jointcommission.org/PatientSafety/NationalPatientSafetyGoals/08_hap_npsgs.htm.
10. Tapson VF, Hyers TM, Waldo AL, Ballard DJ, et al. Antithrombotic therapy practices in US hospitals in an era of practice guidelines. Arch Intern Med. 2005;165:1458-1464.
11. Goldhauber SZ, Tapson VF. DVT Steering Committee, A prospective registry of 5,451 patients with ultrasound confirmed deep vein thrombosis. Amer J Card. 2004;93:59-62.
12. Goldhaber SZ, Grodstein P, Stampfer MJ, Manson JE, et al. A prospective study of risk factors for pulmonary embolism in women. JAMA 1997;277:642-645.
13. Hull RD, Raskob GE, Hirsh J, et al. Continuous intravenous heparin compared with intermittent subcutaneous heparin in the initial treatment of proximal-vein thrombosis. N Engl J Med. 1986;315:1109-1114.

1c.16 Quote verbatim, the specific guideline recommendation *(Including guideline # and/or page #)*:
American Heart Association:
Adult patients with IFDVT who receive oral warfarin as first-line long-term anticoagulation therapy should have warfarin overlapped with initial anticoagulation therapy for a minimum of 5 days and until the INR is >2.0 for at least 24 hours, and then targeted to an INR of 2.0 to 3.0. Page 1803. (Class I; Level of Evidence A).
ACCP
In patients with acute DVT, we recommend initial treatment with LMWH, UFH or fondaparinux for at least 5 days and until the INR is = 2.0 for 24 h. (Grade 1C). 1.1.3. page 455S (2008).
In patients with acute PE, we recommend initial treatment with LMWH, UFH or fondaparinux for at least 5 days and until the INR is = 2.0 for 24 h. (Grade 1C). 4.1.3. page 500S (2008).
In patients with acute DVT, we recommend initiation of VKA together with LMWH, UFH, or fondaparinux on the first treatment day rather than delayed initiation of VKA. Grade 1A) 1.1.4. page 455S (2008).
In patients with acute PE, we recommend initiation of VKA together with LMWH, UFH, or fondaparinux on the first treatment day rather than delayed initiation of VKA. (Grade 1A) 4.1.4. page 500S (2008).

1c.17 Clinical Practice Guideline Citation: Kearon C, Kahn SR, Agnelli G, et al. Antithrombotic therapy for venous thromboembolic disease: American College of Chest Physicians Evidence-based Clinical Practice Guidelines (8th Edition). Chest 2008; 133:454S-545S.

Jaff MR, McMurtry MS, Archer SL, et al. Management of massive and submassive pulmonary embolism, iliofemoral deep vein thrombosis, and chronic thromboembolic pulmonary hypertension: a scientific statement from the American Heart Association. Circulation. 2011; 123:1788-830.

1c.18 National Guideline Clearinghouse or other URL: http://chestjournal.chestpubs.org/content/133/6_suppl/454S.full.pdf+html and http://circ.ahajournals.org/content/123/16/1788.extract

1c.19 Grading of Strength of Guideline Recommendation. Has the recommendation been graded? Yes

1c.20 If guideline recommendation graded, identify the entity that graded the evidence including balance of representation and any disclosures regarding bias: American College of Chest Physicians and The American Heart Association

1c.21 System Used for Grading the Strength of Guideline Recommendation: GRADE

1c.22 If other, identify and describe the grading scale with definitions:

1c.23 Grade Assigned to the Recommendation: 1C-ACCP, and 1A- AHA

1c.24 Rationale for Using this Guideline Over Others: This is the most comprehensive and evidence-rated guideline available currently on treatment considerations with overlap therapy.

Based on the NQF descriptions for rating the evidence, what was the developer's assessment of the quantity, quality, and consistency of the body of evidence?
1c.25 Quantity: High **1c.26** Quality: High**1c.27** Consistency**:** High

Was the threshold criterion, *Importance to Measure and Report*, met?
(*1a & 1b must be rated moderate or high and 1c yes*) Yes☐ No☐
Provide rationale based on specific subcriteria:

For a new measure if the Committee votes NO, then STOP.
For a measure undergoing endorsement maintenance, if the Committee votes NO because of 1b. (no opportunity for improvement), it may be considered for continued endorsement and all criteria need to be evaluated.

2. RELIABILITY & VALIDITY - SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES

Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when

implemented. **(evaluation criteria)**
Measure testing must demonstrate adequate reliability and validity in order to be recommended for endorsement. Testing may be conducted for data elements and/or the computed measure score. Testing information and results should be entered in the appropriate field. Supplemental materials may be referenced or attached in item 2.1. See guidance on measure testing.

S.1 **Measure Web Page** *(In the future, NQF will require measure stewards to provide a URL link to a web page where current detailed specifications can be obtained*). Do you have a web page where current detailed specifications for this measure can be obtained? Yes

S.2 **If yes, provide web page URL:**
http://www.jointcommission.org/specifications_manual_for_national_hospital_inpatient_quality_measures/

2a. RELIABILITY. Precise Specifications and Reliability Testing: H☐ M☐ L☐ I ☐

2a1. Precise Measure Specifications. (*The measure specifications precise and unambiguous.*)

2a1.1 **Numerator Statement** *(Brief, narrative description of the measure focus or what is being measured about the target population, e.g., cases from the target population with the target process, condition, event, or outcome)***:**
Patients who received overlap therapy:
Included Populations: Patients who received warfarin and parenteral anticoagulation:

- Five or more days, with an INR greater than or equal to 2 prior to discontinuation of parenteral therapy OR
- Five or more days, with an INR less than 2 and discharged on overlap therapy OR
- Less than five days and discharged on overlap therapy OR
- With documentation of reason for discontinuation of overlap therapy OR
- With documentation of a reason for no overlap therapy

2a1.2 **Numerator Time Window** *(The time period in which the target process, condition, event, or outcome is eligible for inclusion)***:**
Episode of care

2a1.3 **Numerator Details** *(All information required to identify and calculate the cases from the target population with the target process, condition, event, or outcome such as definitions, codes with descriptors, and/or specific data collection items/responses***:**
Six data elements are used to calculate the numerator:
1. INR Value - Documentation of an international normalized ratio (INR) value greater than or equal to 2 prior to discontinuation of the parenteral anticoagulation therapy. Allowable Value (AV): Yes or No/UTD
2. Overlap Therapy - Documentation that parenteral (intravenous [IV] or subcutaneous [subcu]) anticoagulation therapy and warfarin were both administered on the same day or a reason is documented why overlap therapy was not initiated. Allowable Value: 1- There was documentation of overlap therapy; 2 -There is a reason for no overlap therapy; or 3- There was no overlap therapy and no reason/UTD.
3. Overlap Therapy Start Date - The first date that the parenteral (intravenous [IV] or subcutaneous [subcu]) anticoagulation therapy and warfarin were administered.
4. Parenteral Anticoagulant End Date - The last date that a parenteral (intravenous [IV] or subcutaneous [subcu]) anticoagulant medication was administered.
5. Parenteral Anticoagulant Prescribed at Discharge - Documentation that a parenteral (intravenous [IV] or subcutaneous [subcu]) anticoagulant medication was prescribed at discharge. Allowable Value: Yes or No/UTD
6. Reason for Discontinuation of Overlap Therapy - Documentation of a reason for discontinuation of the overlap therapy by a physician/advanced practice nurse/physician assistant or pharmacist (physician/APN/PA or pharmacist). Allowable Value: Yes or No/UTD

2a1.4 **Denominator Statement** *(Brief, narrative description of the target population being measured)***:**
Patients with confirmed VTE who received warfarin. The target population includes patients discharged with an ICD-9-CM Principal or Other Diagnosis Codes for VTE as defined in Table 7.03 or Table 7.04.

2a1.5 Target Population Category *(Check all the populations for which the measure is specified and tested if any)*: Adult/Elderly Care

2a1.6 Denominator Time Window *(The time period in which cases are eligible for inclusion)*:
Episode of Care

2a1.7 Denominator Details (*All information required to identify and calculate the target population/denominator such as definitions, codes with descriptors, and/or specific data collection items/responses)*:
Eleven data elements are used to calculate the denominator:

1. Admission Date – The month, day and year of admission to acute inpatient care.
2. Birthdate - The month, day and year the patient was born.
3. Clinical Trial - Documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients with the same condition as the measure set were being studied. Allowable values: Yes or No/UTD
4. Comfort Measures Only - Physician/advanced practice nurse/physician assistant (physician/APN/PA) documentation of comfort measures only. Commonly referred to as "palliative care" in the medical community and "comfort care" by the general public. Palliative care includes attention to the psychological and spiritual needs of the patient and support for the dying patient and the patient´s family. Comfort Measures Only are not equivalent to the following: Do Not Resuscitate (DNR), living will, no code, and no heroic measure. Allowable values represent the earliest physician/APN/PA documentation: (AV 1) Day 0 or 1, (AV 2) Day 2 or after, (AV 3) Timing unclear or (AV 4) Not Documented/UTD.
5. Discharge Date – The month day and year the patient was discharged from acute care, left against medical advice or expired during the stay.
6. Discharge Disposition - The final place or setting to which the patient was discharged on the day of discharge. Allowable values: 1-8.
7. ICD-9-CM Other Diagnosis Codes - The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) codes associated with the secondary diagnoses for this hospitalization.
8. ICD-9-CM Principal Diagnosis Code - 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 occasioning the admission of the patient for this hospitalization.
9. VTE Confirmed – Documentation by a physician/advanced practice nurse/physician assistant (physician/APN/PA) that a diagnosis of VTE [deep vein thrombosis (DVT) and/or pulmonary embolism (PE)] was confirmed in a defined location. Allowable values: Yes or No/UTD
10. VTE Diagnostic Test – Documentation that a diagnostic test for VTE was performed. Allowable values: Yes or No/UTD
11. Warfarin Administration - Documentation that warfarin was administered during hospitalization. Allowable values: Yes or No/UTD.

2a1.8 Denominator Exclusions *(Brief narrative description of exclusions from the target population)*:

- Patients less than 18 years of age
- Patients who have a length of stay greater than 120 days
- Patients with Comfort Measures Only documented
- Patients enrolled in clinical trials
- Patients discharged to a health care facility for hospice care
- Patients discharged to home for hospice care
- Patients who expired
- Patients who left against medical advice
- Patients discharged to another hospital
- Patients without warfarin therapy during hospitalization
- Patients without VTE confirmed by diagnostic testing

2a1.9 Denominator Exclusion Details *(All information required to identify and calculate exclusions from the denominator such as definitions, codes with descriptors, and/or specific data collection items/responses)*:

- Patient without a Principal or Other ICD-9-CM Diagnosis Code on Table 7.03 or 7.04 are excluded.
- The patient age in years is equal to the Admission Date minus the Birthdate. Patients less than 18 years are excluded.
- Length of stay (LOS) in days is equal to the Discharge Date minus the Admission Date. If the LOS is greater than 120 days, the patient is excluded.

- Patients with AV 1,2 or 3 for Comfort Measures Only are excluded.
- Patients are excluded if "Yes" is selected for Clinical Trial.
- The allowable values (AV) 2, 3, 4, 6 and 7 for Discharge Disposition exclude patients who are discharged to a health care facility for hospice care, home to hospice care, expired, left against medical advice, or to another hospital.
- Patients are excluded if "No" is selected for Warfarin Administration.
- Patients are excluded if "No" is selected for VTE Diagnostic Test.
- Patients are excluded if "No" is selected for VTE Confirmed.

2a1.10 Stratification Details/Variables *(All information required to stratify the measure results including the stratification variables, codes with descriptors, definitions, and/or specific data collection items/responses)***:**
Not Applicable, the measure is not stratified.

2a1.11 Risk Adjustment Type *(Select type. Provide specifications for risk stratification in 2a1.10 and for statistical model in 2a1.13)***:** No risk adjustment or risk stratification **2a1.12 If "Other," please describe:**

2a1.13 Statistical Risk Model and Variables *(Name the statistical method - e.g., logistic regression and list all the risk factor variables. Note - risk model development should be addressed in 2b4.)***:**
Not Applicable

2a1.14-16 Detailed Risk Model Available at Web page URL (or attachment). Include coefficients, equations, codes with descriptors, definitions, and/or specific data collection items/responses. Attach documents only if they are not available on a webpage and keep attached file to 5 MB or less. NQF strongly prefers you make documents available at a Web page URL**.** Please supply login/password if needed**:**

2a1.17-18. Type of Score: Rate/proportion

2a1.19 Interpretation of Score *(Classifies interpretation of score according to whether better quality is associated with a higher score, a lower score, a score falling within a defined interval, or a passing score)***:** Better quality = Higher score

2a1.20 Calculation Algorithm/Measure Logic*(Describe the calculation of the measure score as an ordered sequence of steps including identifying the target population; exclusions; cases meeting the target process, condition, event, or outcome; aggregating data; risk adjustment; etc.)***:**
1. Start processing. Run cases that are included in the VTE Initial Patient Population and pass the edits defined in Transmission Data Processing Flow: Clinical through this measure.

2. Check ICD-9-CM Principal or Other Diagnosis Code
a. If none of the ICD-9-CM Principal or Other Diagnosis Code is on Table 7.03 or 7.04 (VTE, Obstetrics-VTE), the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
b. If at least one of the ICD-9-CM Principal or Other Diagnosis Code is on Table 7.03 or 7.04, continue processing and proceed to Comfort Measures Only.

3. Check Comfort Measures Only
a. If Comfort Measures Only is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
b. If Comfort Measures Only equals 1, 2 or 3, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.
c. If Comfort Measures Only equals 4, continue processing and proceed to Clinical Trial.

4. Check Clinical Trial
a. If Clinical Trial is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
b. If Clinical Trial equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.
c. If Clinical Trial equals No, continue processing and proceed to Discharge Disposition.

5. Check Discharge Disposition
a. If Discharge Disposition equals 2, 3, 4, 6, 7, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.
b. If Discharge Disposition equals 1, 5, 8, continue processing and proceed to VTE Diagnostic Test.

6. Check VTE Diagnostic Test
a. If VTE Diagnostic Test is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
b. If VTE Diagnostic Test equals No, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.
c. If VTE Diagnostic Test equals Yes, continue processing and proceed to VTE Confirmed.

7. Check VTE Confirmed
a. If VTE Confirmed is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
b. If VTE Confirmed equals No, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.
c. If VTE Confirmed equals Yes, continue processing and proceed to Warfarin Administration.

8. Check Warfarin Administration
a. If Warfarin Administration is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
If Warfarin Administration equals No, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.
c. If Warfarin Administration equals Yes, continue processing and proceed to Overlap Therapy.

9. Check Overlap Therapy
a. If Overlap Therapy is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
b. If Overlap Therapy equals 2, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
c. If Overlap Therapy equals 3, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.
d. If Overlap Therapy equals 1, continue processing and proceed to the Overlap Therapy Start Date.

10. Check Overlap Therapy Start Date
a. If Overlap Therapy Start Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
b. If the Overlap Therapy Start Date equals Unable to Determine, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.
c. If Overlap Therapy Start Date equals a Non Unable to Determine Value, continue processing and proceed to the Parenteral Anticoagulant End Date.

11. Check Parenteral Anticoagulant End Date

a. If Parenteral Anticoagulant End Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
b. If the Parenteral Anticoagulant End Date equals Unable to Determine, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.
c. If Parenteral Anticoagulant End Date equals a Non Unable to Determine Value, continue processing and proceed to the Overlap Therapy Days calculation.

12. Calculate Overlap Therapy Days. Overlap Therapy Days, in days, is equal to Parenteral Anticoagulant End Date minus Overlap Therapy Start Date.

13. Check Overlap Therapy Days
a. If Overlap Therapy Days is less than 0 days, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.
b. If Overlap Therapy Days is greater than or equal to 4 days, continue processing and proceed to INR Value.
a. If INR Value is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
b. If INR Value equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.
c. If INR Value equals No, continue processing and proceed to Parenteral Anticoagulant Prescribed at Discharge.
c. If Overlap Therapy Days is greater than or equal to zero days and less than 4 days, continue processing and proceed to Parenteral Anticoagulant Prescribed at Discharge.

14. Check Parenteral Anticoagulant Prescribed at Discharge
a. If Parenteral Anticoagulant Prescribed at Discharge is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
b. If Parenteral Anticoagulant Prescribed at Discharge equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.
c. If Parenteral Anticoagulant Prescribed at Discharge equals No, continue processing and proceed to Reason for Discontinuation of Overlap Therapy.

15. Check Reason for Discontinuation of Overlap Therapy
a. If Reason for Discontinuation of Overlap Therapy is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
b. If Reason for Discontinuation of Overlap Therapy equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.
c. If Reason for Discontinuation of Overlap Therapy equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.

2a1.21-23 Calculation Algorithm/Measure Logic Diagram URL or attachment:
Attachment
2zs_VTE3.pdf

2a1.24 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)**:**
The global Initial Patient Population includes patients discharged from inpatient acute care. Patients with an ICD-9-CM Principal or Other Diagnosis Code as defined in Appendix A, Tables 7.03 and 7.04 can be sampled for VTE-3. Patients with an ICD-9-CM Principal Diagnosis Code as defined in Appendix A, Tables 7.03 and 7.04, a Patient Age (Admission Date minus Birthdate) greater than or equal to 18 years, and a Length of Stay (Discharge Date minus Admission Date) less than or equal to 120 days are included. If the ICD-9-CM Principal Diagnosis Code is not on Table 7.03 or 7.04, continue processing and proceed to ICD-9-CM Other Diagnosis Code. If at least one of the ICD-9-CM Other Diagnosis Codes is on Table 7.03 or 7.04, the patient is eligible to be sampled for VTE-3. Hospitals that choose to sample have the option of sampling quarterly or monthly. The sample is taken randomly as follows for a monthly sample:
• Average monthly Initial Patient Population > or = 596 results in a minimum random sample size of 120

• Average monthly Initial Patient Population of 151-595 results in a random sample of 20% of the population size
• Average monthly Initial Patient Population 30-150 results in a random sample of 30
• Average monthly Initial Patient Population < 30: No sampling; 100% population required.

2a1.25 Data Source *(Check all the sources for which the measure is specified and tested*). If other, please describe**:**
Administrative claims, Electronic Clinical Data, Paper Records

2a1.26 Data Source/Data Collection Instrument (*Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.*)**:** Each data element in the data dictionary includes suggested data sources. The data are collected using contracted Performance Measurement Systems (vendors) that develop data collection tools based on the measure specifications. The tools are verified and tested by Joint Commission staff to confirm the accuracy and conformance of the data collection tool with the measure specifications. Verification must be completed and passed before the vendor can offer the data collection tool to hospitals.

2a1.27-29 Data Source/data Collection Instrument Reference Web Page URL or Attachment:

2a1.30-32 Data Dictionary/Code Table Web Page URL or Attachment:
Attachment
VTE 4.0 ManuaLF-634469519104709898.pdf

2a1.33 Level of Analysis (*Check the levels of analysis for which the measure is specified and tested)***:** Facility, Population : National

2a1.34-35 Care Setting *(Check all the settings for which the measure is specified and tested)***:** Hospital/Acute Care Facility

2a2. Reliability Testing. (*Reliability testing was conducted with appropriate method, scope, and adequate demonstration of reliability*.)

2a2.1 Data/Sample *(Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included)***:**
The VTE measure set has been in national use since the 4th quarter of 2009. It is a requirement of participation in the ORYX initiative that data on all measures in the set are collected. (ORYX is the term used by The Joint Commission to describe the component of the hospital accreditation program which requires data collection and reporting on standardized national performance measures.) Demographics of organizations collecting and reporting data on these measures is as follows:
78 health care organizations representing various types, locations and sizes:
5 For Profit, 22 Not for Profit, 44 Military Facilities, 2 County, 5 other
3 >500 beds; 7 250-500 beds; 60 <250 beds; 8 facilities did not report # of beds
Located in: AE, AK, AP, AR, CA, DO, DC, FL, GA, HI, IA, ID, IN, KS, KY, LA, MD, MN, NO, MS, NC, NE, NM, NV, NY, OH, SC, TX, VA, WA, WI, WY,
8 performance measurement systems

2a2.2 Analytic Method *(Describe method of reliability testing & rationale)***:**
At the time this measure was originally created, extensive tests of measure reliability were conducted. Alpha testing was conducted from June 2006 until August 2006 . Broad scale pilot testing of this measure took place from January 2007 through June 2007. Data elements were reviewed for reliability during this phase of testing as well.
Currently, hospitals are supported in their data collection and reporting efforts by eight contracted performance measurement system (PMS) vendors. It is a contractual requirement of Joint Commission listed vendors that the quality and reliability of data submitted to them by contracted health care organizations must be monitored on a quarterly basis. In addition, The Joint Commission analyzes these data by running 17 quality tests on the data submitted into ORYX. (ORYX is the term used by The Joint Commission to describe the component of the hospital accreditation program which requires data collection and reporting on standardized national performance measures). The following is a list of the major tests done on the submitted ORYX data, taken from the 2011 ORYX Performance Measurement System Requirements manual.

- Transmission of complete data
- Usage of individual core measure data received: To understand if the HCO provides the relevant service to treat the relevant population
- Investigation of aberrant data points
- Verification of patient population and sample size
- Identification of missing data elements
- Validation of the accuracy of target outliers
- Data integrity
- Data corrections

Data Element Agreement Rate:
Inter-rater reliability testing methodology utilized by contracted performance measure system vendors as outlined in the is as follows:

- All clinical data elements and all editable demographic elements are scored.
- All measure data are reabstracted with originally abstracted data having been blinded so that the reabstraction is not biased.
- Reabstracted data are compared with originally abstracted data on a data element by data element basis. A data element agreement rate is calculated. Clinical and demographic data are scored separately, and an overall agreement rate is computed.

2a2.3 Testing Results *(Reliability statistics, assessment of adequacy in the context of norms for the test conducted)***:**
Data element agreement results reported to The Joint Commission for the time period of one year have shown an agreement rate of 98.41%. This reflects the findings of 12 participating hospitals, comprising 1,180 records (100% sample).
The following table delineates calculated agreement rates for individual data elements that are used to compute measure rates for VTE-3.

Data Elements with a Mismatch		total n	total d	rate
Comfort Measures Only	88	90	97.78%	
Parenteral Anticoagulant Prescribed at d/c	11	12	91.67%	
Reason for Discontinuation	11	12	91.67%	
VTE Confirmed	17	18	94.44%	
VTE Diagnostic Test	19	20	95.00%	
Warfarin Admin	16	17	94.12%	

These agreement rates are considered to be well within acceptable levels.

2b. VALIDITY. Validity, Testing, <u>including all Threats to Validity</u>: H☐ M☐ L☐ I ☐

2b1.1 Describe how the measure specifications *(measure focus, target population, and exclusions)* **are consistent with the evidence cited in support of the measure focus (***criterion 1c)* **and identify any differences from the evidence:**
The measure focuses on patients diagnosed with VTE on warfarin who received overlap therapy. The literature supports overlap therapy for patients with VTE being treated with warfarin therapy. Patients less than 18 years of age that have a length of stay (LOS) more than 120 days, enrolled in a clinical trial for VTE or who were designated “comfort measures only” anytime during hospitalization are excluded. In addition, patients who were discharged to a health care facility for hospice care, home for hospice care, who expired or who left against medical advice were excluded to harmonize with other CMS/Joint Commission measures.

Differences between the measure and the guideline recommendations include:
In the measure, patients are in the numerator if they have documentation of administration of warfarin or parenteral therapy or there is a reason for no overlap therapy. The guideline assumes ALL patients should have overlap therapy and it does not specify any patients who could be excluded for medical reasons or allow patients to have less than the recommended days of therapy. Operationally, the measure allows physicians to document a reason for not administering overlap therapy and allows a reason for discontinuation of overlap therapy to include patients in the numerator with less than 5 days of therapy. An INR level of 2 or greater is needed for both the measure and guideline, but the recommendation of sustaining that level for 24 hours is not required for the

measure.

2b2. Validity Testing. (*Validity testing was conducted with appropriate method, scope, and adequate demonstration of validity.)*

2b2.1 **Data/Sample** *(Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included)***:**
As previously stated, the VTE measure set has been in national use since the 4th quarter of 2009. Demographics of organizations collecting and reporting data on these measures is as follows:
78 health care organizations representing various types, locations and sizes:
5 For Profit, 22 Not for Profit, 44 Military Facilities, 2 County, 5 other
3 >500 beds; 7 250-500 beds; 60 <250 beds; 8 facilities did not report # of beds
Located in: AE, AK, AP, AR, CA, DO, DC, FL, GA, HI, IA, ID, IN, KS, KY, LA, MD, MN, NO, MS, NC, NE, NM, NV, NY, OH, SC, TX, VA, WA, WI, WY,
8 performance measurement systems

2b2.2 **Analytic Method** *(Describe method of validity testing and rationale; if face validity, describe systematic assessment)***:**
At the time this measure was originally tested, extensive tests of measure validity were conducted. Alpha testing was conducted from June 2006 until August 2006 to test face validity. Broad scale pilot testing of this measure took place from January 2007 through June 2007. Data elements were reviewed for validity during this phase of testing as well.

Since the measure has been in national use, continued face validity of the measure has been determined through analysis of feedback from measure users. The Joint Commission provides a web-based application with which measure users can provide feedback regarding appropriateness of measure specifications, request clarification of specifications, and/or provide other comments pertinent to the measure. This feedback is systematically continually reviewed in order to identify trends and to identify areas of the measure specifications that require clarification or revision. Additionally, The Joint Commission staff continually monitors the national literature and environment in order to assess continued validity of this measure.

2b2.3 **Testing Results** *(Statistical results, assessment of adequacy in the context of norms for the test conducted; if face validity, describe results of systematic assessment)***:**
Analysis of feedback obtained via the automated feedback system reveals 83 submissions regarding specifications for this measure since its implementation in 2009. Predominant themes of these submissions involved question regarding clarification of the data element Overlap Therapy, VTE Confirmed, VTE Diagnostic test, and Reason for discontinuation of overlap therapy. After initial merging of existing data elements from other measures, and creating new data elements for this measure, many notes for abstraction have been created to better explain the details of the numerator and denominator, and decrease abstraction burden. No other changes have been documented at this time.

POTENTIAL THREATS TO VALIDITY. (*All potential threats to validity were appropriately tested with adequate results.*)

2b3. Measure Exclusions. (*Exclusions were supported by the clinical evidence in 1c or appropriately tested with results demonstrating the need to specify them.*)

2b3.1 **Data/Sample for analysis of exclusions** *(Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included)***:**
As stated before, the VTE measure set has been in national use since the 4th quarter of 2009. Demographics of organizations collecting and reporting data on these measures is as follows:
78 health care organizations representing various types, locations and sizes:
5 For Profit, 22 Not for Profit, 44 Military Facilities, 2 County, 5 other
3 >500 beds; 7 250-500 beds; 60 <250 beds; 8 facilities did not report # of beds
Located in: AE, AK, AP, AR, CA, DO, DC, FL, GA, HI, IA, ID, IN, KS, KY, LA, MD, MN, NO, MS, NC, NE, NM, NV, NY, OH, SC, TX, VA, WA, WI, WY,
8 performance measurement systems

2b3.2 **Analytic Method** (*Describe type of analysis and rationale for examining exclusions, including exclusion related to patient preference)***:**
Measure exclusions that were not derived directly from the evidence are presented below. Please note that these are population exclusions that are necessary to ensure consistency in all measures in this 6 measure set.

These exclusions were analyzed for frequency of occurrence. An issue that is of great concern to users of this measure is that due to the presence of exceptions to the measure, attainment of a 100% measure rate is not possible. Because of the role of this measure in the current Joint Commission accreditation process and the role it is anticipated to play in the determination of value based purchasing incentives, this is especially troubling to measure users. This concern is the basis for a number of the non-evidence-based exclusions to these measures. Additional reasons for these population exclusions are enumerated in our response to section 2b1.1 above.

1. Patients with LOS <120 days
2. Patients enrolled in clinical trials
3. Patients with Comfort Measures Only documented
4. Patients discharged to healthcare facility for hospice care
5. Patients discharged to home for hospice care
6. Patients who expired
7. Patients who left against medical advice
8. Patients discharged to another hospital
9. Patients without warfarin therapy during hospitalization
10. Patient without VTE confirmed by diagnostic testing

2b3.3 Results *(Provide statistical results for analysis of exclusions, e.g., frequency, variability, sensitivity analyses):*
N=1,298

1. Patients who have a length of stay greater than 120 days =0%
2. Patients with Comfort Measures Only documented =1.93%
3. Patients enrolled in clinical trials =0.15%
4. Patients discharged to a health care facility for hospice care =0%
5. Patients discharged to home for hospice care =0%
6. Patients who expired =0%
7. Patients who left against medical advice =0.08%
8. Patients discharged to another hospital =0%
9. Patients without warfarin therapy during hospitalization =4.31%
10. Patients without VTE confirmed by diagnostic testing =3.47%

2b4. Risk Adjustment Strategy. (*For outcome measures, adjustment for differences in case mix (severity) across measured entities was appropriately tested with adequate results.*)

2b4.1 Data/Sample *(Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included)***:**
Not Applicable

2b4.2 Analytic Method (*Describe methods and rationale for development and testing of risk model or risk stratification including selection of factors/variables)***:**
Not Applicable

2b4.3 Testing Results *(Statistical risk model: Provide quantitative assessment of relative contribution of model risk factors; risk model performance metrics including cross-validation discrimination and calibration statistics, calibration curve and risk decile plot, and assessment of adequacy in the context of norms for risk models. Risk stratification: Provide quantitative assessment of relationship of risk factors to the outcome and differences in outcomes among the strata)***:**
Not Applicable

2b4.4 If outcome or resource use measure is not risk adjusted, provide rationale and analyses to justify lack of adjustment: Not Applicable

2b5. Identification of Meaningful Differences in Performance. (*The performance measure scores were appropriately analyzed*

and discriminated meaningful differences in quality.)

2b5.1 Data/Sample *(Describe the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included)*:
As stated before demographics of organizations collecting and reporting data on these measures is as follows:
78 health care organizations representing various types, locations and sizes:
5 For Profit, 22 Not for Profit, 44 Military Facilities, 2 County, 5 other
3 >500 beds; 7 250-500 beds; 60 <250 beds; 8 facilities did not report # of beds
Located in: AE, AK, AP, AR, CA, DO, DC, FL, GA, HI, IA, ID, IN, KS, KY, LA, MD, MN, NO, MS, NC, NE, NM, NV, NY, OH, SC, TX, VA, WA, WI, WY,
8 performance measurement systems

2b5.2 Analytic Method *(Describe methods and rationale to identify statistically significant and practically/meaningfully differences in performance)*:
The method used to analyze meaningful differences in performance at The Joint Commission is Target Analysis. The object of target analysis is to compare a health care organization's (HCO) data against a comparative norm for the purpose of evaluating performance improvement opportunities. When an organization's performance level is statistically significantly different from a comparative norm, it is considered a statistical deviation. A statistical deviation may be desirable or undesirable depending on the "direction of improvement" of the measure.
There are two components to the target analysis methodology used at The Joint Commission. Given the national average for a performance measure, a target range is constructed. Using generalized linear mixed models methodology (also known as hierarchical models), a predicted estimate of an HCO's performance, with a corresponding 95% confidence interval, is generated. This confidence interval is compared to the target range, to determine the HCOs' rating. The estimate of the organization's true performance is based on both the data from that organization and on data from the entire set of reporting organizations.

2b5.3 Results *(Provide measure performance results/scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance)*:
VTE-3 Distribution of Outliers

2010 4th Quarter Data:
Scores on this measure: N=47, Mean 94, SD 0.16762
10th Percentile= 90%
25th Percentile= 96%
50th Percentile= 100%
75th Percentile= 100%
90th Percentile= 100%

Neutral 74 (63.51%) - not significantly different from the target range
Undesirable 0- statistically significantly lower than the national rate
27 (36.49%) missing data

2b6. Comparability of Multiple Data Sources/Methods. (*If specified for more than one data source, the various approaches result in comparable scores.*)

2b6.1 Data/Sample *(Describe the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included)*:
Multiple data sources are not used for this measure.

2b6.2 Analytic Method *(Describe methods and rationale for testing comparability of scores produced by the different data sources specified in the measure)*:
Not Applicable

2b6.3 Testing Results *(Provide statistical results, e.g., correlation statistics, comparison of rankings; assessment of adequacy in*

the context of norms for the test conducted):
Not Applicable

2c. Disparities in Care: H☐ M☐ L☐ I ☐ NA☐ (*If applicable, the measure specifications allow identification of disparities.*)

2c.1 **If measure is stratified for disparities, provide stratified results** *(Scores by stratified categories/cohorts)*: This measure is not stratified for disparities

2c.2 **If disparities have been reported/identified (e.g., in 1b), but measure is not specified to detect disparities, please explain:**
This measure was originally specified to capture use of overlap therapy in confirmed VTE patient with no focus on disparities. The Joint Commission does not currently capture date elements for race or ethnicity because these data elements have not been shown to be reliably collectable due to the fact that no national standardized definitions exist for these data elements. Also, not all hospitals collect race and ethnicity. In the future, it may be feasible for The Joint Commission to explore how race and ethnicity and other relevant disparity data, might be collected reliably in the future. Future measure data could also be evaluated according to sex, age and geographic location.

2.1-2.3 **Supplemental Testing Methodology Information:**

Steering Committee: Overall, was the criterion, *Scientific Acceptability of Measure Properties*, met?
(*Reliability and Validity must be rated moderate or high*) Yes☐ No☐
Provide rationale based on specific subcriteria:

If the Committee votes No, STOP

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)**

C.1 **Intended Purpose/ Use** *(Check all the purposes and/or uses for which the measure is intended)*: Public Reporting, Quality Improvement (Internal to the specific organization), Quality Improvement with Benchmarking (external benchmarking to multiple organizations), Regulatory and Accreditation Programs

3.1 **Current Use** *(Check all that apply; for any that are checked, provide the specific program information in the following questions)*: Public Reporting, Regulatory and Accreditation Programs, Quality Improvement with Benchmarking (external benchmarking to multiple organizations), Quality Improvement (Internal to the specific organization)

3a. Usefulness for Public Reporting: H☐ M☐ L☐ I ☐
(*The measure is meaningful, understandable and useful for public reporting.*)

3a.1. **Use in Public Reporting - disclosure of performance results to the public at large** *(If used in a public reporting program, provide name of program(s), locations, Web page URL(s)).* If not publicly reported in a national or community program, state the reason AND plans to achieve public reporting, potential reporting programs or commitments, and timeline, e.g., within 3 years of endorsement: **[*For Maintenance* –** *If not publicly reported, describe progress made toward achieving disclosure of performance results to the public at large and expected date for public reporting; provide rationale why continued endorsement should be considered.***]**
The Joint Commission has a longstanding commitment to providing meaningful information about the comparative performance of accredited organizations to the public. The Quality Check® Web site, www.qualitycheck.org, launched in 2004, fulfills this commitment. Among other things, Quality Check allows consumers to view or download free hospital performance measure results. Measure rates for VTE-3 (and all the VTE measures) are included in the hospital performance measure results.
This measure is included among the 15 clinical quality measures required in Stage 1 of meaningful use that must be reported by eligible hospitals and critical access hospitals in order to be eligible for the Medicare or Medicaid electronic health record incentive programs.

In addition, this measure is included in the in the CMS FY 2012 Final Rule for the Inpatient Prospective Payment System and will be included in the Hospital Inpatient Quality Reporting Program FY 2015 payment determination. Data collection will begin with discharges on or after January 2013.

3a.2.**Provide a rationale for why the measure performance results are meaningful, understandable, and useful for public reporting**. If usefulness was demonstrated (e.g., focus group, cognitive testing), describe the data, method, and results**:** All measure specifications (e.g., numerator, denominator, exclusions, data elements and measure calculation algorithms) are standardized in order to produce consistent measure results. Specifications are updated biannually based on feedback from vendors, and hospitals, as well as technical advisory member recommendations and updated clinical practice guidelines. Data are collected using data collection tools that have been verified by The Joint Commission to accurately collect measure data elements and compute measure assignment categories according to the measure specifications. Quarterly data reported to The Joint Commission are subject to a number of data quality tests to ensure the accuracy of the data. The measure rate is computed using a standardized measure calculation algorithm that is Section 508 compliant so the information is understandable to the general public.

The Joint Commission provides an opportunity for abstractors to submit questions and feedback about the measure specifications via an on-line website. This information is used to evaluate the need for revisions and provide abstractors with a database of frequently asked questions. Measure updates and issues about the measures are presented and discussed at an annual vendor conference. These activities support the Joint Commission's effort to provide results that are useable, understandable and useful for public reporting.

3.2 **Use for other Accountability Functions (payment, certification, accreditation).** If used in a public accountability program, provide name of program(s), locations, Web page URL(s)**:** The Joint Commission is a national (and international) accreditor of hospitals and other healthcare organizations. This measure set is one of 10 available measure sets from which hospitals can select to meet The Joint Commission´s ORYX accreditation program requirement for data collection and reporting. Additional information located at: http://www.jointcommission.org/accreditation/hospitals.aspx
These measures will be used in the CMS Inpatient Quality Reporting program. They are the basis for e Measures required as clinical quality measures for Stage 1 of meaningful use of the electronic health record.

3b. Usefulness for Quality Improvement: H☐ M☐ L☐ I ☐
(*The measure is meaningful, understandable and useful for quality improvement.*)

3b.1. **Use in QI.** If used in quality improvement program, provide name of program(s), locations, Web page URL(s):
[*For Maintenance* – *If not used for QI, indicate the reasons and describe progress toward using performance results for improvement*].
While The Joint Commission developed this measure for and uses results from this measure in its accreditation activities, the measure is also intended for use in internal quality improvement by accredited organizations.

3b.2. Provide rationale for why the measure performance results are meaningful, understandable, and useful for quality improvement. If usefulness was demonstrated *(e.g., QI initiative),* describe the data, method and results:
From an accreditation perspective, measure results have proven useful in that they are used in the Priority Focus Process, which helps to focus accreditation survey activities toward areas of greatest need. From the hospital quality improvement perspective, measure rates are included in the Joint Commission's Strategic Surveillance System (S3) product, which is made available to accredited organizations at no extra cost and is used by them to identify gaps in the care they provide relative to other measure users. Aggregate measure results have improved over time, indicating that they are being used by hospitals to identify and address areas in need of improvement.

Overall, to what extent was the criterion, *Usability*, met? H☐ M☐ L☐ I ☐
Provide rationale based on specific subcriteria:

4. FEASIBILITY

Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. **(evaluation criteria)**

4a. Data Generated as a Byproduct of Care Processes: H☐ M☐ L☐ I ☐

4a.1-2 How are the data elements needed to compute measure scores generated? *(Check all that apply).*
Data used in the measure are**:**
generated by and used by healthcare personnel during the provision of care, e.g., blood pressure, lab value, medical condition, Coded by someone other than person obtaining original information (e.g., DRG, ICD-9 codes on claims), Abstracted from a record by someone other than person obtaining original information (e.g., chart abstraction for quality measure or registry), Other
data elements like admission date and discharge date may be genearted

4b. Electronic Sources: H☐ M☐ L☐ I ☐

4b.1 Are the data elements needed for the measure as specified available electronically *(Elements that are needed to compute measure scores are in defined, computer-readable fields)***:** ALL data elements in electronic health records (EHRs)

4b.2 If ALL data elements are not from electronic sources, specify a credible, near-term path to electronic capture, OR provide a rationale for using other than electronic sources:

4c. Susceptibility to Inaccuracies, Errors, or Unintended Consequences: H☐ M☐ L☐ I ☐

4c.1 Identify susceptibility to inaccuracies, errors, or unintended consequences of the measurement identified during testing and/or operational use and strategies to prevent, minimize, or detect. If audited, provide results:
The original algorithm was not designed to manage patients who were ineligible for overlap therapy, expired or were transferred to another hospital or had to have overlap therapy discontinued sooner than the five day requirement. New and aligned data elements were added and several data elements were deleted to increase reliability. Additional notes for abstraction were provided to clarify appropriate reasons for discontinuation other than a therapeutic INR value by day 3.

4d. Data Collection Strategy/Implementation: H☐ M☐ L☐ I ☐

A.2 Please check if either of the following apply (*regarding proprietary measures*)**:**
4d.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 and frequency of data collection, sampling, patient confidentiality, time and cost of data collection, other feasibility/implementation issues *(e.g., fees for use of proprietary measures)***:**
Although this measure has been specified for electronic data collection via the meaningful use of EHR program, at the present time, hospitals using this performance measure generally collect measure data via manual review of the paper medical record. Collected data are submitted to The Joint Commission on a quarterly basis, by way of contracted performance measurement system vendors, as described previously. Specifications for this measure are freely available to anyone who wishes to use the measure. Feedback from hospitals using this measure indicates that required data elements are generally available in the medical record, and measure specifications are robust and easy to understand. As described above, the measure specifications have been clarified and updated based upon feedback of the measure users.

Overall, to what extent was the criterion, *Feasibility*, met? H☐ M☐ L☐ I ☐
Provide rationale based on specific subcriteria:

OVERALL SUITABILITY FOR ENDORSEMENT

Does the measure meet all the NQF criteria for endorsement? Yes☐ No☐
Rationale:

If the Committee votes No, STOP.
If the Committee votes Yes, the final recommendation is contingent on comparison to related and competing measures.

5. COMPARISON TO RELATED AND COMPETING MEASURES

If a measure meets the above criteria and there are endorsed or new related measures (either the same measure focus or the same target population) or competing measures (both the same measure focus and the same target population), the measures are compared to address harmonization and/or selection of the best measure before a final recommendation is made.

5.1 If there are related measures *(either same measure focus or target population)* or competing measures *(both the same measure focus and same target population*), list the NQF # and title of all related and/or competing measures:

5a. **Harmonization**
5a.1 **If this measure has EITHER the same measure focus OR the same target population as NQF-endorsed measure(s): Are the measure specifications completely harmonized?** 5a.2 **If the measure specifications are not completely harmonized, identify the differences, rationale, and impact on interpretability and data collection burden:**
5b. **Competing Measure(s)**
5b.1 **If this measure has both the same measure focus and the same target population as NQF-endorsed measure(s): Describe why this measure is superior to competing measures** *(e.g., a more valid or efficient way to measure quality)***; OR provide a rationale for the additive value of endorsing an additional measure.** *(Provide analyses when possible)***:**

CONTACT INFORMATION
Co.1 **Measure Steward (Intellectual Property Owner):** The Joint Commission, One Renaissance Boulevard, Oakbrook Terrace, Illinois, 60181 Co.2 **Point of Contact:** Jerod M., Loeb, PhD, jloeb@jointcommission.org, 630-792-5920-
Co.3 **Measure Developer if different from Measure Steward:** The Joint Commission, One Renaissance Boulevard, Oakbrook Terrace, Illinois, 60181 Co.4 **Point of Contact:** Jerod M., Loeb, PhD, jloeb@jointcommission.org, 630-792-5920-
Co.5 **Submitter:** Ann, Watt, MBA, RHIA, awatt@jointcommission.org, 630-792-5944-, The Joint Commission
Co.6 **Additional organizations that sponsored/participated in measure development:**
Co.7 **Public Contact:** Ann, Watt, MBA, RHIA, awatt@jointcommission.org, 630-972-5944-, The Joint Commission

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.** Dale Bratzler, DO, MPH, Co-Chair Oklahoma Foundation for Medical Quality Oklahoma City, OK Joseph A. Caprini, MD, MS, RVT, Co-Chair Evanston Northwestern Healthcare Evanston, IL Anne R. Bass, MD Weill Medical College of Cornell University Hospital for Special Surgery New York, NY Stephen V. Cantrill, MD Denver Health Medical Center Denver, CO Vanessa K. Dalton, MD, MPH University of Michigan Hospitals Ann Arbor, MI

T. Bruce Ferguson, Jr., MD, SC CO-Chair
Division of CT and Vascular Surgery
Brody School of Medicine at ECU
William H. Geerts, MD
University of Toronto
Toronto, Ontario, Canada
James Boyd Groce, III, PharmD
Moses H. Cone Memorial Hospital
Greensboro, NC
Kathryn Hassell, MD
University of Colorado Health Sciences Center
Denver, CO
John A. Heit, MD, SC Co-Chair
Mayo Clinic
Rochester, MN
Scott Kaatz, DO
Henry Ford Hospital
Detroit, MI
Nicos Labropoulos, PhD, DIC, RVT
University of Medicine & Dentistry of New Jersey
Newark, New Jersey,
Franklin A. Michota, Jr., MD
Cleveland Clinic Foundation
Cleveland, OH
Ruth Morrison, BSN, CVN
Brigham & Women's Hospital
Boston, MA
Robert Jeffery Panzer, MD
University of Rochester
Rochester, NY
Vincent Pellegrini, Jr., MD
University of Maryland School of Medicine
Baltimore, MD
Jodi Beth Segal, MD, MPH
Johns Hopkins University School of Medicine
Baltimore, MD
Victor F. Tapson, MD
Duke University Medical Center
Durham, NC
Suresh Vedantham, MD
Mallinckrodt Institute of Radiology, Washington University School of Medicine,
St. Louis, MO

The technical advisory panel (TAP) members determined priority areas that could be evaluated to improve care related to prevention and treatment for VTE during the development timeframe. Public comments and hospital feedback was reviewed during the testing phases of the project to assist the TAP in making the final measure recommendations. After implementation, minor revisions, acknowledged by TAP representatives, were made to improve clarity.

Ad.2 If adapted, provide title of original measure, NQF # if endorsed, and measure steward. Briefly describe the reasons for adapting the original measure and any work with the original measure steward:

Measure Developer/Steward Updates and Ongoing Maintenance
Ad.3 Year the measure was first released: 2009
Ad.4 Month and Year of most recent revision: 07, 2011
Ad.5 What is your frequency for review/update of this measure? Biannual

Ad.6 When is the next scheduled review/update for this measure? 01, 2012
Ad.7 Copyright statement: The Specifications Manual for National Hospital Inpatient Quality Measures (Specifications Manual) is the result of the collaborative efforts of the Centers for Medicare & Medicaid Services (CMS) and The Joint Commission to publish a uniform set of national hospital quality measures. A primary objective of this collaborative effort is to promote and enhance the utility of these measures for all hospitals. No royalty or use fee is required for copying or reprinting this manual, but the following are required as a condition of usage: 1) disclosure that the Specifications Manual is periodically updated, and that the version being copied or reprinted may not be up-to-date when used unless the copier or printer has verified the version to be up-to-date and affirms that, and 2) users participating in the QIO supported initiatives, the Hospital Inpatient Quality Reporting Program, and Joint Commission accreditation; including performance measures systems; are required to update their software and associated documentation based on the published manual production timelines. Example Acknowledgement: The Specifications Manual for National Hospital Inpatient Quality Measures [Version xx, Month, Year] is the collaborative work of the Centers for Medicare & Medicaid Services and The Joint Commission. The Specifications Manual is periodically updated by the Centers for Medicare & Medicaid Services and The Joint Commission. Users of the Specifications Manual for National Hospital Inpatient Quality Measures must update their software and associated documentation based on the published manual production timelines.
Ad.8 Disclaimers:
Ad.9 Additional Information/Comments:
Date of Submission (*MM/DD/YY*)**:** 09/13/2011

NQF-ENDORSED VOLUNTARY CONSENSUS STANDARDS FOR HOSPITAL CARE

Measure Information Form
Collected For: The Joint Commission Only
CMS Informational Only

Measure Set: Venous Thromboembolism (VTE)

Set Measure Set ID #: VTE-3

Performance Measure Name: Venous Thromboembolism Patients with Anticoagulation Overlap Therapy

Description: This measure assesses the number of patients diagnosed with confirmed VTE who received an overlap of parenteral (intravenous [IV] or subcutaneous [subcu]) anticoagulation and warfarin therapy. For patients who received less than five days of overlap therapy, they should be discharged on both medications or have a *Reason for Discontinuation of Overlap Therapy*. Overlap therapy should be administered for at least five days with an international normalized ratio (INR) greater than or equal to 2 prior to discontinuation of the parenteral anticoagulation therapy, discharged on both medications or have a *Reason for Discontinuation of Overlap Therapy.*

Rationale: For patients who present with a confirmed acute VTE, parenteral anticoagulation is the first line of therapy because of its rapid onset of action. Because the oral anticoagulant warfarin has a very slow onset of action, it cannot be used as mono-therapy for acute VTE. Pretreatment with parenteral anticoagulants prior to initiation of warfarin also avoids an early period of hypercoagulability that can result from the selective inhibition of proteins S and C (which have very short half lives). Warfarin can be initiated on the first day of treatment after the first dose of a parenteral anticoagulant has been given.

Warfarin interferes with the synthesis of vitamin K dependent pro-coagulant factors (factors II, VII, IX, and X) as well as some anticoagulant factors (proteins S and C). It takes several days for warfarin to achieve its effect because time is required for normal coagulation factors to be cleared from plasma. The adequacy of warfarin therapy is monitored by measurement of the international normalized ratio (INR). The INR can sometimes appear prolonged (or “therapeutic”) as soon as 24 hours after the institution of warfarin due to a reduction in factor VII levels, even while factor II levels are still high and the patient is not in fact therapeutically anti-coagulated. Because factor II has a half-life of 60-72 hours, a minimum of five days of parenteral anticoagulation is recommended as “overlap therapy” while warfarin is being initiated. Parenteral therapy should also be continued until the INR is greater than or equal to 2.0, even if this takes longer than five

days, so that patients are fully anticoagulated during the period before warfarin takes its full effect.

Type of Measure: Process

Improvement Noted As: An increase in the rate

Numerator Statement: Patients who received overlap therapy.

Included Populations: Patients who received warfarin **and** parenteral anticoagulation:

- Five or more days, with an INR greater than or equal to 2 prior to discontinuation of parenteral therapy OR
- Five or more days, with an INR less than 2 and discharged on overlap therapy OR
- Less than five days and discharged on overlap therapy OR
- With documentation of reason for discontinuation of overlap therapy OR
- With documentation of a reason for no overlap therapy

Excluded Populations: None

Data Elements:

- *INR Value*
- *Overlap Therapy*
- *Overlap Therapy Start Date*
- *Parenteral Anticoagulant End Date*
- *Parenteral Anticoagulant Prescribed at Discharge*
- *Reason for Discontinuation of Overlap Therapy*

Denominator Statement: Patients with confirmed VTE who received warfarin.

Included Populations:
Discharges with an *ICD-9-CM Principal or Other Diagnosis Codes* of VTE as defined in Appendix A, Table 7.03 or 7.04

Excluded Populations:

- Patients less than 18 years of age
- Patients who have a length of stay greater than 120 days
- Patients with *Comfort Measures Only* documented
- Patients enrolled in clinical trials
- Patients discharged to a health care facility for hospice care
- Patients discharged to home for hospice care
- Patients who expired
- Patients who left against medical advice

- Patients discharged to another hospital
- Patients without warfarin therapy during hospitalization
- Patients without VTE confirmed by diagnostic testing

Data Elements:

- *Admission Date*
- *Birthdate*
- *Clinical Trial*
- *Comfort Measures Only*
- *Discharge Date*
- *Discharge Disposition*
- *ICD-9-CM Other Diagnosis Codes*
- *ICD-9-CM Principal Diagnosis Code*
- *VTE Confirmed*
- *VTE Diagnostic Test*
- *Warfarin Administration*

Risk Adjustment: No

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical records.

Data Accuracy: Variation may exist in the assignment of ICD-9-CM codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: In order to identify areas for improvement**,** hospitals may want to review cases that did not pass the measure to determine if documentation, medication administration or other reasons need to be addressed.

Sampling: Yes, please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications.

Data Reported as: Aggregate rate generated from count data reported as a proportion

Selected References:

- Kearon C, Kahn, SR, Agnelli G, Goldhaber S, Raskob, GE, Comerota AJ. Antithrombotic therapy for venous thromboembolic disease. The Eighth ACCP Conference on antithrombotic and thrombolytic therapy. *Chest*. 2008;133: 454S-545S.
- Sallah S, Thomas DP, Roberts HR. Warfarin and heparin-induced skin necrosis and the purple toe syndrome: infrequent complications of anticoagulant treatment. *Thromb Haemost*. 1997; 78(2): 785-90.
- Gallus A, Jackaman J, Tillet J et al. Safety and efficacy of warfarin started early after submassive venous thrombosis or pulmonary embolism. *Lancet*. 1986 Dec 6;2(8519):1293-6.

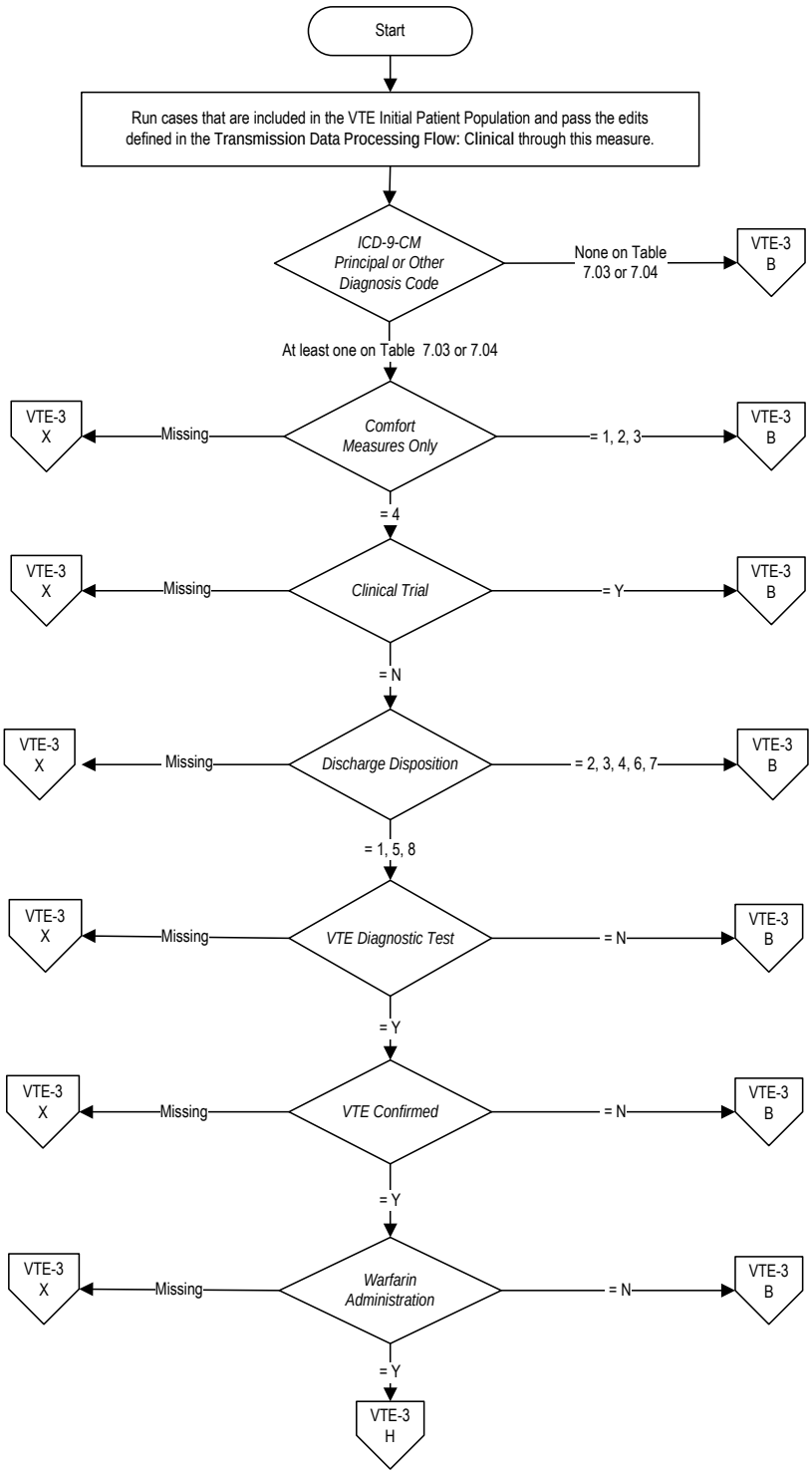
- Buller HR, Davidson BL, Decousus DL et al. Subcutaneous fondaparinux versus intravenous unfractionated heparin in the initial treatment of pulmonary embolism. *N Engl J Med*. 2003 Oct 30;349 (18):1695-702.
- Buller HR, Davidson BL, Decousas DL et al. Fondaparinux or enoxaparin for the initial treatment of symptomatic deep venous thrombosis: a randomized trial. *Ann Intern Med*. 2004 Jun 1;140(11):867-73.
- Ansell J, Hirsch J, Hylek E, Jacobson A, Crowther M, Palareti G. Pharmacology and management of the vitamin K antagonists: The Eighth ACCP Conference on Antithrombotic and Thrombolytic Therapy. *Chest*. 2008 133:160S-198S.
- Caprini JA, Tapson VF, Hyers TM et al. NABOR Steering Committee. Treatment of venous thromboembolism: adherence to guidelines and impact of physician knowledge, attitudes, and beliefs. *J of Vasc Surg*. 2005 Oct;42(4):726-33.

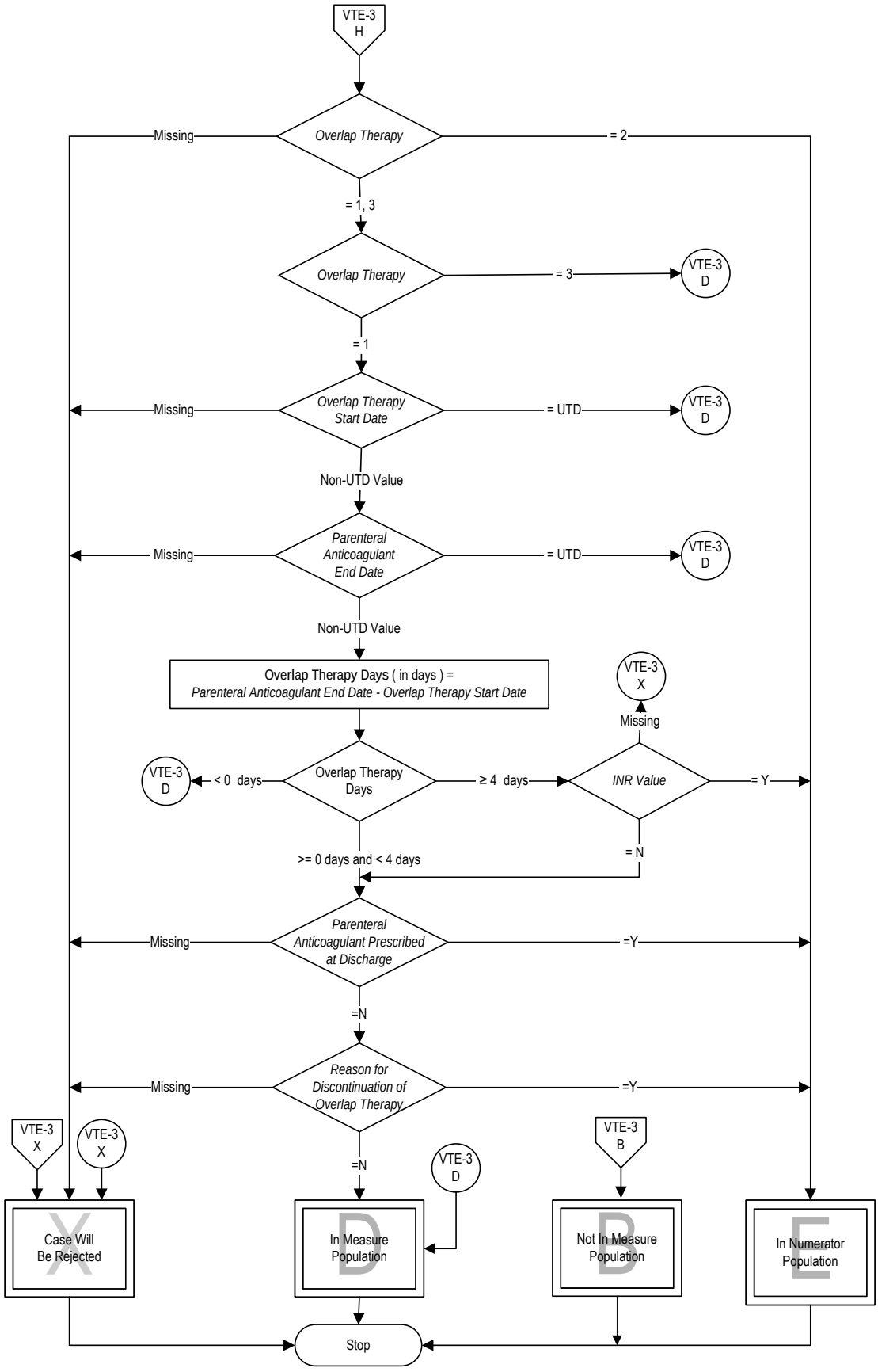
VTE-3: Venous Thromboembolism Patients with Anticoagulation Overlap Therapy

Numerator: Patients who received overlap therapy

Denominator: VTE patients with confirmed VTE who received warfarin

Variable Key:
Overlap Therapy Days




VTE-3 H
Overlap Therapy
Missing
= 2
= 1, 3
Overlap Therapy
= 3
VTE-3 D
= 1
Overlap Therapy Start Date
Missing
= UTD
VTE-3 D
Non-UTD Value
Parenteral Anticoagulant End Date
Missing
= UTD
VTE-3 D
Non-UTD Value
Overlap Therapy Days (in days) =
Parenteral Anticoagulant End Date - Overlap Therapy Start Date
VTE-3 X
Missing
VTE-3 D
< 0 days
Overlap Therapy Days
≥ 4 days
INR Value
= Y
>= 0 days and < 4 days
= N
Parenteral Anticoagulant Prescribed at Discharge
Missing
=Y
=N
Reason for Discontinuation of Overlap Therapy
Missing
=Y
VTE-3 X
VTE-3 X
=N
VTE-3 D
VTE-3 B
X
Case Will Be Rejected
D
In Measure Population
B
Not In Measure Population
E
In Numerator Population
Stop

VTE-3: Venous Thromboembolism Patients with Anticoagulation Overlap Therapy

Numerator: Patients who received overlap therapy.

Denominator: Patients with confirmed VTE who received warfarin.

Variable Key: Overlap Therapy Days

1. Start processing. Run cases that are included in the VTE Initial Patient Population and pass the edits defined in Transmission Data Processing Flow: Clinical through this measure.

2. Check ICD-9-CM Principal or Other Diagnosis Code
   a. If none of the ICD-9-CM Principal or Other Diagnosis Code is on Table 7.03 or 7.04, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
   b. If at least one of the ICD-9-CM Principal or Other Diagnosis Code is on Table 7.03 or 7.04, continue processing and proceed to Comfort Measures Only.

3. Check Comfort Measures Only
   a. If Comfort Measures Only is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
   b. If Comfort Measures Only equals 1, 2 or 3, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
   c. If Comfort Measures Only equals 4, continue processing and proceed to Clinical Trial.

4. Check Clinical Trial
   a. If Clinical Trial is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
   b. If Clinical Trial equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
   c. If Clinical Trial equals No, continue processing and proceed to Discharge Disposition.

5. Check Discharge Disposition
   a. If Discharge Disposition is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.

b. If Discharge Disposition equals 2, 3, 4, 6, 7, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.
c. If Discharge Disposition equals 1, 5, 8, continue processing and proceed to VTE Diagnostic Test.

6. Check VTE Diagnostic Test
   a. If VTE Diagnostic Test is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
   b. If VTE Diagnostic Test equals No, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
   c. If VTE Diagnostic Test equals Yes, continue processing and proceed to VTE Confirmed.

7. Check VTE Confirmed
   a. If VTE Confirmed is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
   b. If VTE Confirmed equals No, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
   c. If VTE Confirmed equals Yes, continue processing and proceed to Warfarin Administration.

8. Check Warfarin Administration
   a. If Warfarin Administration is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
   b. If Warfarin Administration equals No, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
   c. If Warfarin Administration equals Yes, continue processing and proceed to Overlap Therapy.

9. Check Overlap Therapy
   a. If Overlap Therapy is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
   b. If Overlap Therapy equals 2, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.

c. If Overlap Therapy equals 3, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.
d. If Overlap Therapy equals 1, continue processing and proceed to the Overlap Therapy Start Date.

10. Check Overlap Therapy Start Date
    a. If Overlap Therapy Start Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
    b. If the Overlap Therapy Start Date equals Unable to Determine, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.
    c. If Overlap Therapy Start Date equals a Non Unable to Determine Value, continue processing and proceed to the Parenteral Anticoagulant End Date.

11. Check Parenteral Anticoagulant End Date
    a. If Parenteral Anticoagulant End Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
    b. If the Parenteral Anticoagulant End Date equals Unable to Determine, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.
    c. If Parenteral Anticoagulant End Date equals a Non Unable to Determine Value, continue processing and proceed to the Overlap Therapy Days calculation.

12. Calculate Overlap Therapy Days. Overlap Therapy Days, in days, is equal to Parenteral Anticoagulant End Date minus Overlap Therapy Start Date.

13. Check Overlap Therapy Days
    a. If Overlap Therapy Days is less than 0 days, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.
    b. If Overlap Therapy Days is greater than or equal to 4 days, continue processing and proceed to INR Value.
        1. If INR Value is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
        2. If INR Value equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.

3. If INR Value equals No, continue processing and proceed to Parenteral Anticoagulant Prescribed at Discharge.

c. If Overlap Therapy Days is greater than or equal to zero days and less than 4 days, continue processing and proceed to Parenteral Anticoagulant Prescribed at Discharge.

14. Check Parenteral Anticoagulant Prescribed at Discharge
    a. If Parenteral Anticoagulant Prescribed at Discharge is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
    b. If Parenteral Anticoagulant Prescribed at Discharge equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.
    c. If Parenteral Anticoagulant Prescribed at Discharge equals No, continue processing and proceed to Reason for Discontinuation of Overlap Therapy.

15. Check Reason for Discontinuation of Overlap Therapy
    a. If Reason for Discontinuation of Overlap Therapy is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
    b. If Reason for Discontinuation of Overlap Therapy equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.
    c. If Reason for Discontinuation of Overlap Therapy equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.

Data Element Name: *Admission Date*

Collected For: CMS/The Joint Commission: All Records

Definition: The month, day, and year of admission to acute inpatient care.

Suggested Data Collection Question: What is the date the patient was admitted to acute inpatient care?

Format:

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

Allowable Values:

MM = Month (01-12) DD = Day (01-31) YYYY = Year (2001-Current Year)

Notes for Abstraction:

- The intent of this data element is to determine the date that the patient was actually admitted to acute inpatient care. Because this data element is critical in determining the population for all measures, the abstractor should NOT assume that the claim information for the admission date is correct. If the abstractor determines through chart review that the date from billing is incorrect, for purposes of abstraction, she/he should correct and override the downloaded value.
- For patients who are admitted to Observation status and subsequently admitted to acute inpatient care, abstract the date that the determination was made to admit to acute inpatient care and the order was written. Do not abstract the date that the patient was admitted to Observation.
  Example:
  - Medical record documentation reflects that the patient was admitted to observation on 04-05-20xx. On 04-06-20xx the physician writes an order to admit to acute inpatient effective 04-05-20xx. The *Admission Date* would be abstracted as 04-06-20xx; the date the determination was made to admit to acute inpatient care and the order was written.

- If there are multiple inpatient orders, use the order that most accurately reflects the date that the patient was admitted. The admission date should not be abstracted from the earliest admission order without regards to substantiating documentation. If documentation suggests that the earliest admission order does not reflect the date the patient was admitted to inpatient care, this date should not be used.

Example:
Preoperative Orders are dated as 04-06-20xx with an order to admit to Inpatient. Postoperative Orders, dated 05-01-20xx, state to admit to acute inpatient. All other documentation supports that the patient presented to the hospital for surgery on 05-01-20xx. The admission date would be abstracted as 05-01-20xx.

Suggested Data Sources:
ONLY ALLOWABLE SOURCES
1. Physician orders
2. Face Sheet
3. UB-04, Field Location: 12

Excluded Data Sources
UB-04, Field Location: 06

Inclusion Guidelines for Abstraction:
None

Exclusion Guidelines for Abstraction:
- Admit to observation
- Arrival date

Data Element Name: *Anesthesia Start Date*

Collected For: CMS/The Joint Commission: All SCIP Measures; **The Joint Commission Only:** VTE-2

Definition: The date the anesthesia for the procedure started.

Suggested Data Collection Question: On what date did the anesthesia for the procedure start?

Format:

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

Allowable Values:

MM = Month (01-12) DD = Day (01-31) YYYY = Year (2001-Current Year) UTD = Unable to Determine

Notes for Abstraction:

- If an anesthesia start date is not documented use surrounding documentation to determine the date anesthesia started. Example: The anesthesia end date is 10-02-20xx, the anesthesia start time is 2330 and the anesthesia end time is 0045. The anesthesia start date should be abstracted as 10-01-20xx because it is obvious that the date would change if the anesthesia ended after midnight.
- If the date anesthesia started cannot be determined from medical record documentation, enter “UTD”. When the date documented is obviously invalid (not a valid format/range [12-39-20xx] or before the anesthesia start date) and no other documentation can be found that provides the correct information, the abstractor should select “UTD”. Example: Patient expires on 02-12-20xx and documentation indicates the anesthesia start date was 03-12-20xx. Other documentation in the medical record supports the date of death as being accurate, but no other documentation of the anesthesia start date can be found. Since the anesthesia start date is outside of the parameter for care (after the *Discharge Date* [death]) and no other documentation is found, the abstractor should select “UTD”.
- If the anesthesia start date is an obvious error but it is a valid date and the correct date can be supported with other documentation in the medical record, the correct date may be entered. If supporting documentation of the correct date

cannot be found, the medical record must be abstracted as documented or at "face value." Example: The anesthesia form is dated 12-20-2008, but other documentation in the medical record supports that the correct date was 12-10-2009. Enter the correct date of 12-10-2009 as the *Anesthesia Start Date.*

- An *Anesthesia End Date* of 11-20-20xx is documented but the *Anesthesia Start Date* is documented as 11-10-20xx. Other documentation in the medical record supports the anesthesia start date as being accurate. If no other documentation can be found to support another *Anesthesia Start Date*, then it must be abstracted as 11-10-20xx because the date is not considered invalid or outside the parameter of care. **Note:** Transmission of a case with an invalid date as described above will be rejected from the QIO Clinical Warehouse and the Joint Commission's Data Warehouse. Use of "UTD" for Anesthesia Start Date allows the case to be accepted into the warehouse.

SCIP: The *Anesthesia Start Date* is the date associated with the start of anesthesia for the surgical episode that includes the principal procedure. If a patient enters the operating room, but the surgery is canceled before incision and the principal procedure is performed on a later date, the *Anesthesia Start Date* is the date the principal procedure was actually performed.

Suggested Data Sources:
Note: The anesthesia record is the priority data source for this data element, if a valid *Anesthesia Start Date* is found on the anesthesia record, use that date. If a valid date is not on the anesthesia record, other suggested data sources may be used in no particular order to determine the *Anesthesia Start Date.*

Priority Source:
Anesthesia record

Other Suggested Sources:
- Intraoperative record
- Circulator record
- Post-anesthesia evaluation record
- Operating room notes

Inclusion Guidelines for Abstraction
None

Exclusion Guidelines for Abstraction
None

Data Element Name: *Birthdate*

Collected For: CMS/The Joint Commission: All Records

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

Note: Patient's age (in years) is calculated by *Admission Date* minus *Birthdate*. The algorithm to calculate age must use the month and day portion of admission 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, she/he should correct and override the downloaded value. If the abstractor is unable to determine the correct birthdate through chart review, she/he should default to the date of birth on the claim information.

Suggested Data Sources:

- Emergency department record
- Face sheet Registration form
- UB-04, Field Location: 10

Inclusion Guidelines for Abstraction:

None

Exclusion Guidelines for Abstraction:

None

Data Element Name: *Clinical Trial*

Collected For: CMS/Joint Commission: All AMI Measures, All HF Measures, PN-3a, PN-3b, PN-4, PN-5c, SCIP-Inf-1, SCIP-Inf-2, SCIP-Inf-3, SCIP-Inf-4, SCIP-Inf-6, SCIPInf-9, SCIP-Card-2, SCIP-VTE-1, SCIP-VTE-2; **CMS Only:** PN-6; **The Joint Commission Only:** All CAC, PN-5, PN-6a, PN-6b, All STK Measures, All VTE Measures

Definition: Documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients with the same condition as the measure set were being studied (i.e. AMI, CAC, HF, PN, SCIP, STK, VTE).

Suggested Data Collection Question: During this hospital stay, was the patient enrolled in a clinical trial in which patients with the same condition as the measure set were being studied (i.e. AMI, CAC, HF, PN, SCIP, STK, VTE)?

Format:

Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes)	There is documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients with the same condition as the measure set were being studied (i.e. AMI, CAC, HF, PN, SCIP, STK, VTE).
N (No)	There is no documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients with the same condition as the measure set were being studied (i.e. AMI, CAC, HF, PN, SCIP, STK, VTE), or unable to determine from medical record documentation.

Notes for Abstraction:

- To select "Yes" to this data element, BOTH of the following must be true:
  1. **There must be a signed consent form for clinical trial**. For the purposes of abstraction, a clinical trial is defined as an **experimental study** in which research subjects are recruited and assigned a treatment/intervention and their outcomes are measured based on the intervention received. Treatments/interventions most often include use of drugs, surgical procedures, and devices. Often a control group is used to compare with the

treatment/intervention. Allocation of different interventions to participants is usually randomized.

2. **There must be documentation on the signed consent form that during this hospital stay the patient was enrolled in a clinical trial in which patients with the same condition as the measure set were being studied (i.e. AMI, CAC, HF, PN, SCIP, STK, VTE).** Patients may either be newly enrolled in a clinical trial during the hospital stay or enrolled in a clinical trial prior to arrival and continued active participation in that clinical trial during this hospital stay.

- In the following situations, select "No":

1. **There is a signed patient consent form for an observational study only**. Observational studies are non-experimental and involve no intervention (e.g., registries). Individuals are observed (perhaps with lab draws, interviews, etc.), data is collected, and outcomes are tracked by investigators. Although observational studies may include the assessment of the effects of an intervention, the study participants are not allocated into intervention or control groups.
2. **It is not clear whether the study described in the signed patient consent form is experimental or observational**.
3. **It is not clear which study population the clinical trial is enrolling**. Assumptions should not be made if it is not specified.

AMI:
Only capture patients enrolled in clinical trials studying patients with acute myocardial infarction (AMI), ST-elevation myocardial infarction (STEMI), Non ST-elevation MI (NSTEMI), heart attack, or acute coronary syndrome (ACS).

CAC:
Only capture patients enrolled in clinical trials studying children with asthma.

HF:
Only capture patients enrolled in clinical trials studying patients with heart failure (HF).

PN:
Only capture patients enrolled in clinical trials studying patients with pneumonia.

SCIP:
The clinical trial should be relevant to one or more of the SCIP measures. Some examples may include but are not limited to: The clinical trial involved the use of antibiotics. The clinical trial involved testing a new beta-blocker. The clinical trial involved the use of VTE prophylaxis.

STK:
Only capture patients enrolled in clinical trials studying patients with stroke.

VTE:

Only capture patients enrolled in clinical trials studying patients with VTE (prevention or treatment interventions).

Suggested Data Sources: ONLY ACCEPTABLE SOURCES
Signed consent form for clinical trial

Inclusion Guidelines for Abstraction:
None

Exclusion Guidelines for Abstraction:
None

Data Element Name: *Comfort Measures Only*

Collected For: CMS/The Joint Commission: AMI-1, AMI-2, AMI-3, AMI-4, AMI-5, AMI-10, All HF Measures, PN-3a, PN-3b, PN-4, PN-5c; **CMS Only:** PN-6; **The Joint Commission Only:** PN-5, PN-6a, PN-6b, STK-1, STK-2, STK-3, STK-5, STK-6, STK-8, STK-10, VTE-1, VTE-2, VTE-3, VTE-4, VTE-6

Definition: Physician/advanced practice nurse/physician assistant (physician/APN/PA) documentation of comfort measures only. Commonly referred to as "palliative care" in the medical community and "comfort care" by the general public. Palliative care includes attention to the psychological and spiritual needs of the patient and support for the dying patient and the patient's family. Comfort Measures Only are not equivalent to the following: Do Not Resuscitate (DNR), living will, no code, no heroic measure.

Suggested Data Collection Question: When is the earliest physician/APN/PA documentation of comfort measures only?

Format:

- **Length:** 1
- **Type:** Alphanumeric
- **Occurs:** 1

Allowable Values:

1 **Day 0 or 1:** The earliest day the physician/APN/PA documented comfort measures only was the day of arrival (Day 0) or day after arrival (Day 1).

2 **Day 2 or after:** The earliest day the physician/APN/PA documented comfort measures only was two or more days after arrival day (Day 2+).

3 **Timing unclear:** There is physician/APN/PA documentation of comfort measures only during this hospital stay, but whether the earliest documentation of comfort measures only was on day 0 or 1 OR after day 1 is unclear.

4 **Not Documented/UTD:** There is no physician/APN/PA documentation of comfort measures only, or unable to determine from medical record documentation.

Notes for Abstraction:

- **Only accept terms identified in the list of inclusions. No other terminology will be accepted.**
- Physician/APN/PA documentation of comfort measures only (hospice, palliative care, etc.) mentioned in the following contexts suffices:
    - Comfort measures only recommendation

- Order for consultation or evaluation by a hospice/palliative care service

- Patient or family request for comfort measures only
- Plan for comfort measures only
- Referral to hospice/palliative care service

- Determine the earliest day the physician/APN/PA DOCUMENTED comfort measures only in the ONLY ACCEPTABLE SOURCES. Do not factor in when comfort measures only was actually instituted. E.g., “Discussed comfort care with family on arrival” noted in day 2 progress note – Select “2”.
- If any of the inclusions are documented in the ONLY ACCEPTABLE SOURCES, select “1”, “2”, or “3” accordingly, unless otherwise specified in this data element.
- Consider comfort measures only documentation in the discharge summary as documentation on the last day of the hospitalization, regardless of when the summary is dictated.
- Documentation of an Inclusion term in the following situations should be disregarded. Continue to review the remainder of the ONLY ACCEPTABLE SOURCES for Inclusion terms. If the **ONLY** documentation found is an Inclusion term in the following situations, select value “4”:
  - Documentation that is dated prior to arrival or documentation which refers to the pre-arrival time period (e.g., comfort measures only order in previous hospitalization record, “Pt. on hospice at home” in discharge summary).
    EXCEPTION:
    State-authorized portable orders (SAPOs). SAPOs are specialized forms, Out-of-Hospital DNR (OOH DNR) or Do Not Attempt Resuscitation (DNAR) orders, or identifiers authorized by state law, that translate a patient’s preferences about specific-end-of-life treatment decisions into portable medical orders. Examples:
    - DNR-Comfort Care form
    - MOLST (Medical Orders for Life-Sustaining Treatment)
    - POLST (Physician Orders for Life-Sustaining Treatment)
  - Inclusion term not clearly selected on order form signed by the physician/APN/PA. Examples:
    - “DNR-Comfort Care” order form - The only option checked is
    - “DNR/Allow Natural Death” (option “Comfort Care” remains unchecked)
    - “Home Health/Hospice” order form – “Hospice” has not been circled in the title or selected on the form
  - Inclusion term listed in pre-printed instruction for completing the form
  - Inclusion term clearly described as negative.

Examples:
-“No comfort care"
-“Not a hospice candidate"
-"Declines palliative care"
-"Not appropriate for hospice care"

- "I offered palliative care consult to discuss end of life issues. Family did not show any interest."
- "Patient declines hospice care at this time but I feel this will be an important plan of care when his condition deteriorates further"
- "Palliative care would also be reasonable - defer decision for now"

o Comfort care when explicitly documented in any of the formats listed in the Exclusion List. Example: "DNR-CCA" box is checked on order form – **Disregard** ("DNR-CCA" is a listed exclusion).

• If there is documentation of an Inclusion term clearly described as negative in one source and an Inclusion term NOT described as negative in another source, that second source would still count for comfort measures only.

Examples:

- o On Day 0 the physician documents "The patient is not a hospice candidate." On Day 3, the physician orders a hospice consult. Select "2".
- o On Day 1 the physician documents the patient is comfort measures only. On Day 2 the physician documents "The patient is refusing CMO." Select "1".

Suggested Data Sources:
PHYSICIAN/APN/PA DOCUMENTATION ONLY IN THE FOLLOWING ONLY ACCEPTABLE SOURCES:

- Discharge summary
- DNR/MOLST/POLST forms
- Physician orders
- Progress notes

Excluded Data Sources:
Restraint order sheet

Inclusion Guidelines for Abstraction:

- Brain dead
- Brain death
- Comfort care
- Comfort measures
- Comfort measures only (CMO)
- Comfort only
- DNR-CC
- End of life care
- Hospice
- Hospice care
- Organ harvest
- Palliative care
- Palliative measures
- Terminal care

Exclusion Guidelines for Abstraction:
DNR-Comfort Care Arrest (Only terms listed below count as an Exclusion. Other arrest terminology would NOT count as Exclusion – E.g., “Comfort Care Protocol will be implemented in the event of a cardiac arrest or a respiratory arrest”).

- DNR-CCA
- DNR-Comfort Care Arrest
- DNRCC-A
- DNRCC-Arrest
- DNRCCA

Data Element Name: *Discharge Date*
Collected For: CMS/The Joint Commission: All Records; **Used in Algorithms for: CMS/The Joint Commission:** AMI-1, PN-3a, PN-3b, PN-5c, SCIP-Inf-4, SCIP-VTE-1, SCIP-VTE-2; **CMS Only:** PN-6; **The Joint Commission Only:** PN-5, PN-6a, PN-6b, All SUB Measures, All TOB Measures; **CMS Informational Only:** All SUB Measures, All TOB Measures

Definition: The month, day, and year the patient was discharged from acute care, left against medical advice, or expired during this stay.

Suggested Data Collection Question: What is the date the patient was discharged from acute care, left against medical advice (AMA), or expired?

Format:

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

Allowable Values:
MM = Month (01-12)
DD = Day (01-31)
YYYY = Year (2001 – Current Year)

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

Suggested Data Sources:

- Discharge summary
- Face sheet
- Nursing discharge notes
- Physician orders
- Progress notes
- Transfer note
- UB-04, Field Location: 6

Inclusion Guidelines for Abstraction:
None

Exclusion Guidelines for Abstraction:
None

Data Element Name: *Discharge Disposition*

Collected For: CMS/The Joint Commission: AMI-1, AMI-2, AMI-3, AMI-4, AMI-5, AMI-10, All HF Measures, All IMM Measures**,** PN-3b, PN-4, PN-5c; **The Joint Commission Only:** PN-5, CAC-3, STK-2, STK-3, STK-6, STK-8, STK-10, SUB-3, SUB 4, TOB-3, TOB-4, VTE-3, VTE-4, VTE-5; **CMS Informational Only**: SUB-3, SUB-4, TOB-3, TOB-4

Definition: The final place or setting to which the patient was discharged on the day of discharge.

Suggested Data Collection Question: What was the patient's discharge disposition on the day of discharge?

Format:

Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

1 Home
2 Hospice - Home
3 Hospice – Health Care Facility
4 Acute Care Facility
5 Other Health Care Facility
6 Expired
7 Left Against Medical Advice/AMA
8 Not Documented or Unable to Determine (UTD)

Notes for Abstraction:

- **Only use documentation from the day of or the day before discharge** when abstracting this data element.
  Example:
  Documentation in the Discharge Planning notes on 04-01-20xx state that the patient will be discharged back home. On 04-06-20xx the physician orders and nursing discharge notes on the day of discharge reflect that the patient was being transferred to skilled care. The documentation from 04-06-20xx would be used to select value "5".

- Consider discharge disposition documentation in the discharge summary or a post-discharge addendum as day of discharge documentation, regardless of when it was dictated/written.
- If documentation is contradictory, use the latest documentation. If there is documentation that further clarifies the level of care that documentation should be used to determine the correct value to abstract. Example: Nursing discharge note documentation reflects that the patient is being discharged to “XYZ” Hospital. The Social Service notes from the day before discharge further clarify that the patient will be transferred to the rehab unit of “XYZ” Hospital, select value “5”.
- If the medical record states only that the patient is being discharged to another hospital and does not reflect the level of care that the patient will be receiving, select value “4”.
- To select value “7” there must be explicit documentation that the patient left against medical advice.
  Examples:
  - Progress notes state that patient requests to be discharged but that discharge was medically contraindicated at this time. Nursing notes reflect that patient left against medical advice and AMA papers were signed, select value “7”.
  - Physician order written to discharge to home. Nursing notes reflect that patient left before discharge instructions could be given, select value “1”.

Suggested Data Sources:

- Discharge instruction sheet
- Discharge planning notes
- Discharge summary
- Nursing discharge notes
- Physician orders
- Progress notes
- Social service notes
- Transfer record

Excluded Data Sources:

- Any documentation prior to the day of or day before discharge
- UB-04

Inclusion Guidelines for Abstraction:
For Value 1:

- Assisted Living Facilities
- Court/Law Enforcement – includes detention facilities, jails, and prison
- Home – includes board and care, foster or residential care, group or personal care homes, and homeless shelters
- Home with Home Health Services

- Outpatient Services including outpatient procedures at another hospital, Outpatient Chemical Dependency Programs and Partial Hospitalization

For Value 3:

- Hospice Care - General Inpatient and Respite
- Hospice Care - Residential and Skilled Facilities
- Hospice Care - Other Health Care Facilities **(**excludes home)

For Value 4:

- Acute Short Term General and Critical Access Hospitals
- Cancer and Children's Hospitals
- Department of Defense and Veteran's Administration Hospitals

For Value 5:

- Extended or Intermediate Care Facility (ECF/ICF)
- Long Term Acute Care Hospital (LTACH)
- Nursing Home or Facility including Veteran's Administration Nursing Facility
- Psychiatric Hospital or Psychiatric Unit of a Hospital
- Rehabilitation Facility including Inpatient Rehabilitation Facility/Hospital or
- Rehabilitation Unit of a Hospital
- Skilled Nursing Facility (SNF), Sub-Acute Care or Swing Bed
- Transitional Care Unit (TCU)

Exclusion Guidelines for Abstraction:
None

Data Element Name: *Discharge Instructions Address Compliance Issues*

Collected For: The Joint Commission Only: VTE-5

Definition: Written discharge instructions or other documentation of educational material given to patient/caregiver addressing compliance issues related to warfarin therapy prescribed after discharge.

Suggested Data Collection Question: Did the WRITTEN discharge instructions or other documentation of educational material given to the patient/caregiver address compliance issues related to warfarin therapy prescribed after discharge?

Format:

Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes)	WRITTEN discharge instructions/educational material were given to the patient/caregiver that addressed compliance issues related to warfarin therapy prescribed after discharge.
N (No)	WRITTEN discharge instructions/educational material do not address compliance issues related to warfarin therapy prescribed after discharge or unable to determine from medical record documentation.

Notes for Abstraction:

- Documentation that addresses compliance issues must include **all** of the following, in order to select "Yes".
  - The importance of taking warfarin as instructed.
  - The importance of monitoring warfarin with scheduled PT/INR blood draws.
- Acceptable materials include discharge instruction sheets, brochures, booklets, teaching sheets, videos, CDs, and DVDs.
- Documentation must clearly convey that the patient/caregiver was given a copy of the material to take home. When the material is present in the medical record and there is no documentation which clearly suggests that a copy was given, the inference should be made that it was given IF the patient's name or the medical record number appears on the material AND hospital staff or the patient/caregiver has signed the material.

- **Use only documentation provided in the medical record itself.** Do not review and use outside materials in abstraction. Do not make assumptions about what content may be covered in material documented as given to the patient/caregiver.

- Written instructions given anytime during the hospital stay are acceptable.
- If the patient refused written discharge instructions/material which addressed compliance issues, select "Yes".
- The caregiver is defined as the patient's family or any other person (e.g., home health, VNA provider, prison official or other law enforcement personnel) who will be responsible for care of the patient after discharge.

Suggested Data Sources:
- Discharge instruction sheet
- Home health referral form
- Nursing notes
- Teaching sheet

Inclusion Guidelines for Abstraction:
None

Exclusion Guidelines for Abstraction:
Unchecked checkbox next to instruction (e.g., blank checkbox on discharge instruction sheet next to "The importance of taking warfarin as instructed.").

Data Element Name: *Discharge Instructions Address Dietary Advice*

Collected For: The Joint Commission Only: VTE-5

Definition: Written discharge instructions or other documentation of educational material given to patient/caregiver addressing dietary advice related to warfarin therapy prescribed after discharge.

Suggested Data Collection Question: Did the WRITTEN discharge instructions or other documentation of educational material given to the patient/caregiver address dietary advice related to warfarin therapy prescribed after discharge?

Format:

Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes)	WRITTEN discharge instructions/educational material were given to the patient/caregiver that addressed dietary advice related to warfarin therapy prescribed after discharge.
N (No)	WRITTEN discharge instructions/educational material do not address dietary advice related to warfarin therapy prescribed after discharge or unable to determine from medical record documentation.

Notes for Abstraction:

- Documentation that addresses dietary advice must include **all** of the following, in order to select, “Yes”.
  - A “consistent amount” of foods with Vitamin K rather than avoidance should be advised.
  - Avoid major changes in dietary habits, or notify health professional before changing habits.
- Acceptable materials include discharge instruction sheets, brochures, booklets, teaching sheets, videos, CDs, and DVDs.
- Documentation must clearly convey that the patient/caregiver was given a copy of the material to take home. When the material is present in the medical record and there is no documentation which clearly suggests that a copy was given, the inference should be made that it was given IF the patient's name or the medical record number appears on the material AND hospital staff or the patient/caregiver has signed the material.

- **Use only documentation provided in the medical record itself.** Do not review and use outside materials in abstraction. Do not make assumptions about what content may be covered in material documented as given to the patient/caregiver.

- Written instructions given anytime during the hospital stay are acceptable.
- If the patient refused written discharge instructions/material which addressed dietary advice, select "Yes".
- The caregiver is defined as the patient's family or any other person (e.g., home health, VNA provider, prison official or other law enforcement personnel) who will be responsible for care of the patient after discharge.

Suggested Data Sources:
- Discharge instruction sheet
- Home health referral form
- Nursing notes
- Teaching sheet

Inclusion Guidelines for Abstraction:
None

Exclusion Guidelines for Abstraction
Unchecked checkbox next to instruction (e.g., blank checkbox on discharge instruction sheet next to "A consistent amount of foods with Vitamin K rather than avoidance should be advised.")

Data Element Name: *Discharge Instructions Address Follow-up Monitoring*

Collected For: The Joint Commission Only: VTE-5

Definition: Written discharge instructions or other documentation of educational material given to patient/caregiver addressing follow-up monitoring related to warfarin therapy prescribed after discharge.

Suggested Data Collection Question: Did the WRITTEN discharge instructions or other documentation of educational material given to the patient/caregiver address follow-up monitoring related to warfarin therapy prescribed after discharge?

Format:

Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes)	WRITTEN discharge instructions/educational material were given to the patient/caregiver that addressed follow-up monitoring related to warfarin therapy prescribed after discharge.
N (No)	WRITTEN discharge instructions/educational material do not address follow-up monitoring related to warfarin therapy prescribed after discharge or unable to determine from medical record documentation.

Notes for Abstraction:

- Documentation that addresses follow-up monitoring must include the following in order to select, “Yes”.
    - Information about plans to monitor warfarin post-discharge. For example, if “follow-up with Coumadin clinic in one week” is documented, select “Yes”.
- If home health will be monitoring the warfarin, select “Yes”.
- Acceptable materials include discharge instruction sheets, brochures, booklets, teaching sheets, videos, CDs, and DVDs.
- Documentation must clearly convey that the patient/caregiver was given a copy of the material to take home. When the material is present in the medical record and there is no documentation which clearly suggests that a copy was given, the inference should be made that it was given IF the patient's name or the medical record number appears on the material AND hospital staff or the patient/caregiver has signed the material.

- **Use only documentation provided in the medical record itself.** Do not review and use outside materials in abstraction. Do not make assumptions about what content may be covered in material documented as given to the patient/caregiver.
- Written instructions given anytime during the hospital stay are acceptable.
- If the patient refused written discharge instructions/material which addressed follow-up monitoring, select "Yes".
- The caregiver is defined as the patient's family or any other person (e.g., home health, VNA provider, prison official or other law enforcement personnel) who will be responsible for care of the patient after discharge.

Suggested Data Sources:

- Discharge instruction sheet
- Home health referral form
- Nursing notes
- Teaching sheet

Inclusion Guidelines for Abstraction:

None

Exclusion Guidelines for Abstraction:

Unchecked checkbox next to instructions (e.g., blank checkbox on discharge instruction sheet next to "Next date for PT/INR laboratory blood draw").

Data Element Name: *Discharge Instructions Address Potential for Adverse Drug Reactions and Interactions*

Collected For: The Joint Commission Only: VTE-5

Definition: Written discharge instructions or other documentation of educational material given to patient/caregiver addressing potential for adverse drug reactions and interactions related to warfarin therapy prescribed after discharge.

Suggested Data Collection Question: Did the WRITTEN discharge instructions or other documentation of educational material given to the patient/caregiver address potential for adverse drug reactions and interactions related to warfarin therapy prescribed after discharge?

Format:

Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes)	WRITTEN discharge instructions/educational material were given to the patient/caregiver that addressed potential for adverse drug reactions and interactions related to warfarin therapy prescribed after discharge.
N (No)	WRITTEN discharge instructions/educational material do not address potential for adverse drug reactions and interactions related to warfarin therapy prescribed after discharge or unable to determine from medical record documentation.

Notes for Abstraction:

- Documentation that addresses potential for adverse drug reactions and interactions must include **all** of the following, in order to select, "Yes".
  - Diet and medications can affect the PT/INR level.
  - Do not take or discontinue any medication or over-the-counter medication except on the advice of the physician or pharmacist.
  - Warfarin increases the risk of bleeding.
- Acceptable materials include discharge instruction sheets, brochures, booklets, teaching sheets, videos, CDs, and DVDs.
- Documentation must clearly convey that the patient/caregiver was given a copy of the material to take home. When the material is present in the medical record and there is no documentation which clearly suggests that a copy was given, the inference should be made that it was given IF the patient's name or the medical record number

appears on the material AND hospital staff or the patient/caregiver has signed the material.

- **Use only documentation provided in the medical record itself.** Do not review and use outside materials in abstraction. Do not make assumptions about what content may be covered in material documented as given to the patient/caregiver.
- Written instructions given anytime during the hospital stay are acceptable.
- If the patient refused written discharge instructions/material which addressed potential for adverse drug reactions and interactions, select "Yes".
- The caregiver is defined as the patient's family or any other person (e.g., home health, VNA provider, prison official or other law enforcement personnel) who will be responsible for care of the patient after discharge.

Suggested Data Sources:

- Discharge instruction sheet
- Home health referral form
- Nursing notes
- Teaching sheet

Inclusion Guidelines for Abstraction:
None

Exclusion Guidelines for Abstraction:
Unchecked checkbox next to instruction (e.g., blank checkbox on discharge instruction sheet next to "Diet and medication can affect PT/INR").

Data Element Name: *ICD-9-CM Other Diagnosis Codes*

Collected For: CMS/The Joint Commission: All Records; **Used in Algorithms for: CMS/The Joint Commission:** All IMM Measures, PN-3a, PN-3b, PN-4, PN-5c; **CMS Only:** PN-6; **The Joint Commission Only:** PN-5, PN-6a, PN-6b, SUB-3, SUB-4, TOB2, TOB-3, All VTE Measures; **CMS Informational Only:** SUB-3, SUB-4, TOB-2, TOB-3

Definition: The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) codes associated with the diagnosis for this hospitalization.

Suggested Data Collection Question: What were the ICD-9-CM other diagnosis codes selected for this medical record?

Format:

Length: 6 (with or without decimal point)
Type: Alphanumeric
Occurs: 24

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

Notes for Abstraction:
None

Suggested Data Sources:
- Discharge summary
- Face sheet
- UB-04, Field Locations: 67A-Q

Note: Medicare will only accept codes listed in fields A-H

Inclusion Guidelines for Abstraction:
None

Exclusion Guidelines for Abstraction:
None

Data Element Name: *ICD-9-CM Other Procedure Codes*

Collected For: CMS/The Joint Commission: All Records; **Used in Algorithms for: CMS/The Joint Commission:** AMI-8, AMI-8a, HF-1, HF-2, HF-3, HF-4, IMM-2; **The Joint Commission Only:** SUB-3, SUB-4; **CMS Informational Only:** SUB-3, SUB-4

Definition: The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) codes identifying all significant procedures other than the principal procedure.

Suggested Data Collection Question: What were the ICD-9-CM code(s) selected as other procedure(s) for this record?

Format:

Length: 5 (with or without decimal point)
Type: Alphanumeric
Occurs: 24

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

Notes for Abstraction:
None

Suggested Data Sources:
- Discharge summary
- Face sheet
- UB-04, Field Location: 74A-E

Inclusion Guidelines for Abstraction:
For inclusion in the algorithms listed above, refer to Appendix A, for ICD-9-CM Code Tables (AMI, HF, IMM, SUB).

Exclusion Guidelines for Abstraction:
None

Data Element Name: *ICD-9-CM Other Procedure Dates*

Collected For: CMS/The Joint Commission: All Records

Definition: The month, day, and year when the associated procedure(s) was (were) performed.

Suggested Data Collection Question: What were the date(s) the other procedure(s) were performed?

Format:

Length: 10 – MM-DD-YYYY (includes dashes) or UTD
Type: Date
Occurs: 24

Allowable Values:

MM = Month (01-12)
DD = Day (01-31)
YYYY = Year (2001 – Current Year)
UTD = Unable to Determine

Notes for Abstraction:

- If the procedure date for the associated procedure is unable to be determined from medical record documentation, select "UTD".
- The medical record must be abstracted as documented (taken at "face value"). When the date documented is obviously in error (not a valid format/range or outside of the parameters of care [after *Discharge Date*]) **and** no other documentation is found that provides this information, the abstractor should select "UTD".
  Examples:
  - Documentation indicates the *ICD-9-CM Other Procedure Dates* was 02**42-**20xx. No other documentation in the medical record provides a valid date. Since the *ICD-9-CM Other Procedure Dates* is outside of the range listed in the Allowable Values for "Day," it is not a valid date and the abstractor should select "UTD".
  - Patient expires on 02-12-20xx and documentation indicates the *ICD-9-CM Other Procedure Dates* was 03-12-20xx. Other documentation in the medical record supports the date of death as being accurate. Since the *ICD-9-CM Other Procedure Dates* is after the *Discharge Date* (death), it is outside of the parameters of care and the abstractor should select "UTD".

Note: Transmission of a case with an invalid date as described above will be rejected from the QIO Clinical Warehouse and the Joint Commission's Data Warehouse. Use

of “UTD” for *ICD-9-CM Other Procedure Dates* allows the case to be accepted into the warehouse.

Suggested Data Sources:

- Consultation notes
- Diagnostic test reports
- Discharge summary
- Face sheet
- Operative notes
- Procedure notes
- Progress notes
- UB-04, Field Location: 74A-E

Inclusion Guidelines for Abstraction:

None

Exclusion Guidelines for Abstraction:

None

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

Collected For: CMS/The Joint Commission: All Records; **Used in Algorithms for: CMS/The Joint Commission:** ED-1, ED-2, All IMM Measures; **The Joint Commission Only:** STK-2, STK-3, STK-4, STK-5, STK-6, SUB-3, SUB-4, TOB-2, TOB-3, All VTE Measures; **CMS Informational Only:** SUB-3, SUB-4, TOB-2, TOB-3

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 occasioning the admission of the patient for this hospitalization.

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 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:

- Discharge summary
- Face sheet
- UB-04, Field Location: 67

Inclusion Guidelines for Abstraction:
Refer to Appendix A, for ICD-9-CM Code Tables (AMI, ED, HF, IMM, PN, STK, SUB, TOB, VTE).

Exclusion Guidelines for Abstraction:
Refer to Appendix A, for ICD-9-CM Code Tables (ED, SCIP, IMM).

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

Collected For: CMS/The Joint Commission: All Records; **Used in Algorithm For: CMS/The Joint Commission:** AMI-8, AMI-8a, HF-1, HF-2, HF-3, HF-4, IMM-2, All SCIP Records; **The Joint Commission Only:** VTE-1, VTE-2, SUB-3, SUB-4; **CMS Informational Only:** SUB-3, SUB-4

Definition: The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) code that identifies the principal procedure performed during this hospitalization. The principal procedure is the procedure performed for definitive treatment rather than diagnostic or exploratory purposes, or which is necessary to take care of a complication.

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

Format:

Length: 5 (with or without decimal point)
Type: Alphanumeric
Occurs: 1

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

Notes for Abstraction:
The principal procedure as described by the Uniform Hospital Discharge Data Set (UHDDS) is one performed for definitive treatment rather than diagnostic or exploratory purposes, or which is necessary to take care of a complication.

Suggested Data Sources:

- Discharge summary
- Face sheet
- UB-04, Field Location: 74

Inclusion Guidelines for Abstraction:
For inclusion in the algorithms listed above, refer to Appendix A, for ICD-9-CM Code Tables (AMI, HF, SCIP, VTE, IMM, SUB).

Exclusion Guidelines for Abstraction:
None

Data Element Name: *ICD-9-CM Principal Procedure Date*

Collected For: CMS/The Joint Commission: All Records

Definition: The month, day, and year when the principal procedure was performed.

Suggested Data Collection Question: What was the date the principal procedure was performed?

Format:

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

Allowable Values:

MM = Month (01-12)
DD = Day (01-31)
YYYY = Year (2001 – Current Year)
UTD = Unable to Determine

Notes for Abstraction:

- If the principal procedure date is unable to be determined from medical record documentation, select "UTD".
- The medical record must be abstracted as documented (taken at "face value"). When the date documented is obviously in error (not a valid date/format or is outside of the parameters of care [after *Discharge Date*]) **and** no other documentation is found that provides this information, the abstractor should select "UTD".
  Examples:
  - Documentation indicates the *ICD-9-CM Principal Procedure Date* was 02**42-**20xx. No other documentation in the medical record provides a valid date. Since the *ICD-9-CM Principal Procedure Date* is outside of the range listed in the Allowable Values for "Day," it is not a valid date and the abstractor should select "UTD".
  - Patient expires on 02-12-20xx and documentation indicates the *ICD-9-CM Principal Procedure Date* was 03-12-20xx. Other documentation in the medical record supports the date of death as being accurate. Since the *ICD-9-CM Principal Procedure Date* is after the *Discharge Date* (death), it is outside of the parameter of care and the abstractor should select "UTD".

Note: Transmission of a case with an invalid date as described above will be rejected from the QIO Clinical Warehouse and the Joint Commission's Data Warehouse. Use of "UTD" for *ICD-9-CM Principal Procedure Date* allows the case to be accepted into the warehouse.

Suggested Data Sources:

- Consultation notes
- Diagnostic test reports
- Discharge summary
- Face sheet
- Operative notes
- Procedure notes
- Progress notes
- UB-04, Field Location: 74

Inclusion Guidelines for Abstraction:

None

Exclusion Guidelines for Abstraction:

None

Data Element Name: *ICU Admission Date*

Collected For: The Joint Commission Only: VTE-1, VTE-2

Definition: The day, month and year that the order was written for the patient to be directly admitted **or** transferred (from a lower lever of care) to the intensive care unit (ICU).

Suggestion Data Collection Question: What is the date that the order was written for the ICU admission **or** transfer?

Format:

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

Allowable Values:

MM = Month (01-12)
DD = Day (01-31)
YYYY = Year (2001-Current Year)
UTD = Unable to Determine

Notes for Abstraction:

- The intent of this data element is to determine the date that the patient was actually admitted to ICU. Because this data element is critical in determining the population, the abstractor should NOT assume that the claim information for the ICU admission date is correct. If the abstractor determines through chart review that the date from billing is incorrect, for purposes of abstraction, she/he should correct and override the downloaded value.
- For patients who are admitted to Observation status and subsequently admitted to ICU, abstract the date that the determination was made and the order written to admit to ICU. Do not abstract the date that the patient was admitted to Observation. Example: Medical record documentation reflects that the patient was admitted to observation on 04-05-20xx. On 04-06-20xx the physician writes an order to admit to ICU. The *ICU Admission Date* would be abstracted as 04-06-20xx; the date the determination was made to admit to acute inpatient care and the order was written.
- If there are discrepancies in the ICU admission/transfer date refer to the ICU admission/transfer vital signs, nurse's notes or progress notes to determine the date.
- If a patient was a direct admit to the ICU for more than one day, subsequent transfers back to an ICU during the same hospitalization will NOT be abstracted for VTE-2.

- If the patient had more than one ICU admission/transfer greater than one day during hospitalization, select the ICU admission date that was closest to the hospital admission date.
- If a patient is admitted to ICU on 10/19/xx and discharged to a medical floor on 10/20/xx, that is equal to one day, regardless of the number of hours. More than a day in ICU is when a patient is admitted to ICU on 10/19/xx and discharged on 10/21/xx, regardless of the number of hours.
- Abstract the date that the admission/transfer was ordered regardless of whether the patient is physically admitted to the ICU on the same date.
- The medical record must be abstracted as documented (taken at "face value"). When the date documented is obviously in error (not a valid date/format) **and** no other documentation is found that provides this information, the abstractor should select "UTD".
  Example: Documentation indicates the *ICU Admission Date* was 03-**42**-20xx. No other documentation in the medical record provides a valid date. Since the *ICU Admission Date* is outside of the range listed in the Allowable Values for "Day," it is not a valid date and the abstractor should select "UTD".
  Note: Transmission of a case with an invalid date as described above will be rejected from the Joint Commission's Data Warehouse. Use of "UTD" for *ICU Admission Date* allows the case to be accepted into the warehouse.

Suggested Data Sources:
ALLOWABLE SOURCES:
- Face Sheet
- Physician orders
- UB-04, Field Location: 12

Inclusion Guidelines for Abstraction:
- Coronary care unit (CCU, CICU)
- Intensive care unit (ICU)
- Medical intensive care unit (MICU, MCU)
- Respiratory intensive care unit (RICU, RCU)
- Surgical intensive care unit (SCU, SICU)

Exclusion Guidelines for Abstraction:
- ED, OR, or procedure units as inpatient units
- Inpatient units with telemetry monitoring that are not intensive care units
- Intermediate care unit (IMCU)
- Post coronary care unit (PCCU)

Data Element Name: *ICU Admission or Transfer*

Collected For: CMS/The Joint Commission: PN-3a; **CMS Only:** PN-6; **The Joint Commission Only:** PN-6a, PN-6b, VTE-1, VTE-2

Definition: Documentation that the patient was admitted or transferred to the intensive care unit (ICU) at this hospital. The definition of an ICU for the purpose of the measures noted above is that used by the CDC in the NHSN Patient Safety Project. An intensive care unit can be defined as a nursing care area that provides intensive observation, diagnosis, and therapeutic procedures for adults and/or children who are critically ill. An ICU excludes nursing areas that provide step-down, intermediate care or telemetry only and specialty care areas.

Suggested Data Collection Question: Was the patient admitted or transferred to the intensive care unit (ICU) during this hospitalization?

Format:

Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

1 (Yes)	The patient was admitted or transferred to the ICU during this hospitalization (at this hospital within the first 24 hours following arrival at this hospital for PN).
2 (No)	The patient was not admitted or transferred to an ICU during this hospitalization (at this hospital within the first 24 hours following arrival at this hospital for PN).
3 (UTD)	Unable to determine from medical record documentation if the patient was admitted or transferred to ICU during this hospitalization (at this hospital within the first 24 hours following arrival at this hospital for PN).

Notes for Abstraction:

- Direct admits, admissions via the emergency department, or transfers from lower levels of in-patient care are included.
- Do not use clinical judgment based on the type of care administered to the patient. The level of intensive care MUST be documented.

- PCU is not an inclusion for ICU, unless it is identified as a Pulmonary Care Unit, which can be considered synonymous with Respiratory Care Unit.
- If there is an order for ICU, but the patient was not moved to an ICU because the patient's condition changed and did not require an ICU level of care, select value "2". However, if the patient is not moved to an ICU unit due to lack of a bed, select value "1".

PN:
The patient was admitted or transferred to the intensive care unit (ICU) at this hospital within the first 24 hours following arrival at this hospital.

- In order to select value "1" (yes) for this data element there must be a physician order for admission or transfer to an ICU and documentation that the patient was transferred or admitted to the ICU care within 24 hours following hospital arrival.
- The 24-hour timeframe relates to the time from hospital arrival to arrival in the ICU unit, not the time of the physician order to admit or transfer to the ICU.
- If documentation reflects ICU graphic sheets or ICU nursing notes and there is no physician order for ICU, select value "2" (No).
- If other pneumonia related reasons for transfer or admission, such as septic shock, respiratory distress or failure, hypotension, tachypnea, hypoxemia or the need for a ventilator are documented, select value "1".
- If the patient was transferred or admitted to the ICU at this hospital within the first 24 hours after arrival to the hospital for reasons other than complications due to pneumonia, select value "2" to this question (i.e., a patient presents to the ED with pneumonia and shortly after arrival has a GI bleed or cardiac arrhythmia or the ICU may be the only place with monitored beds).
- If there is no other documented reason why the patient was transferred/admitted to the ICU at this hospital, assume it was for complications due to pneumonia.

VTE:
The patient was admitted or transferred to the ICU anytime during this hospitalization

Suggested Data Sources:
ONLY ACCEPTABLE SOURCE (required)

- Physician orders Suggested data sources to support admission or transfer to ICU Emergency department record ICU Nursing admission assessment ICU Nursing notes

Inclusion Guidelines for Abstraction:
None

Exclusion Guidelines for Abstraction:

- ED, OR, or procedure units as inpatient units.
- Intermediate care unit (IMCU)

- Step-down unit : a post critical care unit for patients that are hemodynamically stable who can benefit from close supervision and monitoring such as frequent pulmonary toilet, vital signs, and/or neurological and neurovascular checks.

- Inpatient units with telemetry monitoring that are not intensive care units. Post coronary care unit (PCCU) Specialty care units (hospital locations specializing in the following types of care)
- Bone marrow transplant
- Solid organ transplant
- Inpatient acute dialysis
- Hematology/Oncology
- Long term acute care

Data Element Name: *ICU Discharge Date*

Collected For: The Joint Commission Only: VTE-1**,** VTE-2

Definition: The day, month and year that the order was written to discharge the patient from the intensive care unit (ICU), left against medical advice (AMA) or expired.

Suggested Data Collection Question: What date was the order written for the patient to be discharged from the ICU, left AMA or expired?

Format:

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

Allowable Values:

MM = Month (01-12)
DD = Day (01-31)
YYYY = Year (2001-Current Year)
UTD = Unable to Determine

Notes for Abstraction:

- The abstractor should NOT assume that the claim information for the ICU discharge date is correct. If the abstractor determines through chart review that the ICU discharge date from billing is incorrect, for purposes of abstraction, she/he should correct and override the downloaded value. If the abstractor is unable to determine the correct discharge date through chart review, she/he should default to the discharge date on the claim information.
- Discharge does not include a temporary transfer from an intensive care unit (e.g., for surgery, radiology or to the recovery room) or transfers between ICUs.
- A patient may have multiple ICU discharges within the same hospitalization. Select the discharge date that corresponds with the *ICU Admission Date*.
- Abstract the date that the order to discharge was written regardless of whether the pateint is physically discharged from ICU.

- The medical record must be abstracted as documented (taken at “face value”). When the date documented is obviously in error (not a valid date/format) **and** no other documentation is found that provides this information, the abstractor should select “UTD”.
  Example:
  Documentation indicates the *ICU Discharge Date* was 03-**42**-20xx. No other documentation in the medical record provides a valid date. Since the *ICU Discharge*

Date is outside of the range listed in the Allowable Values for “Day,” it is not a valid date and the abstractor should select “UTD”.

Note: Transmission of a case with an invalid date as described above will be rejected from the Joint Commission’s Data Warehouse. Use of “UTD” for *ICU Discharge Date* allows the case to be accepted into the warehouse.

Suggested Data Sources:

- Face sheet
- Physician orders
- UB-04, Field Location: 6

Inclusion Guidelines for Abstraction:
None

Exclusion Guidelines for Abstraction:
None

Data Element Name: *ICU VTE Prophylaxis*

Collected For: The Joint Commission Only: VTE-2

Definition: The type of venous thromboembolism (VTE) prophylaxis that was initially administered in the ICU. VTEs are the formation, development, or existence of a blood clot or thrombus within the venous system.

Suggested Data Collection Question: What type of VTE prophylaxis was initially administered in the ICU?

Format:

Length: 1
Type: Alphanumeric
Occurs: 1-7

Allowable Values:

Select all that apply:

1 Low dose unfractionated heparin (LDUH)

2 Low molecular weight heparin (LMWH)

3 Intermittent pneumatic compression devices (IPC)

4 Graduated compression stockings (GCS)

5 Factor Xa Inhibitor

6 Warfarin

7 Venous foot pumps (VFP)

A None of the above or not documented or unable to determine from medical record documentation

Notes for Abstraction:

- Abstract the initial ICU VTE prophylaxis(s) that was administered the day of or the day after ICU admission or the day of or the day after *Surgery End Date* for surgeries that start the day of or the day after ICU admission. If no ICU VTE prophylaxis was administered **during this timeframe**, select value “A” and check for a *Reason for No VTE Prophylaxis – ICU Admission*. If there is no reason, then abstract the initial ICU

VTE prophylaxis that was administered and the date it was given after ICU admission.

- Selection of allowable values 1-7 includes any prophylaxis that were initially administered on the same date.
  Example:
  If a patient was admitted to ICU on 12/8/20xx and had bilateral GCS applied at 13:00 on 12/08/20xx and LMWH was administered at 22:00 on 12/8/20xx, select Values “2” and “4”.
- If one pharmoacological medication is ordered and another medication is substituted (such as per pharmacy formulary substitution or protocol), abstract the medication administered. Note: No copy of the formulary or protocol is required in the medical record. Examples: Lovenox is ordered and not received and is substituted with Arixtra, which is received by the patient. Abstract Arixtra as Value “5” for *ICU VTE Prophylaxis* and abstract the date is was administered for *ICU VTE Prophylaxis Date.*
- If the patient received one of the pharmacologic anticoagulation medications for other reasons, select the allowable value that was administered during the specified timeframe. For example: if the patient received warfarin for atrial fibrillation on the day of ICU admission, select Value “6”.
- Only select prophylaxis if there is documentation that it was administered. Documentation in the progress notes under assessment/Plan: “DVT prophylaxis – SCD/Teds” is not enough to select Values “3” and “4”
- No value should be selected more than once. If a value of “A” is selected, no other selection should be recorded.

Suggested Data Sources:
- Circulator’s notes
- Graphic/flow sheets
- Medication administration record
- Nursing notes
- Operative notes
- Physician notes
- Preoperative nursing notes
- Progress notes

Inclusion Guidelines for Abstraction:
Refer to Appendix H, Table 2.1 VTE Prophylaxis Inclusion Table.

Exclusion Guidelines for Abstraction:
None

Data Element Name: *ICU VTE Prophylaxis Date*

Collected For: The Joint Commission Only: VTE-2

Definition: The day, month and year that the **initial** VTE prophylaxis (mechanical and/or pharmacologic) option was administered after admission/transfer to the intensive care unit (ICU).

Suggested Data Collection Question: What date was the initial VTE prophylaxis administered in the ICU?

Format:

Length: 10 - MM-DD-YYYY (including dashes) or UTD
Type: Date
Occurs: 1

Allowable Values:

MM = Month (01-12)
DD = Day (01-31)
YYYY = Year (2001-Current Year)
UTD = Unable to Determine

Notes for Abstraction:

- If VTE prophylaxis was administered the day of and the day after *ICU Admission or Transfer* or *Surgery End Date*, select the date that the **initial** VTE prophylaxis was administered.
  Example:
  If the patient was admitted on 12/8/20xx and bilateral GCS was applied at 13:00 on 12/8/20xx and LMWH was administered at 02:00 on 12/9/20xx, record the 12/8/20xx date.

- The medical record must be abstracted as documented (taken at "face value"). When the date documented is obviously in error (not a valid date/format) **and** no other documentation is found that provides this information, the abstractor should select "UTD".
  Example:
  Documentation indicates the *ICU VTE Prophylaxis Date* was 03-**42**-20xx. No other documentation in the medical record provides a valid date. Since the *ICU VTE Prophylaxis Date* is outside of the range listed in the Allowable Values for "Day," it is not a valid date and the abstractor should select "UTD".

Note: Transmission of a case with an invalid date as described above will be rejected from the Joint Commission's Data Warehouse. Use of "UTD" for *ICU VTE Prophylaxis Date* allows the case to be accepted into the warehouse.

Suggested Data Sources:

- Emergency department record
- Medication administration record
- Nursing notes
- Physician orders
- Progress notes

Inclusion Guidelines for Abstraction:

None

Exclusion Guidelines for Abstraction:

None

Data Element Name: *INR Value*

Collected For: The Joint Commission Only: VTE-3

Definition: Documentation of an international normalized ratio (INR) value greater than or equal to 2 prior to discontinuation of the parenteral anticoagulation therapy. This value correlates to the ability of the blood to clot.

Suggested Data Collection Question: Was there documentation of an INR value greater than or equal to 2 prior to discontinuation of the parenteral anticoagulation?

Format:

Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes)	There is documentation of an INR result greater than or equal to 2 prior to discontinuation of the parenteral anticoagulation therapy.
N (No)	There is no documentation of an INR result greater than or equal to 2 prior to discontinuation of the parenteral anticoagulation therapy or unable to determine from medical record documentation.

Notes for Abstraction:
To determine the value for this data element, review the INR values the day of and the day prior to the discontinuation of the parenteral anticoagulation therapy. If any result is greater than or equal to 2, select “Yes”.

Suggested Data Sources:

- Discharge summary
  Laboratory reports
- Nursing notes
- Progress notes

Inclusion Guidelines for Abstraction:
Refer to Appendix H, Table 2.3 VTE Parenteral Therapy Table.

Exclusion Guidelines for Abstraction:
None

Data Element Name: *Measure Category Assignment*

Collected For: The Joint Commission Only: Used in calculation of the Joint Commission's aggregate data and in the transmission of the Hospital Clinical Data file

Notes:

- Episode of care records that calculate with a *Measure Category Assignment* of "X" (missing data) for one or more measures will be rejected by the QIO Clinical Warehouse and the Joint Commission's Data Warehouse. Refer to the Missing and Invalid data section in this manual for more information.
- All hospital measures use this data element. The ORYX® Vendor's calculated *Measure Category Assignment* will be transmitted to The Joint Commission on a quarterly basis with the associated hospital clinical data. These measure results will be used in the Joint Commission's data quality analysis and continuous measure verification process. ORYX Vendors can refer to the Joint Commission's *ORYX Data Quality Manual* for more information.
- *Measure Category Assignment* must be transmitted to The Joint Commission but cannot be transmitted to CMS. Files transmitted to the QIO Clinical Warehouse that contain *Measure Category Assignment* will be rejected.

Definition: Calculated measures results for each episode of care (EOC) that is processed through a measure algorithm.

Used to summarize the outcome for an EOC that is processed through a specific measure algorithm.

Suggested Data Collection Question: Not Applicable

Format:

Length: 1
Type: Character
Occurs: One *Measure Category Assignment* per EOC is expected for every measure that a hospital is participating in.

Allowable Values:

B **Category B - Not in Measure Population** For rate-based and continuous variable measures: EOC record is not a member of a measure's population.

D **Category D - In Measure Population** For rate-based measures: EOC record is a member of the measure's population and there has not been an occurrence of the measure.

For continuous variable measures: EOC record is a member of the measure's population and has sufficient accurate and valid data to compute the measurement.

Note: For continuous variable measures, EOC records that have a *Measure Category Assignment* of “D” **will** have an associated *Measurement Value*.

E **Category E - In Numerator Population** For rate-based measures: EOC record is a member of the measure's population and there has been an occurrence of the measure.

For continuous variable measures: Does not apply.

X **Category X – Data Are Missing** For rate-based and continuous variable measures: Data are missing that is required to calculate the measure. The record will be rejected by the QIO Clinical Warehouse and the Joint Commission’s Data Warehouse.

Y **Category Y – UTD Allowable Value Does Not Allow Calculation of The Measure**
For rate-based measures: Does not apply.

For continuous variable measures: EOC record contains a Date, Time, or Numeric data element with a value of “UTD”.

Note: For continuous variable measures, EOC records that have a *Measure Category Assignment* of “Y” **will not** have an associated *Measurement Value.*

Notes for Abstraction:
None

Suggested Data Sources:
Not Applicable

Inclusion Guidelines for Abstraction:
None

Exclusion Guidelines for Abstraction:
None

Data Element Name: *Monitoring Documentation*

Collected For: The Joint Commission Only: VTE-4

Definition: Documentation that defined parameters such as a nomogram or protocol were used to manage the intravenous (IV) unfractionated heparin (UFH) AND platelet counts.

Suggested Data Collection Question: Was there documentation that the IV UFH AND platelet counts were managed by defined parameters using a nomogram or protocol?

Format:

Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes)	There is documentation that defined parameters such as a protocol or nomogram were used to manage dosages of the IV UFH AND the platelet counts.
N (No)	There is no documentation that defined parameters such as a protocol or nomogram were used to manage dosages of the IV UFH AND/OR the platelet counts or unable to determine from medical record documentation.

Notes for Abstraction:

- Pathways, orders or documentation that state that a nomogram or protocol was used to calculate the UFH therapy dosages and platelet count monitoring are acceptable.
- "Defined parameters" for managing UFH therapy may include documents labeled a nomogram or protocol.
- For orders that state that UFH therapy is ordered per pharmacy dosing or per pharmacy protocol select "Yes" if there is documentation that platelet counts were also monitored.
- If IV UFH was managed by a nomogram, but was discontinued prior to monitoring the platelet counts, select "Yes".

Suggested Data Sources:
PHYSICIAN/APN/PA or PHARMACIST DOCUMENTATION ONLY
Physician orders
Physician or Pharmacist notes

NURSES

- Pathways

Inclusion Guidelines for Abstraction:
Refer to Appendix H, Table 2.3 VTE Parenteral Therapy Table.

Exclusion Guidelines for Abstraction:
None

Last Updated: New Data Element Version 4.0

Data Element Name: *Overlap Therapy*

Collected For: The Joint Commission Only: VTE-3

Definition: Documentation that parenteral (intravenous [IV] or subcutaneous [subcu]) anticoagulation therapy and warfarin were both administered on the same day or a reason is documented why overlap therapy was not initiated.

Suggested Data Collection Question: Were parenteral anticoagulation therapy and warfarin both administered on the same day or is a reason documented for why both therapies were not initiated on the same day?

Format:

Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

1 There is documentation that parenteral anticoagulation therapy and warfarin were both administered on the same day.

2 There is documentation of a reason why parenteral anticoagulation therapy and warfarin were **not** administered on the same day.

3 Parenteral anticoagulation therapy and warfarin were **not** administered on the same day and there is **no** documentation of a reason for no overlap therapy or unable to determine from medical record documentation.

Notes for Abstraction:

- If a patient refuses overlap therapy, select "2". The list of reasons for not administering overlap therapy is not all inclusive.

Suggested Data Sources:

- Consultation notes
- Discharge summary
- Medication administration record
- Nursing notes
- Progress notes

Inclusion Guidelines for Abstraction:

- Reasons for not administering overlap therapy:
- Surgical procedure

- Bleeding complications

Refer to Appendix H, Table 2.3 VTE Parenteral Therapy Table and Appendix C, Table 1.4 Warfarin Therapy.

Exclusion Guidelines for Abstraction:
None

Data Element Name: *Overlap Therapy Start Date*

Collected For: The Joint Commission Only: VTE-3

Definition: The **first** date that the parenteral (intravenous [IV] or subcutaneous [subcu]) anticoagulation therapy and warfarin were administered.

Suggested Data Collection Question: What was the **first** date that parenteral anticoagulation therapy AND warfarin were both administered?

Format:

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

Allowable Values:

MM = Month (01-12)
DD = Day (01-31)
YYYY = Year (2001-Current Year)
UTD = Unable to Determine

Notes for Abstraction:

- Select "UTD" if unable to determine the date that both medications were administered.
- For patients admitted for VTE who were on warfarin at home and took a dose the day of admission, select the day of admission as the *Overlap Therapy Start Date* if the parenteral anticoagulant was started the day of admission. For example, patient admitted on 9/12 and lovenox was started that day. If there is documentation in the MAR that the "patient took Coumadin earlier the same day, (9/12)", select 9/12 as the *Overlap Therapy Start Date.* For patients diagnosed with VTE while in the ED that had overlap therapy started prior to admission, enter the date that both medications were administered prior to the admission date.
- The medical record must be abstracted as documented (taken at "face value"). When the date documented is obviously in error (not a valid date/format) **and** no other documentation is found that provides this information, the abstractor should select "UTD".
  Example:
  Documentation indicates the *Overlap Therapy Start Date* was 03-**42**-20xx. No other documentation in the medical record provides a valid date. Since the *Overlap Therapy Start Date* is outside of the range listed in the Allowable Values for "Day," it is not a valid date and the abstractor should select "UTD".

Note: Transmission of a case with an invalid date as described above will be rejected from the Joint Commission's Data Warehouse. Use of "UTD" for *Overlap Therapy Start Date* allows the case to be accepted into the warehouse.

Suggested Data Sources:

- Consultation notes
- Discharge summary
- Medication administration record
- Nursing notes
- Progress notes

Inclusion Guidelines for Abstraction:

Refer to Appendix H, Table 2.3 VTE Parenteral Therapy Table and Appendix C, Table 1.4 Warfarin Therapy.

Exclusion Guidelines for Abstraction:

None

Data Element Name: *Parenteral Anticoagulant End Date*

Collected For: The Joint Commission Only: VTE-3

Definition: The **last** date that a parenteral (intravenous [IV] or subcutaneous [subcu]) anticoagulant medication was administered.

Suggested Data Collection Question: What was the **last** date that a parenteral anticoagulant medication was administered?

Format:

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

Allowable Values:

MM = Month (01-12)
DD = Day (01-31)
YYYY = Year (2001-Current Year)
UTD = Unable to Determine

Notes for Abstraction:

- Select "UTD" if unable to determine the last date that a parenteral anticoagulant medication was administered.
- The *Parenteral Anticoagulant End Date* is the last date that the medication was administered during hospitalization. This may be the same day as the discharge day.
- For patients with non-consecutive medication administration, use the last day the parenteral medication was given. For example, if LMWH was given from 4/9 to 4/11, resumed from 4/13 to 4/15, use 4/15 as the end date.
- If the parenteral medications are changed during overlap therapy, the end date is when the last dose of the parenteral medication is given during hospitalization. For example, if the patient receives 2 days of LMWH on 11/1 and 11/2 and is changed to Arixtra on 11/3, 11/4 and 11/5, the parenteral end date would be 11/5.
- If reviewing an electronic health record (EHR) for parenteral end date, use the actual date that the last parenteral medication was administered. This may not be the same time as the stop time indicated on the initial electronic order entry.

- The medical record must be abstracted as documented (taken at "face value"). When the date documented is obviously in error (not a valid date/format) **and** no other documentation is found that provides this information, the abstractor should select "UTD".

Example:
Documentation indicates the *Parenteral Anticoagulant End Date* was 03-**42**-20xx. No other documentation in the medical record provides a valid date. Since the *Parenteral Anticoagulant End Date* is outside of the range listed in the Allowable Values for "Day," it is not a valid date and the abstractor should select "UTD".

Note: Transmission of a case with an invalid date as described above will be rejected from the Joint Commission's Data Warehouse. Use of "UTD" for *Parenteral Anticoagulant End Date* allows the case to be accepted into the warehouse.

Suggested Data Sources:

- Consultation notes
- Discharge summary
- Medication administration record
- Nursing notes
- Progress notes

Inclusion Guidelines for Abstraction:

Refer to Appendix H, Table 2.3 VTE Parenteral Therapy Table.

Exclusion Guidelines for Abstraction:

None

Data Element Name: *Parenteral Anticoagulant Prescribed at Discharge*

Collected For: The Joint Commission Only: VTE-3

Definition: Documentation that a parenteral (intravenous [IV] or subcutaneous [subcu]) anticoagulant medication was prescribed at discharge.

Suggested Data Collection Question: Was a parenteral anticoagulant medication prescribed at discharge?

Format:

Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes)	There is documentation that a parenteral anticoagulant medication was prescribed at discharge.
N (No)	There is no documentation that a parenteral anticoagulant medication was prescribed at discharge or unable to determine from medical record documentation.

Notes for Abstraction:

- In determining whether a parenteral anticoagulant was prescribed at discharge, it is not uncommon to see conflicting documentation amongst different medical record sources. For example, the discharge summary may list a parenteral anticoagulant that is not included in any of the other discharge medication sources (e.g., discharge orders). All discharge medication documentation available in the chart should be reviewed and taken into account by the abstractor.
    - In cases where there is a parenteral anticoagulant in one source that is not mentioned in other sources, it should be interpreted as a discharge medication (select "Yes") unless documentation elsewhere in the medical record suggests that it was NOT prescribed at discharge - **Consider it a discharge medication in the absence of contradictory documentation.**
    - If documentation is contradictory (e.g., physician noted “d/c LMWH” in the discharge orders, but LMWH is listed in the discharge summary’s discharge medication list), or after careful examination of circumstances, context, timing, etc, documentation raises enough questions, the case should be deemed "unable to determine" (select "No").
    - Consider documentation of a hold on a parenteral anticoagulant after discharge in one location and a listing of that parenteral anticoagulant as a discharge medication in another location as contradictory ONLY if the

timeframe on the hold is not **defined** (e.g., “Hold LMWH”). Examples of a hold with a defined timeframe include “Hold LMWH x 2 days” and “Hold LMWH until after procedure.”

- If a parenteral anticoagulant is NOT listed as a discharge medication, and there is only documentation of a hold or plan to delay initiation/restarting of anticoagulation therapy after discharge (e.g., “Hold LMWH x 2 days,” “Start LMWH as outpatient,” “Hold LMWH”), select “No”.
- If two discharge summaries are included in the medical record, use the one with the latest date/time. If one or both are not dated or timed, and you cannot determine which was done last, use both. This also applies to discharge medication reconciliation forms. Use the dictated date/time over transcribed date/time, file date/time, etc.

Examples:

- Two discharge summaries, one dictated 5/22 (day of discharge) and one dictated 5/27 - Use the 5/27 discharge summary.
- Two discharge medication reconciliation forms, one not dated and one dated 4/24 (day of discharge) - Use both.

Suggested Data Sources:

- Discharge instruction sheet
  Discharge progress notes
- Home health referral form
- Nursing notes
- Teaching sheet
- Discharge summary

Inclusion Guidelines for Abstraction:

Refer to Appendix H, Table 2.3 VTE Parenteral Therapy Table.

Exclusion Guidelines for Abstraction:

None

Data Element Name: *Payment Source*

Collected For: CMS/The Joint Commission: All Records

Definition: The source of payment for this episode of care.

Suggested Data Collection Question: What is the patient's source of payment for this episode of care?

Format:

Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

1 Source of payment is Medicare.

2 Source of payment is Non-Medicare.

Notes for Abstraction:

- If Medicare is listed as the primary, secondary, tertiary, or even lower down on the list of payers, select "1".
- If the patient has Medicaid only or Medicaid and another insurance type, other than Medicare, select "2". If the patient has Medicaid and Medicare, select "1".
- If the patient is an Undocumented Alien or Illegal immigrant, select "1". Undocumented Alien: Section 1011 of the Medicare Modernization Act of 2003 allows for reimbursement for services rendered to patients who are: Undocumented or illegal aliens (immigrants), Aliens who have been paroled into a United States port of entry and Mexican citizens permitted to enter the United States on a laser visa.

Suggested Data Sources:

- Face sheet
- UB-04, Field Location: 50A, B or C

Inclusion Guidelines for Abstraction:

- Medicare includes, but is not limited to:
- Medicare Fee for Service (includes DRG or PPS)
- Black Lung End Stage Renal Disease (ESRD)
- Railroad Retirement Board (RRB)
- Medicare Secondary Payer
- Medicare HMO/Medicare Advantage

Exclusion Guidelines for Abstraction:
None

Data Element Name: *Reason for Discontinuation of Overlap Therapy*

Collected For: The Joint Commission: VTE-3

Definition: Documentation of a reason for discontinuation of the overlap therapy by a physician/advanced practice nurse/physician assistant or pharmacist (physician/APN/PA or pharmacist).

Suggested Data Collection Question: Is there a reason documented by a physician/APN/PA or pharmacist for discontinuation of the overlap therapy?

Format:

Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes)	There is a reason documented by a physician/APN/PA or pharmacist for discontinuation of the overlap therapy.
N (No)	There is no reason documented by a physician/APN/PA or pharmacist for discontinuation of the overlap therapy or unable to determine from medical record documentation.

Notes for Abstraction:

- Patient refusal of medication during hospitalization or at discharge is a reason for discontinuation and may be documented by a nurse.
- Substitution of one parenteral drug for another parenteral drug is not considered discontinuation of overlap therapy. For example, if patient was on sq heparin and was changed to Arixtra on day 3, the patient is still on a parenteral anticoagulant.

Suggested Data Sources:
ONLY PHYSICIAN/APN/PA or PHARMACIST DOCUMENTATION OF A REASON FOR DISCONTINUING OVERLAP THERAPY

- Consultation notes
- Discharge summary
- Emergency department record
- History and physical
- Operative notes
- Physician orders
- Procedure notes

- Progress notes

SUGGESTED DATA SOURCES FOR PATIENT REFUSAL other than physician/APN/PA or Pharmacist documentation of a reason for discontinuing overlap therapy:

- Medication administration record
- Nurses notes

Excluded Data Sources:
Any documentation dated/timed after discharge, except discharge summary.

Inclusion Guidelines for Abstraction:

- Bleeding risk
- "High" INR value, supratherapeutic
- Patient has severe anemia
- Patient is actively bleeding
- Patient not a candidate for long-term anticoagulation
- Patient previously on warfarin
- Patient received blood during this timeframe
- Patient scheduled for surgery
- Patient/caregiver refusal
- Thrombocytopenia

Exclusion Guidelines for Abstraction:

- A therapeutic INR value without additional documentation
- Discontinuation of parenteral medication without additional documentation

Data Element Name: *Reason for No VTE Prophylaxis – Hospital Admission*

Collected For: The Joint Commission Only: STK-1, VTE-1

Definition: Documentation why mechanical or pharmacologic VTE prophylaxis was not administered at hospital admission.

Suggested Data Collection Question: Is there documentation why VTE prophylaxis was not administered at hospital admission?

Format:

Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes)	There is documentation why VTE prophylaxis was not administered at hospital admission.
N (No)	There is no documentation why VTE prophylaxis was not administered at hospital admission or unable to determine from medical record documentation.

Notes for Abstraction:

- If VTE prophylaxis is administered the day of or the day after hospital admission or surgery end date, this data element is not required (**exception**: see STK note below).
- Documentation of the reason for no VTE prophylaxis must be written by the day after hospital admission or surgery end date. Documentation written after arrival but prior to admission is acceptable. It is not necessary to review documentation outside of this timeframe to answer this data element.
- For patients determined to be at low risk for VTE:
  - If documentation of “No VTE Prophylaxis needed” is written, then it will be inferred that both mechanical and pharmacological options were not indicated for the patient.
  - A completed risk assessment within this timeframe is an acceptable source for this data element, if it is clear that the patient is at low risk for VTE and does not need VTE prophylaxis. If there is conflicting information about the need for prophylaxis, select “No”.
- Documentation that the patient is ambulating without mention of VTE prophylaxis is insufficient. Do not infer that VTE prophylaxis is not needed unless explicitly documented.

- For patients determined to be at risk for VTE and pharmacologic prophylaxis is contraindicated, then evaluation for mechanical prophylaxis must be addressed. For example, if there is physician documentation of “bleeding, no pharmacologic prophylaxis”, there must also be documentation about mechanical prophylaxis such as “no mechanical prophylaxis” to select “Yes”.
    - For patients with a reason for no pharmacologic prophylaxis and an order for mechanical prophylaxis that was **not** administered without a reason, select “No”.
    - For patients with a reason for no mechanical prophylaxis and an order for pharmacologic prophylaxis that was **not** administered without a reason, select “No”.

- For patients on continuous IV heparin therapy the day of or day after hospital admission, select “Yes”.
- For patients on warfarin therapy prior to admission, but placed on hold due to “high INR”, select “Yes”.
- For patients receiving anticoagulant therapy other than warfarin for atrial fibrillation or other conditions the day of or the day after hospital admission, select “Yes”.
- If CMO was documented after the day after arrival (Day 1) but by the day after hospital admission or surgery end date for surgeries that start the day of or the day after hospital admission, select “Yes”.
  Examples:
    - Patient arrives in the ED on 06/01/20xx but is in observation until admission to the hospital on 06/03/20xx. If CMO is documented by 06/04/20xx, select “Yes”.
    - The patient was admitted on 5/31/20xx and the surgery end date was 06/01/20xx, select “Yes” if CMO was documented by 06/02/xx.
- Patient/family refusal may be documented by a nurse, but should be documented within the same timeframe as the reason for no VTE prophylaxis. Patient/family refusal of any form of prophylaxis is acceptable to select “Yes”. For example, “patient refused heparin,” select “Yes”.

STK:
If graduated compression stockings (GCS) are the only form of VTE prophylaxis administered, a reason for not administering another form of prophylaxis must be documented in the medical record.

Suggested Data Sources:
ONLY PHYSICIAN/APN/PA OR PHARMACIST DOCUMENTATION OF A REASON FOR NOT ADMINISTERING VTE PROPHYLAXIS:

- Anesthesia record
- Consultation notes
- Emergency department record
- History and physical
- Physician orders

- Physician progress notes
- Risk assessment form
- Transfer form

NURSES:
Risk assessment form
SUGGESTED DATA SOURCES FOR PATIENT REFUSAL (other than physician/APN/PA or pharmacist) documentation of a reason for not administering VTE prophylaxis as above):

- Medication administration record
- Nurses notes

Inclusion Guidelines for Abstraction:
Reasons for not administering any mechanical or pharmacologic prophylaxis:

- Patient at low risk for VTE
- Explicit documentation that the patient does not need VTE prophylaxis
- Patient/family refusal

Exclusion Guidelines for Abstraction:
None

Data Element Name: *Reason for No VTE Prophylaxis – ICU Admission*

Collected For: The Joint Commission Only: VTE-2

Definition: Documentation why mechanical or pharmacologic VTE prophylaxis was not administered at ICU admission/transfer.

Suggested Data Collection Question: Is there documentation why VTE prophylaxis was not administered at ICU admission or transfer?

Format:

Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes)	There is documentation why VTE prophylaxis was not administered at ICU admission/transfer.
N (No)	There is no documentation why VTE prophylaxis was not administered at ICU admission/transfer or unable to determine from medical record documentation.

Notes for Abstraction:

- If any form of VTE prophylaxis was administered the day of or the day after ICU admission/transfer, this data element is not required.
- Documentation of the reason for no VTE prophylaxis must be written by the day after ICU admission/transfer or surgery end date. Documentation written after arrival but prior to admission/transfer is acceptable. Patients that are transferred to ICU need documentation that the reason for no VTE prophylaxis is associated with the ICU transfer. For example, if a patient did not receive VTE prophylaxis on the medical unit due to physician documentation of bleeding and is transferred to the ICU, another reason (even if it is the same reason) must be documented if no VTE prophylaxis was administered upon transfer to ICU.
- For patients determined to be at low or minimal risk for VTE:
    - If documentation of “No VTE Prophylaxis needed” is written, it will be inferred that both mechanical and pharmacological options were not indicated for the patient.
    - A completed risk assessment within this timeframe is an acceptable source for this data element, if it is clear that the patient is a low risk for VTE and does not need VTE prophylaxis. If there is conflicting information about the need for prophylaxis, select “No”. If there is more than one risk assessment within the

defined timeframe (by the day after admission), use the one with the latest date/time.

- Documentation that the patient is ambulating alone without mention of VTE prophylaxis is insufficient. Do not infer that VTE prophylaxis is not needed unless explicitly documented.
- For patients determined to be at risk for VTE and pharmacologic prophylaxis is contraindicated, then evaluation for mechanical prophylaxis must be addressed. For example, if there is physician documentation of "bleeding, no pharmacologic prophylaxis", there must also be documentation about mechanical prophylaxis such as "no mechanical prophylaxis" to select "Yes".
    - For patients with a reason for no pharmacologic prophylaxis and an order for mechanical prophylaxis that was not administered without a reason, select "No".
    - For patients with a reason for no mechanical prophylaxis and an order for pharmacologic prophylaxis that was not administered without a reason, select "No".
- For patients on continuous IV heparin therapy the day of or day after hospital admission, select "Yes".
- For patients on warfarin therapy prior to admission, but placed on hold due to "high INR", select "Yes".
- For patients receiving anticoagulant therapy other than warfarin for atrial fibrillation or other conditions the day of or the day after ICU admission/transfer, select "Yes".
- If CMO was documented after the day after arrival (Day 1) but by the day after ICU admission or surgery end date for surgeries that start the day of or the day after ICU admission, select "Yes".
  Examples:
    - Patient arrives in the ED on 06/01/20xx but is in observation until admission to the ICU on 06/03/20xx. If CMO is documented by 06/04/20xx, select "Yes".
    - The patient was admitted on 05/31/20xx and the surgery end date was 06/01/20xx, select "Yes" if CMO was documented by 06/02/20xx.
- Patients discharged from ICU on the day after ICU admission that receive VTE prophylaxis after transfer/discharge on the same day as the *ICU Discharge Date* should select "A" for the data element *ICU VTE Prophylaxis* and "Yes" to *Reason for No ICU VTE Prophylaxis*. For example, if the patient was admitted to ICU on 1/1 and discharged form ICU 1/2 but received VTE prophylaxis 1/2 after ICU discharge, select "Yes" to this data element.
- Patient/family refusal may be documented by a nurse, but should be documented within the same timeframe as the reason for no VTE prophylaxis. Patient/family refusal of any form of prophylaxis is acceptable to select "Yes". For example, "patient refused heparin," select "Yes".

Suggested Data Sources:
ONLY PHYSICIAN/APN/PA OR PHARMACIST DOCUMENTATION OF A REASON FOR NOT ADMINISTERING VTE PROPHYLAXIS:

- Anesthesia record
- Consultation notes
- Emergency department record

- History and physical
- Physician orders
- Physician progress notes
- Risk assessment form
- Transfer form

NURSES:
Risk assessment form

SUGGESTED DATA SOURCES FOR PATIENT REFUSAL (other than physician/APN/PA or pharmacist) documentation of a reason for not administering VTE prophylaxis as above):
- Medication administration record
- Nurses notes

Inclusion Guidelines for Abstraction:
Reasons for not administering any mechanical or pharmacologic prophylaxis:
- Patient at low risk for VTE
- Explicit documentation that the patient does not need VTE prophylaxis
- Patient/family refusal

Exclusion Guidelines for Abstraction:
None

Data Element Name: *Sample*

Collected For: CMS/The Joint Commission: All Records (Used in transmission of the Joint Commission's aggregate data file and the Hospital Clinical Data file.)

Notes:
- Required for transmission of individual case data to the QIO Clinical Warehouse. Refer to the Hospital Clinical Data XML File Layout in the Transmission section of this manual.
- Required for transmission of aggregate data to The Joint Commission. Refer to the ORYX Technical Implementation Guide for more information.

Definition: Indicates if the data being transmitted for a hospital has been sampled, or represent an entire population for the specified time period.

Suggested Data Collection Question: Does this case represent part of a sample?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes)	The data represents part of a sample.
N (No)	The data is not part of a sample; this indicates the hospital is performing 100 percent of the discharges eligible for this measure set.

Notes for Abstraction:
When *Sampling Frequency* equals "3" (No, the hospital is not sampling) or "4" (N/A, submission of patient level data is not required), then abstract *Sample* as "No".

Suggested Data Sources:
Not Applicable

Inclusion Guidelines for Abstraction:
None

Exclusion Guidelines for Abstraction:
None

Data Element Name: *Sex*

Collected For: CMS/The Joint Commission: All Records; **Used in Algorithms For: CMS/The Joint Commission:** SCIP-Card-2

Definition: The patient's documented sex on arrival at the hospital.

Suggested Data Collection Question: What was the patient's sex on arrival?

Format:

Length: 1
Type: Character
Occurs: 1

Allowable Values:

M = Male
F = Female
U = Unknown

Notes for Abstraction:

- Collect the documented patient's sex at admission or the first documentation after arrival.
- Consider the sex to be unable to be determined and select "Unknown" if:
  - The patient refuses to provide their sex.
  - Documentation is contradictory.
  - Documentation indicates the patient is a Transexual.
  - Documentation indicates the patient is a Hermaphrodite.

- **Suggested Data Sources:**
- Consultation notes
- Emergency department record
- Face sheet
- History and physical
- Nursing admission notes
- Progress notes
- UB-04, Field Location: 11

Inclusion Guidelines for Abstraction:
None

Exclusion Guidelines for Abstraction:
None

Data Element Name: *Surgery End Date*

Collected For: The Joint Commission Only: VTE-1

Definition: The date the surgical procedure ended after hospital admission.

Suggested Data Collection Question: On what date did the surgical procedure end after hospital admission?

Format:

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

Allowable Values:

MM = Month (01-12)
DD = Day (01-31)
YYYY = Year (2001 – Current Year)
UTD = Unable to Determine

Notes for Abstraction:

- Select "UTD" if unable to determine the surgical end date.
- If a patient leaves the operating room with an open incision (for closure at a later date/time), use the *Surgery End Date* of the initial procedure. Do NOT use the date the patient returns to the OR for closure.
- When the date documented is obviously invalid (not a valid format/range), e.g., a date after the *Discharge Date*, before the *Surgery End Date*, or in an invalid format (12-**39**-20xx) **and if** no other documentation is found that provides the correct information, the abstractor should select "UTD". Example: Patient expires on 02-12-20xx and documentation indicates the *Surgery End Date* was 03-12-20xx. Other documentation in the medical record supports the date of death as being accurate. Since the *Surgery End Date* is outside of the parameter for care (after the *Discharge Date* [death]), the abstractor should select "UTD".
- If the *Surgery End Date* is incorrect (in error) but it is a valid date and the correct date can be found and supported with other documentation in the medical record, use the correct date for *Surgery End Date.* If supporting documentation of the correct date cannot be found, the medical record must be abstracted as documented (at "face value.")

  Examples:
  - The anesthesia form is dated 12-10-2007 and other documentation in the medical record supports that the correct date was 12-10-2009; use the correct date as the *Surgery End Date.*

- A *Surgery End Date* of 11-20-20xx and the *Anesthesia Start Date* was 1110-20xx and no other documentation can be found to support the correct date for the *Surgery End Date*, then it must be abstracted as 11-20-20xx, at face value.

Note: Transmission of a case with an invalid date as described above will be rejected from the Joint Commission's Data Warehouse. Use of "UTD" for *Surgery End Date* allows the case to be accepted into the warehouse.

Suggested Data Sources:

- Anesthesia record
- Operative report
- Operating room notes

Inclusion Guidelines for Abstraction:

None

Exclusion Guidelines for Abstraction:

None

Data Element Name: *Surgery End Date – ICU Admission*

Collected For: The Joint Commission Only: VTE-2

Definition: The date the surgical procedure ended after ICU admission or transfer.

Suggested Data Collection Question: On what date did the surgical procedure end after ICU admission or transfer?

Format:

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

Allowable Values:

MM = Month (01-12)
DD = Day (01-31)
YYYY = Year (2001 – Current Year)
UTD = Unable to Determine

Notes for Abstraction:

- Select "UTD" if unable to determine the *Surgery End Date – ICU Admission*.
- Select the surgery end date with the associated surgical procedure performed the day of or the day after ICU admission or transfer.
- If a patient leaves the operating room with an open incision (for closure at a later date/time), use the *Surgery End Date - ICU Admission* of the initial procedure. Do NOT use the date the patient returns to the OR for closure.
- When the date documented is obviously invalid (not a valid format/range), e.g., a date after the *Discharge Date*, before the *Surgery End Date – ICU Admission*, or in an invalid format (12-**39**-20xx) **and if** no other documentation is found that provides the correct information, the abstractor should select "UTD".
  Example:
  Patient expires on 02-12-20xx and documentation indicates the *Surgery End Date – ICU Admission* was 03-12-20xx. Other documentation in the medical record supports the date of death as being accurate. Since the *Surgery End Date – ICU Admission* is outside of the parmeter for care (after the *Discharge Date* [death]), the abstractor should select "UTD".

- If the *Surgery End Date – ICU Admission* is incorrect (in error) but it is a valid date and the correct date can be found and supported with other documentation in the medical record, use the correct date for *Surgery End Date – ICU Admission.* If supporting documentation of the correct date cannot be found, the medical record must be abstracted as documented (at "face value").

Examples:

- The anesthesia form is dated 12-10-2007 and other documentation in the medical record supports that the correct date was 12-10-2009; use the correct date as the *Surgery End Date – ICU Admission.*
- A *Surgery End Date – ICU Admission* of 11-20-20xx and the *Anesthesia Start Date* was 11-10-20xx and no other documentation can be found to support the correct date for the *Surgery End Date – ICU Admission*, then it must be abstracted as 11-20-20xx, at face value.

Note: Transmission of a case with an invalid date as described above will be rejected from the Joint Commission's Data Warehouse. Use of "UTD" for *Surgery End Date – ICU Admission* allows the case to be accepted into the warehouse.

Suggested Data Sources:

- Anesthesia record
- Operative report
- Operating room notes

Inclusion Guidelines for Abstraction:
None

Exclusion Guidelines for Abstraction:
None

Data Element Name: *Surgical Procedure*

Collected For: The Joint Commission Only: VTE-1

Definition: A surgical procedure was performed using general or neuraxial anesthesia the day of or the day after hospital admission.

Suggested Data Collection Question: Was a surgical procedure performed using general or neuraxial anesthesia the day of or the day after hospital admission?

Format:

Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes)	There is documentation that a surgical procedure was performed using general or neuraxial anesthesia the day of or the day after hospital admission.
N (No) T	here is no documentation that a surgical procedure was performed using general or neuraxial anesthesia the day of or the day after hospital admission or unable to determine from medical record documentation.

Notes for Abstraction:
If unable to determine if the patient had a surgical procedure and/or whether general or neuraxial anesthesia was used from medical record documentation, select “No”.

Suggested Data Sources:

- Anesthesia record
- Intraoperative record
- Operative report
- Operating room notes
- PACU/recovery room record
- Preop checklist
- Procedure note

Inclusion Guidelines for Abstraction:

- General Anesthesia
  - Inhaled gases
  - Intravenous

    - Endotracheal
    - Laryngeal mask airway or anesthesia (LMA)

- Neuraxial Anesthesia
    - Spinal block
    - Epidural block
    - Spinal anesthesia
    - Subarachnoid blocks

Exclusion Guidelines for Abstraction:

- Conscious sedation
- Monitored anesthesia care (MAC)
- Local with sedation
- Local with stand-by
- Peripheral nerve blocks
- Saddle block
- Deep sedation

Data Element Name: *Surgical Procedure - ICU Admission*

Collected For: The Joint Commission Only: VTE-2

Definition: A surgical procedure was performed using general or neuraxial anesthesia the day of or the day after ICU Admission or transfer.

Suggested Data Collection Question: Was a surgical procedure performed using general or neuraxial anesthesia the day of the day after ICU admission or transfer?

Format:

Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes)	There is documentation that a surgical procedure was performed using general or neuraxial anesthesia the day of or the day after ICU Admission or Transfer.
N (No)	There is no documentation that a surgical procedure was performed using general or neuraxial anesthesia the day of or the day after ICU Admission or Transfer or unable to determine from medical record documentation.

Notes for Abstraction:
If unable to determine if the patient had a surgical procedure and/or whether general or neuraxial anesthesia was used from medical record documentation, select “No”.

Suggested Data Sources:

- Anesthesia record
- Intraoperative record
- Operative report
- Operating room notes
- PACU/recovery room record
- Preop checklist
- Procedure note

Inclusion Guidelines for Abstraction:

- General Anesthesia
  - Inhaled gases
  - Intravenous
  - Endotracheal

- Laryngeal mask airway or anesthesia (LMA)

- Neuraxial Anesthesia
  - Spinal block
  - Epidural block
  - Spinal anesthesia
  - Subarachnoid blocks

Exclusion Guidelines for Abstraction:

- Conscious sedation
- Monitored anesthesia care (MAC)
- Local with sedation
- Local with stand-by
- Peripheral nerve blocks
- Saddle block
- Deep sedation

Data Element Name: *UFH Therapy Administration*

Collected For: The Joint Commission Only: VTE-4

Definition: Unfractionated heparin (UFH) administered intravenously (IV).

Suggested Data Collection Question: Was IV UFH administered?

Format:

Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes)	There is documentation that IV UFH was administered.
N (No)	There is no documentation that IV UFH was administered or unable to determine from medical record documentation.

Notes for Abstraction:

- If patient had orders for UFH therapy, but no documentation of administration, select “No”.
- If unable to determine route, select “No”.
- Review dates close to when VTE was diagnosed. It is not necessary to look outside of this timeframe to answer the data element.

Suggested Data Sources:

- Emergency department record
- Nursing notes
- Medication administration record
- Progress notes

Inclusion Guidelines for Abstraction:
Refer to Appendix H, Table 2.3 VTE Parenteral Therapy Table.

Exclusion Guidelines for Abstraction:
None

Data Element Name: *VTE Confirmed*

Collected For: The Joint Commission Only: VTE-3, VTE-4, VTE-5, VTE-6

Definition: Documentation by a physician/advanced practice nurse/physician assistant (physician/APN/PA) that a diagnosis of VTE [deep vein thrombosis (DVT) and/or pulmonary embolism (PE)] was confirmed in a defined location.

Suggested Data Collection Question: Is there documentation that the patient had a diagnosis of VTE confirmed in one of the defined locations?

Format:

Length: 1

Type: Alphanumeric

Occurs: 1

Allowable Values:

Y (Yes)	There is documentation that the patient had a diagnosis of VTE confirmed in one of the defined locations.
N (No)	There is no documentation that the patient had a diagnosis of VTE confirmed in one of the defined locations or unable to determine from medical record documentation.

Notes for Abstraction:

- This data element includes patients who are diagnosed with VTE on arrival or during hospitalization. For example: A patient may have documentation that VTE was confirmed on arrival or the patient may have been admitted without VTE, but there is documentation that the patient developed VTE after admission.
- If a patient had confirmed VTE in one of the defined locations, prior to hospitalization but was the reason for the admission, select “Yes”.
- If the patient was transferred from another acute care hospital, and there is no documentation related to the VTE location, select “No”.
- Recurrent VTE may be considered a VTE diagnosis if the patient has documentation of an “acute VTE.” For example: If a patient had a history of VTE, but diagnostic testing found a new VTE in the proximal vein of the lower extremity, select “Yes”.
- For tests that confirm a diagnosis of only “chronic” or “a history of VTE”, select “No”.

- If more than one diagnostic test was performed, select the earliest test that confirmed VTE in one of the defined locations.
- For patients with “low probability” or “inconclusive test results”, select “No”.
- For patients with a nuclear medicine VQ scan to rule-out PE; if the result was documented as “high probability”, select “Yes”. For all other impressions (e.g., “low probability”, “intermediate”, “intermediate to high probability” or “inconclusive test results”), select “No”.
- If there is conflicting information regarding whether the patient had VTE, select “No”. For example, if the diagnostic test did not confirm VTE, but there is documentation of a DVT, select “No”.
- If VTE is diagnosed in any veins within the defined locations, select “Yes”. For example, documentation of a “non-occlusive thrombus to the right popliteal”, select “Yes”.

Suggested Data Sources:
PHYSICIAN/APN/PA/ DOCUMENTATION ONLY

- Admission notes
- Consult notes
- Emergency department record
  History and physical
- Physician notes
- Radiology report

Inclusion Guidelines for Abstraction:
VTE Location
VTE Confirmed is defined as DVT located in the proximal leg veins, including the inferior vena cava (IVC), iliac, femoral or popliteal veins, or to pulmonary emboli (PE). The data element does not apply to other sites of venous thrombosis unless a proximal leg DVT or PE are also involved.

Exclusion Guidelines for Abstraction:
Patients with VTE in the following areas:

- Isolated calf vein thrombosis
- Upper extremity thrombosis
- Intracranial venous thrombosis
- Hepatic/portal/splenic/mesenteric thrombosis
- Renal vein thrombosis
- Ovarian vein thrombosis
- Not in the defined locations

Data Element Name: *VTE Diagnostic Test*

Collected For: The Joint Commission Only: VTE-3, VTE-4, VTE-5, VTE-6

Definition: Documentation that a diagnostic test for VTE was performed.

Suggested Data Collection Question: Is there documentation that a diagnostic test for VTE was performed?

Format:

Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes)	There is documentation that a diagnostic test for VTE was performed.
N (No)	There is no documentation that a diagnostic test for VTE was performed or unable to determine from medical record documentation.

Notes for Abstraction:

- If the diagnostic test performed is related to this hospitalization, select “Yes”. For example, if a patient arrives at the emergency department and a venous Doppler is performed on 12/1/xx, and admitted on 12/3/xx, select “Yes”.
- If a diagnostic test for VTE was performed that is not an included list, select “No”. For example: If an echo was done that confirmed a PE, select “No”.

Suggested Data Sources:

- Admission notes
- Consult notes
- Emergency department record
- History and physical
- Nursing notes
- Physician notes Radiology report

Inclusion Guidelines for Abstraction:
Diagnostic testing includes the following:

- Compression Ultrasound/Vascular Ultrasound/Duplex Ultrasound (DUS)/Venous Doppler
- Venography/Venogram of pelvic, femoral and other lower extremity veins using contrast material
- Computed tomography (CT) of thorax (chest), abdomen/pelvis, or lower extremity leg veins with contrast
- Magnetic resonance imaging (MRI or MRV) of the thorax (chest), abdomen/pelvis, or lower extremity leg veins
- Pulmonary arteriography/angiography
- Nuclear Medicine Pulmonary Scan/ventilation/perfusion (V/Q) lung scan

Exclusion Guidelines for Abstraction:

- Patients with VTE confirmation by only D-dimer tests
- Patients with VTE diagnosed by tests not listed

Data Element Name: *VTE Present at Admission*

Collected For: The Joint Commission Only: VTE-6

Definition: Documentation by a physician/advanced practice nurse/physician assistant (physician/APN/PA) that VTE was diagnosed or suspected on admission.

Suggested Data Collection Question: Was there any documentation by the physician/APN/PA that VTE was diagnosed or suspected on admission?

Format:

Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes)	There is documentation by the physician/APN/PA that VTE was diagnosed or suspected on admission.
N (No)	There is no documentation by the physician/APN/PA that VTE was diagnosed or suspected on admission or unable to determine from medical record documentation.

Notes for Abstraction:

- If a record has been designated as "Y" for Present on Admission (POA) for VTE based on the coding rules, select "Yes".
- The term "on admission" includes any documentation of a test to be performed to rule out VTE (pulmonary embolism or deep vein thrombosis) or diagnosis or suspicion of VTE written from arrival to and including the admission date.
- If documentation is insufficient or there is conflicting information regarding whether VTE was present or suspected at admission, select "No".
- *VTE Present at Admission* includes hospital or ICU admission depending on the earliest documentation or admission.
- For patients diagnosed with VTE prior to admission and already on treatment at admission, select "Yes".
- Documentation of suspected or possible VTE (DVT or PE) is acceptable, but must be written the day of or the day after hospital admission date for nonsurgical patients. For example: If a patient was admitted on 10/1/20xx with documentation that a PE was suspected and a test was ordered to rule out PE, select "Yes".
- If the patient was admitted for a surgical procedure and there was no documentation of diagnosed/suspected VTE prior to surgery, VTE is not considered present on admission.

- If there is documentation that VTE was suspected or diagnosed in one of the defined locations on admission, select “Yes”. The defined locations include: DVT located in the proximal leg veins, including the inferior vena cava (IVC), iliac, femoral or popliteal veins, or to pulmonary emboli (PE).
- Inclusion list is not all inclusive.

Suggested Data Sources: PHYSICIAN/APN/PA
DOCUMENTATION ONLY
- Consultation notes
- Emergency department record
- History and physical
- Radiology report
- Observation notes
- Outpatient surgery notes
- Physician notes

Inclusion Guidelines for Abstraction
Possible VTE Diagnoses
- Pulmonary Embolism and Infarction
- Phlebitis and Thrombophlebitis of deep vessels of lower extremities - Femoral vein (deep)
- Phlebitis and Thrombophlebitis of iliac vein
- Venous embolism and thrombosis of deep vessels of proximal lower extremity

Exclusion Guidelines for Abstraction:
None

Data Element Name: *VTE Prophylaxis*

Collected For: CMS/The Joint Commission: SCIP-VTE-1, SCIP-VTE-2; **The Joint Commission Only:** STK-1, VTE-1

Definition: The type of venous thromboembolism (VTE) prophylaxis documented in the medical record.

Suggested Data Collection Question: What type of VTE prophylaxis was documented in the medical record?

Format:

Length: 1
Type: Alphanumeric
Occurs: 1-7

Allowable Values:

Select all that apply:

1 Low dose unfractionated heparin (LDUH)

2 Low molecular weight heparin (LMWH)

3 Intermittent pneumatic compression devices (IPC)

4 Graduated compression stockings (GCS)

5 Factor Xa Inhibitor

6 Warfarin

7 Venous foot pumps (VFP)

A None of the above or not documented or unable to determine from medical record documentation

Notes for Abstraction:

SCIP

- For the purposes of abstraction, mechanical VTE prophylaxis does not require a physician order to be abstracted; there is no order or copy of hospital protocol required. Abstract any form of mechanical VTE prophylaxis that is documented as ordered or as placed on the patient at anytime from hospital arrival to 24 hours after *Anesthesia End Time.*

- Abstract any pharmacological VTE prophylaxis that was ordered/substituted at anytime from hospital arrival to 24 hours after *Anesthesia End Time*. If one pharmacological medication is ordered and another medication is substituted (such as per pharmacy formulary substitution or protocol), abstract both medications for *VTE Prophylaxis* and for *VTE Timely*. Note: No copy of the formulary or protocol is required in the medical record. Examples:
    - Lovenox is ordered and not received and is substituted with Arixtra, which is received by the patient. Abstract Lovenox as value "2" for *VTE Prophylaxis* and "No" for *VTE Timely*. Abstract Arixtra as value "5" for *VTE Prophylaxis* and abstract *VTE Timely* accordingly.
    - Lovenox is ordered and not received; Heparin is ordered and is received. SCD's are placed. Abstract Lovenox as value "2" for *VTE Prophylaxis* and "No" for *VTE Timely*. Abstract Heparin as value "1" and SCD's as value "3" for *VTE Prophylaxis* and abstract *VTE Timely* accordingly.
- No value should be selected more than once. If a value of "A" is selected, no other selection should be recorded. Example: Lovenox is ordered and substituted with Fragmin. Only abstract value "2" once, as both are LMWH.

VTE

- Abstract the initial VTE prophylaxis(s) that was administered the day of or the day after hospital admission (non-ICU setting) or the day of or the day after *Surgery End Date* for surgeries that start the day of or the day after hospital admission (non-ICU setting). If no VTE prophylaxis was administered during this timeframe, select A and check for a *Reason for No VTE Prophylaxis*. If there is no reason, then abstract the initial VTE prophylaxis that was administered and the date it was given after hospital admission.
- Selection of allowable values 1-7 includes any prophylaxis that was initially administered on the same date. Example: If a patient was admitted on 12/8/20xx and had bilateral GCS applied at 13:00 on 12/08/20xx and LMWH was administered at 22:00 on 12/8/20xx, select values “2” and “4”.

STK

- Abstract the initial VTE prophylaxis(s) that was administered the day of or the day after hospital admission. If no VTE prophylaxis was administered during this timeframe, select A and check for a *Reason for No VTE Prophylaxis*.
- Selection of allowable values 1-7 includes any prophylaxis that was initially administered on the same date.
  Examples:
    - If a patient was admitted on 12/8/20xx and had bilateral GCS applied at 13:00 on 12/08/20xx and LMWH was administered at 22:00 on 12/8/20xx, select only value “2”.
    - If a patient was admitted on 12/8/20xx and had bilateral IPC applied at 13:00 on 12/8/20xx and LMWH was administered at 22:00 on 12/8/20xx, select values “2” and “3”.

- If GCS was the only prophylaxis administered the day of and/or the day after hospital admission, select value “4”. If a value of “4” is selected, no other selections should be recorded.

- If bilateral GCS are administered on the day of admission and another form of prophylaxis was administered the day after admission, select the value of the prophylaxis other than GCS. Examples:
    - If bilateral GCS are administered at 1300 on 12/08/20xx and LMWH at 0200 on 12/09/20xx, select value “2”.
    - If bilateral GCS are administered on the day of admission and IPC is administered the day after admission, select value “3”.

VTE or STK

- If the patient received an anticoagulation medication for other reasons, select the allowable value that was administered during the specified timeframe. For example: if the patient received warfarin for atrial fibrillation on the day of admission, select value “6”.
- Only select prophylaxis if there is documentation that it was administered. Documentation in the physician progress notes under assessment/Plan: “DVT prophylaxis – IPC” is not enough to select value “3”.
- If one pharmacological medication is ordered and another medication is substituted (such as per pharmacy formulary substitution or protocol), abstract the medication administered. Note: No copy of the formulary or protocol is required in the medical record.
  Example:
  Lovenox is ordered, but not received and is substituted with Arixtra, which is received by the patient. Abstract Arixtra as value “5” for *VTE Prophylaxis* and abstract the date is was administered for *VTE Prophylaxis Date*.
- No value should be selected more than once. If a value of “A” is selected, no other selections should be recorded.

Suggested Data Sources:
SCIP
ONLY ACCEPTABLE SOURCE FOR PHARMACOLOGIC PROPHYLAXIS:

- Physician orders

MECHANICAL PROPHYLAXIS:

- Circulator notes
- Graphic/flow sheets
- Medication administration record
- Nursing notes
- Operative notes
- Physician notes
- Preoperative nursing notes
- Progress notes

STK or VTE
PHARMACOLOGICAL AND MECHANICAL

- Circulator notes
- Emergency department record
- Graphic/flow sheets
- Medication administration record
- Nursing notes
- Operative notes
- Physician notes
- Preoperative nursing notes
- Progress notes

Inclusion Guidelines for Abstraction:
Refer to Appendix H, Table 2.1 VTE Prophylaxis Inclusion Table.

Exclusion Guidelines for Abstraction:
None

Data Element Name: *VTE Prophylaxis Date*

Collected For: The Joint Commission Only: STK-1, VTE-1

Definition: The month, day, and year that the **initial** VTE prophylaxis (mechanical and/or pharmacologic) was administered **after hospital admission**.

Suggested Data Collection Question: What date was the initial VTE prophylaxis administered **after hospital admission**?

Format:

Length: 10 - MM-DD-YYYY (including dashes) or UTD
Type: Date
Occurs: 1

Allowable Values:

MM = Month (1-12)
DD = Day (01-31)
YYYY = Year (2001-Current Year)
UTD = Unable to Determine

Notes for Abstraction:

VTE

- If VTE prophylaxis was administered the day of and the day after hospital admission in a non-ICU setting, select the date that the **initial** VTE prophylaxis was administered. Example: If the patient was admitted on 12/8/20xx and bilateral GCS was applied at 13:00 on 12/8/20xx and LMWH was administered at 02:00 on 12/9/20xx, use the 12/8/20xx date.

STK

- If VTE prophylaxis was administered the day of and the day after hospital admission, select the date that the **initial** VTE prophylaxis was administered. Example: If the patient was admitted on 12/8/20xx and bilateral IPC was applied at 13:00 on 12/8/20xx and LMWH was administered at 02:00 on 12/9/20xx, use the 12/8/20xx date with one exception. **Note:** For STK cases, use the date of the other form of prophylaxis as the initial date of VTE prophylaxis when GCS was applied the day of hospital admission and another form the day after hospital admission.

STK or VTE

- The medical record must be abstracted as documented (taken at “face value”). When the date documented is obviously in error (not a valid date/format) **and** no

other documentation is found that provides this information, the abstractor should select “UTD”.
Example:
Documentation indicates the *VTE Prophylaxis Date* was 03-**42**-20xx. No other documentation in the medical record provides a valid date. Since the *VTE Prophylaxis Date* is outside of the range listed in the Allowable Values for “Day,” it is not a valid date and the abstractor should select “UTD”. **Note:** Transmission of a case with an invalid date as described above will be rejected from the Joint Commission’s Data Warehouse. Use of “UTD” for *VTE Prophylaxis Date* allows the case to be accepted into the warehouse.”

Suggested Data Sources:

- Consultation notes
- Emergency department record
- History and physical
- Radiology report
- Observation notes
- Outpatient surgery notes
- Physician notes

Inclusion Guidelines for Abstraction:
None

Exclusion Guidelines for Abstraction:
None

Data Element Name: *VTE Prophylaxis Status*

Collected For: The Joint Commission Only: VTE-6

Definition: Documentation of VTE prophylaxis (mechanical and/or pharmacologic) administration between the hospital admission date and the day before the VTE diagnostic test order date.

Suggested Data Collection Question: Was VTE prophylaxis administered between the admission day and the day before the VTE diagnostic test order date?

Format:

Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

1 There is documentation that VTE prophylaxis was administered between the day of admission and the day before the VTE diagnostic test order date.

2 There is no documentation that VTE prophylaxis was administered between the day of admission and the day before the VTE diagnostic test order date or unable to determine from medical record documentation.

3 There is physician/advanced practice nurse/physician assistant (physician/APN/PA) or pharmacist documentation of a reason for not administering mechanical and pharmacological VTE prophylaxis during hospitalization.

Notes for Abstraction:

- To determine the value for this data element, the abstractor must locate the diagnostic test order date and then review the chart to ascertain if VTE prophylaxis was administered before the test was ordered. If any VTE prophylaxis was given within the specified timeframe, select value “1”.
- The VTE diagnostic test order date is the date the order was written to determine whether the patient developed VTE during hospitalization, not the date the test was completed. Example: On 10/11/20xx a CT of the thorax is ordered, but not completed until 10/12/20xx. Use 10/11/20xx as the diagnostic test order date to determine if any prophylaxis was administered before that date.

- If more than one diagnostic test (from the inclusion list) was ordered to rule out VTE, and both confirmed VTE, select the first diagnostic test that confirmed VTE to determine if the patient received VTE prophylaxis.

Example:
A doppler was ordered 11/1/20xx to rule out DVT, and another test was ordered on 11/5/20xx to rule out PE. Determine if any prophylaxis was administered anytime between the hospital admission date and before 11/1/20xx. If no prophylaxis was given, select value "2".

- For patients that have documentation that "No VTE prophylaxis--patient was at low risk for VTE", select value "2".
- To select value "3," there must be documentation of a reason for not administering BOTH mechanical and pharmacological prophylaxis. For example: If there is physician documentation of "No VTE Prophylaxis due to active bleeding and fractured femurs bilaterally", select value "3".
- The inclusion list of reasons is not all inclusive. Patient/family refusal of prophylaxis may be documented by a nurse. If the patient refused the prophylaxis that was ordered, select value "3". If the patient was on IV heparin between the hospital arrival date and the day before the VTE diagnostic test order date, select value "3".

Suggested Data Sources:
Allowable Values 1 or 2:

- Consultation notes
- Discharge summary
- Emergency department record
- Medication administration record
- Nursing notes
- Progress notes

Allowable Value 3:
ONLY PHYSICIAN/APN/PA OR PHARMACIST DOCUMENTATION OF A REASON FOR NOT ADMINISTERING <u>BOTH</u> MECHANICAL AND PHARMACOLOGIC VTE PROPHYLAXIS

- Anesthesia record
- Consultation notes
- Discharge summary
- History and physical
- Physician orders
- Physician progress notes

SUGGESTED DATA SOURCES FOR PATIENT REFUSAL (other than physician/APN/PA or pharmacist documentation of a reason for not administering any type of VTE prophylaxis as above):

- Medication administration record
- Nurses notes

Inclusion Guidelines for Abstraction: Diagnostic testing includes the following:

- Compression Ultrasound/Vascular Ultrasound/Duplex Ultrasound (DUS) /Venous Doppler
- Venography/Venogram of pelvic, femoral and other lower extremity veins using contrast material
- Computed tomography (CT) of thorax (chest), abdomen/pelvis, or lower extremity leg veins with contrast
- Magnetic resonance imaging (MRI or MRV) of the thorax (chest), abdomen/pelvis, or lower extremity veins
- Pulmonary arteriography/ angiography
- Nuclear Medicine Pulmonary Scan/ventilation/perfusion (V/Q) lung scan

Reasons for not administering mechanical prophylaxis:

- Bilateral amputee
- Bilateral lower extremity trauma
- Patient/family refusal
- Patients on IV heparin therapy

Reasons for not administering pharmacological prophylaxis:

- Active bleeding (gastrointestinal bleeding, cerebral hemorrhage, retroperitoneal bleeding)
- Bleeding risk
- Hemorrhage
- Patient/family refusal
- Patients on IV heparin therapy
- Thrombocytopenia
- Received blood transfusion after arrival and prior to *VTE Diagnostic Test*

Refer to Appendix H, Table 2.1 VTE Prophylaxis Inclusions.

Exclusion Guidelines for Abstraction:

- Reasons for not administering pharmacological prophylaxis:
- History (Hx) of bleeding
- Bleeding risk described in the informed consent process
- Re-infusion of blood products collected with blood recovery systems
- IV heparin bolus or IVP heparin

Reasons for not administering mechanical or pharmacologic prophylaxis:

- Patient at low risk for VTE or VTE prophylaxis not needed.

Data Element Name: *Warfarin Administration*

Collected For: The Joint Commission Only: VTE–3

Definition: Documentation that warfarin was administered during hospitalization. Warfarin is an oral anticoagulant that inhibits the synthesis of clotting factors that prevents blood clot formation. It also prevents extension of clots already formed, and is used to minimize the risk of blood clot embolization to other vital organs such as the lungs and brain.

Suggested Data Collection Question: Was warfarin administered during hospitalization?

Format:

Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes)	There is documentation that warfarin was administered during hospitalization.
N (No)	There is no documentation that warfarin was administered during hospitalization or unable to determine from the medical record documentation.

Notes for Abstraction:

- If warfarin was ordered, but not administered, select “No”.
- If VTE was diagnosed in the emergency department (ED) and warfarin was administered in the ED prior to admission to treat VTE, select “Yes”.

Suggested Data Sources:

- Medication administration record
- Nursing notes
- Physician notes

Inclusion Guidelines for Abstraction:
Refer to Appendix C, Table 1.4 Warfarin Therapy.

Exclusion Guidelines for Abstraction:
None

Data Element Name: *Warfarin Prescribed at Discharge*

Collected For: The Joint Commission Only: VTE-5

Definition: Documentation that warfarin was prescribed at hospital discharge. Warfarin is an oral anticoagulant that prevents extension of clots already formed and is used to minimize the risk of blood clot embolization to other vital organs such as the lungs and brain.

Suggested Data Collection Question: Was warfarin prescribed at discharge?

Format:

Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

Y (Yes)	There is documentation that warfarin was prescribed at discharge.
N (No)	There is no documentation that warfarin was prescribed at discharge or unable to determine from medical record documentation.

Notes for Abstraction:

- In determining whether warfarin was prescribed at discharge, it is not uncommon to see conflicting documentation amongst different medical record sources. For example, the discharge summary may list warfarin that is not included in any of the other discharge medication sources (e.g., discharge orders). All discharge medication documentation available in the chart should be reviewed and taken into account by the abstractor.
    - In cases where there is warfarin in one source that is not mentioned in other sources, it should be interpreted as a discharge medication (select "Yes") unless documentation elsewhere in the medical record suggests that it was NOT prescribed at discharge - **Consider it a discharge medication in the absence of contradictory documentation.**
    - If documentation is contradictory (e.g., physician noted “d/c warfarin” in the discharge orders, but warfarin is listed in the discharge summary’s discharge medication list), or after careful examination of circumstances, context, timing, etc, documentation raises enough questions, the case should be deemed "unable to determine" (select "No").
    - If two discharge summaries are included in the medical record, use the one with the latest date/time. If one or both are not dated or timed, and you cannot determine which was done last, use both. This also applies to discharge

medication reconciliation forms. Use the dictated date/time over transcribed date/time, file date/time, etc.

Examples:

- Two discharge summaries, one dictated 5/22 (day of discharge) and one dictated 5/27 - Use the 5/27 discharge summary.
- Two discharge medication reconciliation forms, one not dated and one dated 4/24 (day of discharge) - Use both.

- If Coumadin/warfarin is on hold at discharge but there is documentation of a plan to restart it after discharge (e.g., “Resume Coumadin after INR normalizes”), select “Yes”.
- If there are instructions to follow-up with the coumadin clinic, or have a PT/INR drawn, select “Yes”.

Suggested Data Sources:

- Discharge instruction sheet
- Discharge summary
- Home health referral form
- Medication reconciliation form
- Nursing discharge orders
- Physician orders sheet
- Transfer sheet

Excluded Data Sources: Any documentation dated/timed after discharge, except discharge summary and operative/procedure/diagnostic test reports (from procedure done during hospital stay).

Inclusion Guidelines for Abstraction:
Refer to Appendix C, Table 1.4 Warfarin Therapy.

Exclusion Guidelines for Abstraction:
None

Table 5.17 Intracranial Neurosurgery	
Code	Shortened Description
01.21	CRANIAL SINUS I & D
01.23	REOPEN CRANIOTOMY SITE
01.24	OTHER CRANIOTOMY
01.25	OTHER CRANIECTOMY
01.31	INCISE CEREBRAL MENINGES
01.32	LOBOTOMY & TRACTOTOMY
01.39	OTHER BRAIN INCISION
01.41	THALAMUS OPERATIONS
01.42	GLOBUS PALLIDUS OPS
01.51	EX CEREB MENINGEAL LES
01.52	HEMISPHERECTOMY
01.53	BRAIN LOBECTOMY
01.59	OTHER BRAIN EXCISION

Table 5.19 General Surgery	
Code	Shortened Description
17.31	LAP MUL SEG RES LG INTES
17.32	LAPAROSCOPIC CECECTOMY
17.33	LAP RIGHT HEMICOLECTOMY
17.34	LAP RES TRANSVERSE COLON
17.35	LAP LEFT HEMICOLECTOMY
17.36	LAP SIGMOIDECTOMY
17.39	LAP PT EX LRG INTEST NEC
32.39	OTH SEG LUNG RESECT NOS
32.49	LOBECTOMY OF LUNG NEC
32.59	OTHER PNEUMONECTOMY NOS
34.51	DECORTICATION OF LUNG
34.81	EXCISE DIAPHRAGM LESION
34.82	SUTURE DIAPHRAGM LACERAT
34.83	CLOSE DIAPHRAGM FISTULA
34.84	OTHER DIAPHRAGM REPAIR
34.89	DIAPHRAGM OPERATION NEC
41.5	TOTAL SPLENECTOMY
42.01	ESOPHAGEAL WEB INCISION
42.09	ESOPHAGEAL INCISION NEC
42.10	ESOPHAGOSTOMY NOS
42.11	CERVICAL ESOPHAGOSTOMY
42.12	ESOPH POUCH EXTERIORIZAT
42.19	EXT FISTULIZAT ESOPH NEC
42.40	ESOPHAGECTOMY NOS
42.41	PARTIAL ESOPHAGECTOMY
42.42	TOTAL ESOPHAGECTOMY
42.51	THORAC ESOPHAGOESOPHAGOS

42.52	THORAC ESOPHAGOGASTROST
42.53	THORAC SM BOWEL INTERPOS
42.54	THORAC ESOPHAGOENTER NEC
42.55	THORAC LG BOWEL INTERPOS
42.56	THORAC ESOPHAGOCOLOS NEC
42.58	THORAC INTERPOSITION NEC
42.59	THORAC ESOPHAG ANAST NEC
42.61	STERN ESOPHAGOESOPHAGOST
42.62	STERN ESOPHAGOGASTROSTOM
42.63	STERN SM BOWEL INTERPOS
42.64	STERN ESOPHAGOENTER NEC
42.65	STERN LG BOWEL INTERPOS
42.66	STERN ESOPHAGOCOLOS NEC
42.68	STERN INTERPOSITION NEC
42.69	STERN ESOPHAG ANAST NEC
42.82	SUTURE ESOPHAGEAL LACER
42.83	ESOPHAGOSTOMY CLOSURE
42.84	ESOPH FISTULA REPAIR NEC
42.85	ESOPHAG STRICTURE REPAIR
42.86	PROD SUBQ TUNNEL NO ANAS
42.87	ESOPHAGEAL GRAFT NEC
42.89	ESOPHAGEAL REPAIR NEC
43.5	PROXIMAL GASTRECTOMY
43.6	DISTAL GASTRECTOMY
43.7	PART GASTREC W JEJ ANAST
43.81	PART GAST W JEJ TRANSPOS
43.89	PARTIAL GASTRECTOMY NEC
43.91	TOT GAST W INTES INTERPO
43.99	TOTAL GASTRECTOMY NEC
44.00	VAGOTOMY NOS
44.01	TRUNCAL VAGOTOMY
44.02	HIGHLY SELECT VAGOTOMY
44.03	SELECTIVE VAGOTOMY NEC
44.21	DILATE PYLORUS, INCISION
44.29	OTHER PYLOROPLASTY
44.31	HIGH GASTRIC BYPASS
44.39	GASTROENTEROSTOMY NEC
44.40	SUTURE PEPTIC ULCER NOS
44.41	SUT GASTRIC ULCER SITE
44.42	SUTURE DUODEN ULCER SITE
44.5	REVISION GASTRIC ANASTOM
44.61	SUTURE GASTRIC LACERAT
44.63	CLOSE GASTRIC FISTUL NEC
44.64	GASTROPEXY

44.65	ESOPHAGOGASTROPLASTY
44.66	CREAT ESOPHAGASTR SPHINC
44.69	GASTRIC REPAIR NEC
44.91	LIGATE GASTRIC VARICES
44.92	INTRAOP GASTRIC MANIPUL
44.99	GASTRIC OPERATION NEC
45.00	INTESTINAL INCISION NOS
45.01	DUODENAL INCISION
45.02	SMALL BOWEL INCISION NEC
45.03	LARGE BOWEL INCISION
45.31	OTH EXCISE DUODENUM LES
45.32	DESTRUCT DUODEN LES NEC
45.33	LOCAL EXCIS SM BOWEL NEC
45.34	DESTR SM BOWEL LES NEC
45.41	EXCISE LG INTESTINE LES
45.49	DESTRUC LG BOWEL LES NEC
45.50	INTEST SEG ISOLAT NOS
45.51	SM BOWEL SEGMENT ISOLAT
45.52	LG BOWEL SEGMENT ISOLAT
45.61	MULT SEG SM BOWEL EXCIS
45.62	PART SM BOWEL RESECT NEC
45.63	TOTAL REMOVAL SM BOWEL
45.71	OPN MUL SEG LG INTES NEC
45.72	OPEN CECECTOMY NEC
45.73	OPN RT HEMICOLECTOMY NEC
45.74	OPN TRANSV COLON RES NEC
45.75	OPN LFT HEMICOLECTMY NEC
45.76	OPEN SIGMOIDECTOMY NEC
45.79	PRT LG INTES EXC NEC/NOS
45.82	OP TOT INTR-ABD COLECTMY
45.83	TOT ABD COLECTMY NEC/NOS
45.90	INTESTINAL ANASTOM NOS
45.91	SM-TO-SM BOWEL ANASTOM
45.92	SM BOWEL-RECT STUMP ANAS
45.93	SMALL-TO-LARGE BOWEL NEC
45.94	LG-TO-LG BOWEL ANASTOM
45.95	ANAL ANASTOMOSIS
46.01	SM BOWEL EXTERIORIZATION
46.02	RESECT EXT SEG SM BOWEL
46.04	RESECT EXT SEG LG BOWEL
46.21	TEMPORARY ILEOSTOMY
46.22	CONTINENT ILEOSTOMY
46.23	PERMANENT ILEOSTOMY NEC
46.42	PERICOLOST HERNIA REPAIR

46.43	LG BOWEL STOMA REVIS NEC
46.50	INTEST STOMA CLOSURE NOS
46.52	LG BOWEL STOMA CLOSURE
46.60	INTESTINAL FIXATION NOS
46.61	SM BOWEL-ABD WALL FIXAT
46.62	SMALL BOWEL FIXATION NEC
46.63	LG BOWEL-ABD WALL FIXAT
46.64	LARGE BOWEL FIXATION NEC
46.71	DUODENAL LACERAT SUTURE
46.72	DUODENAL FISTULA CLOSURE
46.76	CLOSE LG BOWEL FISTULA
46.79	REPAIR OF INTESTINE NEC
48.0	PROCTOTOMY
48.1	PROCTOSTOMY
48.41	SOAVE SUBMUC RECT RESECT
48.49	PULL-THRU RECT RESEC NEC
48.50	ABDPERNEAL RES RECTM NOS
48.52	OPN ABDPERNEAL RESC REC
48.59	ABDPERNEAL RESC RECT NEC
48.61	TRANSSAC RECTOSIGMOIDECT
48.62	ANT RECT RESECT W COLOST
48.63	ANTERIOR RECT RESECT NEC
48.64	POSTERIOR RECT RESECTION
48.65	DUHAMEL RECTAL RESECTION
48.69	RECTAL RESECTION NEC
48.74	RECTORECTOSTOMY
48.75	ABDOMINAL PROCTOPEXY
48.76	PROCTOPEXY NEC
50.0	HEPATOTOMY
50.21	MARSUPIALIZAT LIVER LES
50.22	PARTIAL HEPATECTOMY
50.29	DESTRUC HEPATIC LES NEC
50.3	HEPATIC LOBECTOMY
51.31	GB-TO-HEPAT DUCT ANAST
51.32	GB-TO-INTESTINE ANASTOM
51.33	GB-TO-PANCREAS ANASTOM
51.34	GB-TO-STOMACH ANASTOMOS
51.35	GALLBLADDER ANASTOM NEC
51.36	CHOLEDOCHOENTEROSTOMY
51.37	HEPATIC DUCT-GI ANASTOM
51.39	BILE DUCT ANASTOMOS NEC
51.41	CDE FOR CALCULUS REMOV
51.42	CDE FOR OBSTRUCTION NEC
51.49	INCIS OBSTR BILE DUC NEC

51.51	COMMON DUCT EXPLORATION
51.59	BILE DUCT INCISION NEC
51.61	EXCIS CYST DUCT REMNANT
51.62	EXCIS AMPULLA OF VATER
51.63	COMMON DUCT EXCIS NEC
51.69	BILE DUCT EXCISION NEC
51.71	SIMPLE SUT-COMMON DUCT
51.72	CHOLEDOCHOPLASTY
51.79	BILE DUCT REPAIR NEC
51.81	SPHINCTER OF ODDI DILAT
51.82	PANCREAT SPHINCTEROTOM
51.83	PANCREAT SPHINCTEROPLAS
51.89	SPHINCT OF ODDI OP NEC
51.91	REPAIR GB LACERATION
51.92	CLOSURE CHOLECYSTOSTOMY
51.93	CLOS BILIARY FISTUL NEC
51.94	REVIS BILE TRACT ANASTOM
51.95	REMOVE BILE DUCT PROSTH
51.99	BILIARY TRACT OP NEC
52.09	PANCREATOTOMY NEC
52.22	OTHER DESTRU PANCREA LES
52.3	PANCREAT CYST MARSUPIALI
52.4	INT DRAIN PANCREAT CYST
52.51	PROXIMAL PANCREATECTOMY
52.52	DISTAL PANCREATECTOMY
52.53	RAD SUBTOT PANCREATECTOM
52.59	PARTIAL PANCREATECT NEC
52.6	TOTAL PANCREATECTOMY
52.7	RAD PANCREATICODUODENECT
52.92	CANNULATION PANCREA DUC
52.95	PANCREATIC REPAIR NEC
52.96	PANCREATIC ANASTOMOSIS
52.99	PANCREATIC OPERATION NEC
53.72	OPN ABD DIAPHRM HERN NEC
53.75	ABD REP-DIAPHR HERN NOS
53.80	THOR REP-DIAPH HERN NOS
53.81	DIAPHRAGMATIC PLICATION
53.82	PARASTERN HERNIA REPAIR
53.84	OPN THORC DIAPH HERN NEC
54.11	EXPLORATORY LAPAROTOMY
54.12	REOPEN RECENT LAP SITE
54.19	LAPAROTOMY NEC
54.59	OTH PERITON ADHESIOLYSIS
54.61	RECLOSE POST OP DISRUPT

54.62	DELAYED CLOS ABD WOUND
54.63	ABD WALL SUTURE NEC
54.64	PERITONEAL SUTURE
54.71	REPAIR OF GASTROSCHISIS
54.72	ABDOMEN WALL REPAIR NEC
54.73	PERITONEAL REPAIR NEC
54.74	OMENTAL REPAIR NEC
54.75	MESENTERIC REPAIR NEC
54.92	REMOVE FB FROM PERITON
54.94	CREAT PERITONEOVAS SHUNT
54.95	PERITONEAL INCISION

Table 5.20 Gynecological Surgery	
Code	Shortened Description
65.22	OVARIAN WEDGE RESECTION
65.29	LOCAL DESTR OVA LES NEC
65.39	OTH UNILAT OOPHORECTOMY
65.49	OTH UNI SALPINGO-OOPHOR
65.51	OTH REMOVE BOTH OVARIES
65.52	OTH REMOVE REMAIN OVARY
65.61	OTH REMOVE OVARIES/TUBES
65.62	OTH REMOVE REM OVA/TUBE
66.4	TOTAL UNILAT SALPINGECT
66.51	REMOVE BOTH FALLOP TUBES
66.52	REMOVE SOLITARY FAL TUBE
66.61	DESTROY FALLOP TUBE LES
66.62	REMOV TUBE & ECTOP PREG
66.63	BILAT PART SALPINGEC NOS
66.69	PARTIAL SALPINGECTOM NEC
68.31	LAP SCERVIC HYSTERECTOMY
68.49	TOTAL ABD HYST NEC/NOS
68.51	LAP AST VAG HYSTERECTOMY
68.59	VAG HYSTERECTOMY NEC/NOS
68.69	RADICAL ABD HYST NEC/NOS
68.79	RADICAL VAG HYST NEC/NOS

Table 5.21 Urological Surgery	
Code	Shortened Description
55.4	PARTIAL NEPHRECTOMY
55.51	NEPHROURETERECTOMY

55.52	SOLITARY KIDNEY NEPHRECT
55.53	REJECTED KIDNEY NEPHRECT
55.54	BILATERAL NEPHRECTOMY
56.51	FORM CUTAN ILEOURETEROST
56.52	REVIS CUTAN ILEOURETEROS
56.71	URIN DIVERSION TO BOWEL
56.72	REVIS URETEROENTEROSTOMY
56.73	NEPHROCYSTANASTOMOSI NOS
56.74	URETERONEOCYSTOSTOMY
56.75	TRANSURETEROURETEROSTOMY
56.79	URETERAL ANASTOMOSIS NEC
57.6	PARTIAL CYSTECTOMY
57.71	RADICAL CYSTECTOMY
57.79	TOTAL CYSTECTOMY NEC
57.81	SUTURE BLADDER LACERAT
57.82	CYSTOSTOMY CLOSURE
57.83	ENTEROVESICO FIST REPAIR
57.84	VESIC FISTULA REPAIR NEC
57.85	CYSTOURETHROPLASTY
57.86	BLADDER EXSTROPHY REPAIR
57.87	BLADDER RECONSTRUCTION
57.88	BLADDER ANASTOMOSIS NEC
57.89	BLADDER REPAIR NEC
59.00	RETROPERIT DISSECT NOS
59.02	PERIREN ADHESIOLYS NEC
59.09	PERIREN/URETER INCIS NEC
60.3	SUPRAPUBIC PROSTATECTOMY
60.4	RETROPUBIC PROSTATECTOMY
60.5	RADICAL PROSTATECTOMY

Table 5.22 Elective Hip Replacement

Code	Shortened Description
00.70	REV HIP REPL-ACETAB/FEM
00.71	REV HIP REPL-ACETAB COMP
00.72	REV HIP REPL-FEM COMP
00.73	REV HIP REPL-LINER/HEAD
00.77	HIP SURFACE, CERMC/POLY
00.85	RESRF HIP,TOTAL-ACET/FEM
00.86	RESRF HIP,PART-FEM HEAD
00.87	RESRF HIP,PART-ACETABLUM
81.51	TOTAL HIP REPLACEMENT
81.52	PARTIAL HIP REPLACEMENT

81.53	REVISE HIP REPLACEMT NOS

Table 5.23 Elective Total Knee Replacement	
Code	Shortened Description
00.80	REV KNEE REPLACEMT-TOTAL
00.81	REV KNEE REPL-TIBIA COMP
00.82	REV KNEE REPL-FEMUR COMP

Table 5.24 Hip Fracture Surgery	
Code	Shortened Description
81.40	REPAIR OF HIP, NEC

Table 7.01 Mental Disorders	
Code	Shortened Description
290.0	SENILE DEMENTIA UNCOMP
290.10	PRESENILE DEMENTIA
290.11	PRESENILE DELIRIUM
290.12	PRESENILE DELUSION
290.13	PRESENILE DEPRESSION
290.20	SENILE DELUSION
290.21	SENILE DEPRESSIVE
290.3	SENILE DELIRIUM
290.40	VASCULAR DEMENTIA,UNCOMP
290.41	VASC DEMENTIA W DELIRIUM
290.42	VASC DEMENTIA W DELUSION
290.43	VASC DEMENTIA W DEPRESSN
290.8	SENILE PSYCHOSIS NEC
290.9	SENILE PSYCHOT COND NOS
291.0	DELIRIUM TREMENS
291.1	ALCOHOL AMNESTIC DISORDR
291.2	ALCOHOL PERSIST DEMENTIA
291.3	ALCOH PSY DIS W HALLUCIN
291.4	PATHOLOGIC ALCOHOL INTOX
291.5	ALCOH PSYCH DIS W DELUS
291.81	ALCOHOL WITHDRAWAL
291.82	ALCOH INDUCE SLEEP DISOR
291.89	ALCOHOL MENTAL DISOR NEC
291.9	ALCOHOL MENTAL DISOR NOS

292.0	DRUG WITHDRAWAL
292.11	DRUG PSYCH DISOR W DELUS
292.12	DRUG PSY DIS W HALLUCIN
292.2	PATHOLOGIC DRUG INTOX
292.81	DRUG-INDUCED DELIRIUM
292.82	DRUG PERSISTING DEMENTIA
292.83	DRUG PERSIST AMNESTC DIS
292.84	DRUG-INDUCED MOOD DISORD
292.85	DRUG INDUCED SLEEP DISOR
292.89	DRUG MENTAL DISORDER NEC
292.9	DRUG MENTAL DISORDER NOS
293.0	DELIRIUM D/T OTHER COND
293.1	SUBACUTE DELIRIUM
293.81	PSY DIS W DELUS OTH DIS
293.82	PSY DIS W HALLUC OTH DIS
293.83	MOOD DISORDER OTHER DIS
293.84	ANXIETY DISORDER OTH DIS
293.89	TRANSIENT MENTAL DIS NEC
293.9	TRANSIENT MENTAL DIS NOS
294.0	AMNESTIC DISORD OTH DIS
294.10	DEMENTIA W/O BEHAV DIST
294.11	DEMENTIA W BEHAVIOR DIST
294.8	MENTAL DISOR NEC OTH DIS
294.9	MENTAL DISOR NOS OTH DIS
295.00	SIMPL SCHIZOPHREN-UNSPEC
295.01	SIMPL SCHIZOPHREN-SUBCHR
295.02	SIMPLE SCHIZOPHREN-CHR
295.03	SIMP SCHIZ-SUBCHR/EXACER
295.04	SIMPL SCHIZO-CHR/EXACERB
295.05	SIMPL SCHIZOPHREN-REMISS
295.10	HEBEPHRENIA-UNSPEC
295.11	HEBEPHRENIA-SUBCHRONIC
295.12	HEBEPHRENIA-CHRONIC
295.13	HEBEPHREN-SUBCHR/EXACERB
295.14	HEBEPHRENIA-CHR/EXACERB
295.15	HEBEPHRENIA-REMISSION
295.20	CATATONIA-UNSPEC
295.21	CATATONIA-SUBCHRONIC
295.22	CATATONIA-CHRONIC
295.23	CATATONIA-SUBCHR/EXACERB
295.24	CATATONIA-CHR/EXACERB
295.25	CATATONIA-REMISSION
295.30	PARANOID SCHIZO-UNSPEC
295.31	PARANOID SCHIZO-SUBCHR

295.32	PARANOID SCHIZO-CHRONIC
295.33	PARAN SCHIZO-SUBCHR/EXAC
295.34	PARAN SCHIZO-CHR/EXACERB
295.35	PARANOID SCHIZO-REMISS
295.40	SCHIZOPHRENIFORM DIS NOS
295.41	SCHIZOPHRENIC DIS-SUBCHR
295.42	SCHIZOPHREN DIS-CHRONIC
295.43	SCHIZO DIS-SUBCHR/EXACER
295.44	SCHIZOPHR DIS-CHR/EXACER
295.45	SCHIZOPHRENIC DIS-REMISS
295.50	LATENT SCHIZOPHREN-UNSP
295.51	LAT SCHIZOPHREN-SUBCHR
295.52	LATENT SCHIZOPHREN-CHR
295.53	LAT SCHIZO-SUBCHR/EXACER
295.54	LATENT SCHIZO-CHR/EXACER
295.55	LAT SCHIZOPHREN-REMISS
295.60	SCHIZOPHR DIS RESID NOS
295.61	SCHIZOPH DIS RESID-SUBCH
295.62	SCHIZOPHR DIS RESID-CHR
295.63	SCHIZO RESID SUBCHR/EXAC
295.64	SCHIZOPH RESID-CHRO/EXAC
295.65	SCHIZOPH DIS RESID-REMIS
295.70	SCHIZOAFFECTIVE DIS NOS
295.71	SCHIZOAFFECTV DIS-SUBCHR
295.72	SCHIZOAFFECTIVE DIS-CHR
295.73	SCHIZOAFF DIS-SUBCH/EXAC
295.74	SCHIZOAFFTV DIS-CHR/EXAC
295.75	SCHIZOAFFECTVE DIS-REMIS
295.80	SCHIZOPHRENIA NEC-UNSPEC
295.81	SCHIZOPHRENIA NEC-SUBCHR
295.82	SCHIZOPHRENIA NEC-CHR
295.83	SCHIZO NEC-SUBCHR/EXACER
295.84	SCHIZO NEC-CHR/EXACERB
295.85	SCHIZOPHRENIA NEC-REMISS
295.90	SCHIZOPHRENIA NOS-UNSPEC
295.91	SCHIZOPHRENIA NOS-SUBCHR
295.92	SCHIZOPHRENIA NOS-CHR
295.93	SCHIZO NOS-SUBCHR/EXACER
295.94	SCHIZO NOS-CHR/EXACERB
295.95	SCHIZOPHRENIA NOS-REMISS
296.00	BIPOL I SINGLE MANIC NOS
296.01	BIPOL I SINGLE MANC-MILD
296.02	BIPOL I SINGLE MANIC-MOD
296.03	BIPOL I SING-SEV W/O PSY

296.04	BIPO I SIN MAN-SEV W PSY
296.05	BIPOL I SING MAN REM NOS
296.06	BIPOL I SINGLE MANIC REM
296.10	RECUR MANIC DIS-UNSPEC
296.11	RECUR MANIC DIS-MILD
296.12	RECUR MANIC DIS-MOD
296.13	RECUR MANIC DIS-SEVERE
296.14	RECUR MANIC-SEV W PSYCHO
296.15	RECUR MANIC-PART REMISS
296.16	RECUR MANIC-FULL REMISS
296.20	DEPRESS PSYCHOSIS-UNSPEC
296.21	DEPRESS PSYCHOSIS-MILD
296.22	DEPRESSIVE PSYCHOSIS-MOD
296.23	DEPRESS PSYCHOSIS-SEVERE
296.24	DEPR PSYCHOS-SEV W PSYCH
296.25	DEPR PSYCHOS-PART REMISS
296.26	DEPR PSYCHOS-FULL REMISS
296.30	RECURR DEPR PSYCHOS-UNSP
296.31	RECURR DEPR PSYCHOS-MILD
296.32	RECURR DEPR PSYCHOS-MOD
296.33	RECUR DEPR PSYCH-SEVERE
296.34	REC DEPR PSYCH-PSYCHOTIC
296.35	RECUR DEPR PSYC-PART REM
296.36	RECUR DEPR PSYC-FULL REM
296.40	BIPOL I CURRNT MANIC NOS
296.41	BIPOL I CURNT MANIC-MILD
296.42	BIPOL I CURRNT MANIC-MOD
296.43	BIPOL I MANC-SEV W/O PSY
296.44	BIPOL I MANIC-SEV W PSY
296.45	BIPOL I CUR MAN PART REM
296.46	BIPOL I CUR MAN FULL REM
296.50	BIPOL I CUR DEPRES NOS
296.51	BIPOL I CUR DEPRESS-MILD
296.52	BIPOL I CUR DEPRESS-MOD
296.53	BIPOL I CURR DEP W/O PSY
296.54	BIPOL I CURRNT DEP W PSY
296.55	BIPOL I CUR DEP REM NOS
296.56	BIPOL I CURRNT DEP REMIS
296.60	BIPOL I CURRNT MIXED NOS
296.61	BIPOL I CURRNT MIX-MILD
296.62	BIPOL I CURRNT MIXED-MOD
296.63	BIPOL I CUR MIX W/O PSY
296.64	BIPOL I CUR MIXED W PSY
296.65	BIPOL I CUR MIX-PART REM

296.66	BIPOL I CUR MIXED REMISS
296.7	BIPOLOR I CURRENT NOS
296.80	BIPOLAR DISORDER NOS
296.81	ATYPICAL MANIC DISORDER
296.82	ATYPICAL DEPRESSIVE DIS
296.89	BIPOLAR DISORDER NEC
296.90	EPISODIC MOOD DISORD NOS
296.99	EPISODIC MOOD DISORD NEC
297.0	PARANOID STATE, SIMPLE
297.1	DELUSIONAL DISORDER
297.2	PARAPHRENIA
297.3	SHARED PSYCHOTIC DISORD
297.8	PARANOID STATES NEC
297.9	PARANOID STATE NOS
298.0	REACT DEPRESS PSYCHOSIS
298.1	EXCITATIV TYPE PSYCHOSIS
298.2	REACTIVE CONFUSION
298.3	ACUTE PARANOID REACTION
298.4	PSYCHOGEN PARANOID PSYCH
298.8	REACT PSYCHOSIS NEC/NOS
298.9	PSYCHOSIS NOS
299.00	AUTISTIC DISORD-CURRENT
299.01	AUTISTIC DISORD-RESIDUAL
299.10	CHILDHD DISINTEGR-ACTIVE
299.11	CHILDHD DISINTEGR-RESID
299.80	PERVASV DEV DIS-CUR NEC
299.81	PERVASV DEV DIS-RES NEC
299.90	PERVASV DEV DIS-CUR NOS
299.91	PERVASV DEV DIS-RES NOS
300.00	ANXIETY STATE NOS
300.01	PANIC DIS W/O AGORPHOBIA
300.02	GENERALIZED ANXIETY DIS
300.09	ANXIETY STATE NEC
300.10	HYSTERIA NOS
300.11	CONVERSION DISORDER
300.12	DISSOCIATIVE AMNESIA
300.13	DISSOCIATIVE FUGUE
300.14	DISSOCIATVE IDENTITY DIS
300.15	DISSOCIATIVE REACT NOS
300.16	FACTITIOUS DIS W SYMPTOM
300.19	FACTITIOUS ILL NEC/NOS
300.20	PHOBIA NOS
300.21	AGORAPHOBIA W PANIC DIS
300.22	AGORAPHOBIA W/O PANIC

300.23	SOCIAL PHOBIA
300.29	ISOLATED/SPEC PHOBIA NEC
300.3	OBSESSIVE-COMPULSIVE DIS
300.4	DYSTHYMIC DISORDER
300.5	NEURASTHENIA
300.6	DEPERSONALIZATION DISORD
300.7	HYPOCHONDRIASIS
300.81	SOMATIZATION DISORDER
300.82	UNDIFF SOMATOFORM DISRDR
300.89	SOMATOFORM DISORDERS NEC
300.9	NONPSYCHOTIC DISORD NOS
301.0	PARANOID PERSONALITY
301.10	AFFECTIV PERSONALITY NOS
301.11	CHRONIC HYPOMANIC PERSON
301.12	CHR DEPRESSIVE PERSON
301.13	CYCLOTHYMIC DISORDER
301.20	SCHIZOID PERSONALITY NOS
301.21	INTROVERTED PERSONALITY
301.22	SCHIZOTYPAL PERSON DIS
301.3	EXPLOSIVE PERSONALITY
301.4	OBSESSIVE-COMPULSIVE DIS
301.50	HISTRIONIC PERSON NOS
301.51	CHR FACTITIOUS ILLNESS
301.59	HISTRIONIC PERSON NEC
301.6	DEPENDENT PERSONALITY
301.7	ANTISOCIAL PERSONALITY
301.81	NARCISSISTIC PERSONALITY
301.82	AVOIDANT PERSONALITY DIS
301.83	BORDERLINE PERSONALITY
301.84	PASSIVE-AGGRESSIV PERSON
301.89	PERSONALITY DISORDER NEC
301.9	PERSONALITY DISORDER NOS
302.0	EGO-DYSTONIC SEX ORIENT
302.1	ZOOPHILIA
302.2	PEDOPHILIA
302.3	TRANSVESTIC FETISHISM
302.4	EXHIBITIONISM
302.50	TRANS-SEXUALISM NOS
302.51	TRANS-SEXUALISM, ASEXUAL
302.52	TRANS-SEXUAL, HOMOSEXUAL
302.53	TRANS-SEX, HETEROSEXUAL
302.6	GENDR IDENTITY DIS-CHILD
302.70	PSYCHOSEXUAL DYSFUNC NOS
302.71	HYPOACTIVE SEX DESIRE

302.72	INHIBITED SEX EXCITEMENT
302.73	FEMALE ORGASMIC DISORDER
302.74	MALE ORGASMIC DISORDER
302.75	PREMATURE EJACULATION
302.76	DYSPAREUNIA, PSYCHOGENIC
302.79	PSYCHOSEXUAL DYSFUNC NEC
302.81	FETISHISM
302.82	VOYEURISM
302.83	SEXUAL MASOCHISM
302.84	SEXUAL SADISM
302.85	GEND IDEN DIS, ADOL/ADULT
302.89	PSYCHOSEXUAL DIS NEC
302.9	PSYCHOSEXUAL DIS NOS
303.00	AC ALCOHOL INTOX-UNSPEC
303.01	AC ALCOHOL INTOX-CONTIN
303.02	AC ALCOHOL INTOX-EPISOD
303.03	AC ALCOHOL INTOX-REMISS
303.90	ALCOH DEP NEC/NOS-UNSPEC
303.91	ALCOH DEP NEC/NOS-CONTIN
303.92	ALCOH DEP NEC/NOS-EPISOD
303.93	ALCOH DEP NEC/NOS-REMISS
304.00	OPIOID DEPENDENCE-UNSPEC
304.01	OPIOID DEPENDENCE-CONTIN
304.02	OPIOID DEPENDENCE-EPISOD
304.03	OPIOID DEPENDENCE-REMISS
304.10	SED,HYP,ANXIOLYT DEP-NOS
304.11	SED,HYP,ANXIOLYT DEP-CON
304.12	SED,HYP,ANXIOLYT DEP-EPI
304.13	SED,HYP,ANXIOLYT DEP-REM
304.20	COCAINE DEPEND-UNSPEC
304.21	COCAINE DEPEND-CONTIN
304.22	COCAINE DEPEND-EPISODIC
304.23	COCAINE DEPEND-REMISS
304.30	CANNABIS DEPEND-UNSPEC
304.31	CANNABIS DEPEND-CONTIN
304.32	CANNABIS DEPEND-EPISODIC
304.33	CANNABIS DEPEND-REMISS
304.40	AMPHETAMIN DEPEND-UNSPEC
304.41	AMPHETAMIN DEPEND-CONTIN
304.42	AMPHETAMIN DEPEND-EPISOD
304.43	AMPHETAMIN DEPEND-REMISS
304.50	HALLUCINOGEN DEP-UNSPEC
304.51	HALLUCINOGEN DEP-CONTIN
304.52	HALLUCINOGEN DEP-EPISOD

304.53	HALLUCINOGEN DEP-REMISS
304.60	DRUG DEPEND NEC-UNSPEC
304.61	DRUG DEPEND NEC-CONTIN
304.62	DRUG DEPEND NEC-EPISODIC
304.63	DRUG DEPEND NEC-IN REM
304.70	OPIOID/OTHER DEP-UNSPEC
304.71	OPIOID/OTHER DEP-CONTIN
304.72	OPIOID/OTHER DEP-EPISOD
304.73	OPIOID/OTHER DEP-REMISS
304.80	COMB DRUG DEP NEC-UNSPEC
304.81	COMB DRUG DEP NEC-CONTIN
304.82	COMB DRUG DEP NEC-EPISOD
304.83	COMB DRUG DEP NEC-REMISS
304.90	DRUG DEPEND NOS-UNSPEC
304.91	DRUG DEPEND NOS-CONTIN
304.92	DRUG DEPEND NOS-EPISODIC
304.93	DRUG DEPEND NOS-REMISS
305.00	ALCOHOL ABUSE-UNSPEC
305.01	ALCOHOL ABUSE-CONTINUOUS
305.02	ALCOHOL ABUSE-EPISODIC
305.03	ALCOHOL ABUSE-IN REMISS
305.1	TOBACCO USE DISORDER
305.20	CANNABIS ABUSE-UNSPEC
305.21	CANNABIS ABUSE-CONTIN
305.22	CANNABIS ABUSE-EPISODIC
305.23	CANNABIS ABUSE-IN REMISS
305.30	HALLUCINOG ABUSE-UNSPEC
305.31	HALLUCINOG ABUSE-CONTIN
305.32	HALLUCINOG ABUSE-EPISOD
305.33	HALLUCINOG ABUSE-REMISS
305.40	SED,HYP,ANXIOLYTC AB-NOS
305.41	SED,HYP,ANXIOLYTC AB-CON
305.42	SED,HYP,ANXIOLYTC AB-EPI
305.43	SED,HYP,ANXIOLYTC AB-REM
305.50	OPIOID ABUSE-UNSPEC
305.51	OPIOID ABUSE-CONTINUOUS
305.52	OPIOID ABUSE-EPISODIC
305.53	OPIOID ABUSE-IN REMISS
305.60	COCAINE ABUSE-UNSPEC
305.61	COCAINE ABUSE-CONTINUOUS
305.62	COCAINE ABUSE-EPISODIC
305.63	COCAINE ABUSE-IN REMISS
305.70	AMPHETAMINE ABUSE-UNSPEC
305.71	AMPHETAMINE ABUSE-CONTIN

305.72	AMPHETAMINE ABUSE-EPISOD
305.73	AMPHETAMINE ABUSE-REMISS
305.80	ANTIDEPRESS ABUSE-UNSPEC
305.81	ANTIDEPRESS ABUSE-CONTIN
305.82	ANTIDEPRESS ABUSE-EPISOD
305.83	ANTIDEPRESS ABUSE-REMISS
305.90	DRUG ABUSE NEC-UNSPEC
305.91	DRUG ABUSE NEC-CONTIN
305.92	DRUG ABUSE NEC-EPISODIC
305.93	DRUG ABUSE NEC-IN REMISS
306.0	PSYCHOGEN MUSCULSKEL DIS
306.1	PSYCHOGENIC RESPIR DIS
306.2	PSYCHOGEN CARDIOVASC DIS
306.3	PSYCHOGENIC SKIN DISEASE
306.4	PSYCHOGENIC GI DISEASE
306.50	PSYCHOGENIC GU DIS NOS
306.51	PSYCHOGENIC VAGINISMUS
306.52	PSYCHOGENIC DYSMENORRHEA
306.53	PSYCHOGENIC DYSURIA
306.59	PSYCHOGENIC GU DIS NEC
306.6	PSYCHOGEN ENDOCRINE DIS
306.7	PSYCHOGENIC SENSORY DIS
306.8	PSYCHOGENIC DISORDER NEC
306.9	PSYCHOGENIC DISORDER NOS
307.0	STUTTERING
307.1	ANOREXIA NERVOSA
307.20	TIC DISORDER NOS
307.21	TRANSIENT TIC DISORDER
307.22	CHR MOTOR/VOCAL TIC DIS
307.23	TOURETTE'S DISORDER
307.3	STEREOTYPIC MOVEMENT DIS
307.40	NONORGANIC SLEEP DIS NOS
307.41	TRANSIENT INSOMNIA
307.42	PERSISTENT INSOMNIA
307.43	TRANSIENT HYPERSOMNIA
307.44	PERSISTENT HYPERSOMNIA
307.45	NONORGANIC CIRCADIAN RHY
307.46	SLEEP AROUSAL DISORDER
307.47	SLEEP STAGE DYSFUNC NEC
307.48	REPETIT SLEEP INTRUSION
307.49	NONORGANIC SLEEP DIS NEC
307.50	EATING DISORDER NOS
307.51	BULIMIA NERVOSA
307.52	PICA

307.53	RUMINATION DISORDER
307.54	PSYCHOGENIC VOMITING
307.59	EATING DISORDER NEC
307.6	ENURESIS
307.7	ENCOPRESIS
307.80	PSYCHOGENIC PAIN NOS
307.81	TENSION HEADACHE
307.89	PSYCHOGENIC PAIN NEC
307.9	SPECIAL SYMPTOM NEC/NOS
308.0	STRESS REACT, EMOTIONAL
308.1	STRESS REACTION, FUGUE
308.2	STRESS REACT, PSYCHOMOT
308.3	ACUTE STRESS REACT NEC
308.4	STRESS REACT, MIXED DIS
308.9	ACUTE STRESS REACT NOS
309.0	ADJUSTMNT DIS W DEPRESSN
309.1	PROLONG DEPRESSIVE REACT
309.21	SEPARATION ANXIETY
309.22	EMANCIPATION DISORDER
309.23	ACADEMIC/WORK INHIBITION
309.24	ADJUSTMENT DIS W ANXIETY
309.28	ADJUST DIS W ANXIETY/DEP
309.29	ADJ REACT-EMOTION NEC
309.3	ADJUST DISOR/DIS CONDUCT
309.4	ADJ DIS-EMOTION/CONDUCT
309.81	POSTTRAUMATIC STRESS DIS
309.82	ADJUST REACT-PHYS SYMPT
309.83	ADJUST REACT-WITHDRAWAL
309.89	ADJUSTMENT REACTION NEC
309.9	ADJUSTMENT REACTION NOS
310.0	FRONTAL LOBE SYNDROME
310.1	PERSONALITY CHG OTH DIS
310.2	POSTCONCUSSION SYNDROME
310.8	NONPSYCHOT BRAIN SYN NEC
310.9	NONPSYCHOT BRAIN SYN NOS
311	DEPRESSIVE DISORDER NEC
312.00	UNSOCIAL AGGRESS-UNSPEC
312.01	UNSOCIAL AGGRESSION-MILD
312.02	UNSOCIAL AGGRESSION-MOD
312.03	UNSOCIAL AGGRESS-SEVERE
312.10	UNSOCIAL UNAGGRESS-UNSP
312.11	UNSOCIAL UNAGGRESS-MILD
312.12	UNSOCIAL UNAGGRESS-MOD
312.13	UNSOCIAL UNAGGR-SEVERE

312.20	SOCIAL CONDUCT DIS-UNSP
312.21	SOCIAL CONDUCT DIS-MILD
312.22	SOCIAL CONDUCT DIS-MOD
312.23	SOCIAL CONDUCT DIS-SEV
312.30	IMPULSE CONTROL DIS NOS
312.31	PATHOLOGICAL GAMBLING
312.32	KLEPTOMANIA
312.33	PYROMANIA
312.34	INTERMITT EXPLOSIVE DIS
312.35	ISOLATED EXPLOSIVE DIS
312.39	IMPULSE CONTROL DIS NEC
312.4	MIX DIS CONDUCT/EMOTION
312.81	CNDCT DSRDR CHLDHD ONST
312.82	CNDCT DSRDR ADLSCNT ONST
312.89	OTHER CONDUCT DISORDER
312.9	CONDUCT DISTURBANCE NOS
313.0	OVERANXIOUS DISORDER
313.1	MISERY & UNHAPPINESS DIS
313.21	SHYNESS DISORDER-CHILD
313.22	INTROVERTED DIS-CHILD
313.23	SELECTIVE MUTISM
313.3	RELATIONSHIP PROBLEMS
313.81	OPPOSITION DEFIANT DISOR
313.82	IDENTITY DISORDER
313.83	ACADEMIC UNDERACHIEVMENT
313.89	EMOTIONAL DIS CHILD NEC
313.9	EMOTIONAL DIS CHILD NOS
314.00	ATTN DEFIC NONHYPERACT
314.01	ATTN DEFICIT W HYPERACT
314.1	HYPERKINET W DEVEL DELAY
314.2	HYPERKINETIC CONDUCT DIS
314.8	OTHER HYPERKINETIC SYND
314.9	HYPERKINETIC SYND NOS
315.00	READING DISORDER NOS
315.01	ALEXIA
315.02	DEVELOPMENTAL DYSLEXIA
315.09	READING DISORDER NEC
315.1	MATHEMATICS DISORDER
315.2	OTH LEARNING DIFFICULTY
315.31	EXPRESSIVE LANGUAGE DIS
315.32	RECP-EXPRES LANGUAGE DIS
315.34	SPEECHDEL D/T HEAR LOSS
315.39	SPEECH/LANGUAGE DIS NEC
315.4	DEVEL COORDINATION DIS

315.5	MIXED DEVELOPMENT DIS
315.8	DEVELOPMENT DELAYS NEC
315.9	DEVELOPMENT DELAY NOS
316	PSYCHIC FACTOR W OTH DIS
317	MILD MENTAL RETARDATION
318.0	MOD MENTAL RETARDATION
318.1	SEVERE MENTAL RETARDAT
318.2	PROFOUND MENTAL RETARDAT
319	MENTAL RETARDATION NOS

Table 7.02 Obstetrics	
Code	Shortened Description
638.0	ATTEM ABORT W PELVIC INF
638.1	ATTEM ABORT W HEMORRHAGE
638.2	ATTEM ABORT W PELV DAMAG
638.3	ATTEM ABORT W RENAL FAIL

Table 7.02 Obstetrics	
Code	Shortened Description
638.4	ATTEM ABOR W METABOL DIS
638.5	ATTEM ABORTION W SHOCK
638.7	ATTEMP ABORT W COMPL NEC
638.8	ATTEMP ABORT W COMPL NOS
638.9	ATTEMPTED ABORT UNCOMPL
640.00	THREATENED ABORT-UNSPEC
640.01	THREATENED ABORT-DELIVER
640.80	HEM EARLY PREG NEC-UNSP
640.81	HEM EARLY PREG NEC-DELIV
640.90	HEMORR EARLY PREG-UNSPEC
640.91	HEM EARLY PREG-DELIVERED
641.00	PLACENTA PREVIA-UNSPEC
641.01	PLACENTA PREVIA-DELIVER
641.03	PLACENTA PREVIA-ANTEPART
641.10	PLACENTA PREV HEM-UNSPEC
641.11	PLACENTA PREV HEM-DELIV
641.13	PLACEN PREV HEM-ANTEPART
641.20	PREM SEPAR PLACEN-UNSPEC
641.21	PREM SEPAR PLACEN-DELIV
641.23	PREM SEPAR PLAC-ANTEPART
641.30	COAG DEF HEMORR-UNSPEC
641.31	COAG DEF HEMORR-DELIVER
641.33	COAG DEF HEMORR-ANTEPART
641.80	ANTEPART HEM NEC-UNSPEC

641.81	ANTEPARTUM HEM NEC-DELIV
641.83	ANTEPART HEM NEC-ANTEPAR
641.90	ANTEPART HEM NOS-UNSPEC
641.91	ANTEPARTUM HEM NOS-DELIV
641.93	ANTEPART HEM NOS-ANTEPAR
642.00	ESSEN HYPERTEN PREG-UNSP
642.01	ESSEN HYPERTEN-DELIVERED
642.02	ESSEN HYPERTEN-DEL W P/P
642.03	ESSEN HYPERTEN-ANTEPART
642.04	ESSEN HYPERTEN-POSTPART
642.10	RENAL HYPERTEN PREG-UNSP
642.11	RENAL HYPERTEN PG-DELIV
642.12	RENAL HYPERTEN-DEL P/P
642.13	RENAL HYPERTEN-ANTEPART
642.14	RENAL HYPERTEN-POSTPART
642.20	OLD HYPERTEN PREG-UNSPEC
642.21	OLD HYPERTEN NEC-DELIVER
642.22	OLD HYPERTEN-DELIV W P/P
642.23	OLD HYPERTEN NEC-ANTEPAR
642.24	OLD HYPERTEN NEC-POSTPAR
642.30	TRANS HYPERTEN PREG-UNSP
642.31	TRANS HYPERTEN-DELIVERED
642.32	TRANS HYPERTEN-DEL W P/P
642.33	TRANS HYPERTEN-ANTEPART
642.34	TRANS HYPERTEN-POSTPART
642.40	MILD/NOS PREECLAMP-UNSP
642.41	MILD/NOS PREECLAMP-DELIV
642.42	MILD PREECLAMP-DEL W P/P
642.43	MILD/NOS PREECLAMP-ANTEP
642.44	MILD/NOS PREECLAMP-P/P
642.50	SEVERE PREECLAMP-UNSPEC
642.51	SEVERE PREECLAMP-DELIVER
642.52	SEV PREECLAMP-DEL W P/P
642.53	SEV PREECLAMP-ANTEPARTUM
642.54	SEV PREECLAMP-POSTPARTUM
642.60	ECLAMPSIA-UNSPECIFIED
642.61	ECLAMPSIA-DELIVERED
642.62	ECLAMPSIA-DELIV W P/P
642.63	ECLAMPSIA-ANTEPARTUM
642.64	ECLAMPSIA-POSTPARTUM
642.70	TOX W OLD HYPERTEN-UNSP
642.71	TOX W OLD HYPERTEN-DELIV
642.72	TOX W OLD HYP-DEL W P/P
642.73	TOX W OLD HYPER-ANTEPART

642.74	TOX W OLD HYPER-POSTPART
642.90	HYPERTEN PREG NOS-UNSPEC
642.91	TOX W OLD HYP-DEL W P/P
642.92	HYPERTENS NOS-DEL W P/P
642.93	HYPERTENS NOS-ANTEPARTUM
642.94	HYPERTENS NOS-POSTPARTUM
643.00	MILD HYPEREM GRAV-UNSPEC
643.01	MILD HYPEREM GRAV-DELIV
643.03	MILD HYPEREMESIS-ANTEPAR
643.10	HYPEREM W METAB DIS-UNSP
643.11	HYPEREM W METAB DIS-DEL
643.13	HYPEREM W METAB-ANTEPART
643.20	LATE VOMIT OF PREG-UNSP
643.21	LATE VOMIT OF PREG-DELIV
643.23	LATE VOMIT PREG-ANTEPART
643.80	VOMIT COMPL PREG-UNSPEC
643.81	VOMIT COMPL PREG-DELIVER
643.83	VOMIT COMPL PREG-ANTEPAR
643.90	VOMIT OF PREG NOS-UNSPEC
643.91	VOMIT OF PREG NOS-DELIV
Table 7.02 Obstetrics	
Code	Shortened Description
643.93	VOMIT OF PG NOS-ANTEPART
644.00	THREAT PREM LABOR-UNSPE
644.03	THRT PREM LABOR-ANTEPART
644.10	THREAT LABOR NEC-UNSPEC
644.13	THREAT LABOR NEC-ANTEPAR
644.20	EARLY ONSET DELIV-UNSPEC
644.21	EARLY ONSET DELIVERY-DEL
645.10	POST TERM PREG-UNSP
645.11	POST TERM PREG-DEL
645.13	POST TERM PREG-ANTEPAR
645.20	PROLONGED PREG-UNSP
645.21	PROLONGED PREG-DEL
645.23	PROLONGED PREG-ANTEPAR
646.00	PAPYRACEOUS FETUS-UNSPEC
646.01	PAPYRACEOUS FETUS-DELIV
646.03	PAPYRACEOUS FET-ANTEPAR
646.10	EDEMA IN PREG-UNSPEC
646.11	EDEMA IN PREG-DELIVERED
646.12	EDEMA IN PREG-DEL W P/P
646.13	EDEMA IN PREG-ANTEPARTUM
646.14	EDEMA IN PREG-POSTPARTUM
646.20	RENAL DIS PREG NOS-UNSP

646.21	RENAL DIS NOS-DELIVERED
646.22	RENAL DIS NOS-DEL W P/P
646.23	RENAL DIS NOS-ANTEPARTUM
646.24	RENAL DIS NOS-POSTPARTUM
646.30	HABITUAL ABORTER-UNSPEC
646.31	HABITUAL ABORTER-DELIVER
646.33	HABITUAL ABORT-ANTEPART
646.40	NEURITIS OF PREG-UNSPEC
646.41	NEURITIS-DELIVERED
646.42	NEURITIS-DELIVERED W P/P
646.43	NEURITIS OF PREG-ANTEPAR
646.44	NEURITIS OF PREG-POSTPAR
646.50	BACTERIURIA PREG-UNSPEC
646.51	ASYM BACTERIURIA-DELIVER
646.52	ASY BACTERURIA-DEL W P/P
646.53	ASY BACTERIURIA-ANTEPART
646.54	ASY BACTERIURIA-POSTPART
646.60	GU INFECT IN PREG-UNSPEC
646.61	GU INFECTION-DELIVERED
646.62	GU INFECTION-DELIV W P/P
646.63	GU INFECTION-ANTEPARTUM
646.64	GU INFECTION-POSTPARTUM
646.70	LIVER DIS IN PREG-UNSPEC
646.71	LIVER DISORDER-DELIVERED
646.73	LIVER DISORDER-ANTEPART
646.80	PREG COMPL NEC-UNSPEC
646.81	PREG COMPL NEC-DELIVERED
646.82	PREG COMPL NEC-DEL W P/P
646.83	PREG COMPL NEC-ANTEPART
646.84	PREG COMPL NEC-POSTPART
646.90	PREG COMPL NOS-UNSPEC
646.91	PREG COMPL NOS-DELIVERED
646.93	PREG COMPL NOS-ANTEPART
647.00	SYPHILIS IN PREG-UNSPEC
647.01	SYPHILIS-DELIVERED
647.02	SYPHILIS-DELIVERED W P/P
647.03	SYPHILIS-ANTEPARTUM
647.04	SYPHILIS-POSTPARTUM
647.10	GONORRHEA IN PREG-UNSPEC
647.11	GONORRHEA-DELIVERED
647.12	GONORRHEA-DELIVER W P/P
647.13	GONORRHEA-ANTEPARTUM
647.14	GONORRHEA-POSTPARTUM
647.20	OTHER VD IN PREG-UNSPEC

647.21	OTHER VD-DELIVERED
647.22	OTHER VD-DELIVERED W P/P
647.23	OTHER VD-ANTEPARTUM
647.24	OTHER VD-POSTPARTUM
647.30	TB IN PREG-UNSPECIFIED
647.31	TUBERCULOSIS-DELIVERED
647.32	TUBERCULOSIS-DELIV W P/P
647.33	TUBERCULOSIS-ANTEPARTUM
647.34	TUBERCULOSIS-POSTPARTUM
647.40	MALARIA IN PREG-UNSPEC
647.41	MALARIA-DELIVERED
647.42	MALARIA-DELIVERED W P/P
647.43	MALARIA-ANTEPARTUM
647.44	MALARIA-POSTPARTUM
647.50	RUBELLA IN PREG-UNSPEC
647.51	RUBELLA-DELIVERED
647.52	RUBELLA-DELIVERED W P/P
647.53	RUBELLA-ANTEPARTUM
647.54	RUBELLA-POSTPARTUM
647.60	OTH VIRUS IN PREG-UNSPEC
647.61	OTH VIRAL DIS-DELIVERED
647.62	OTH VIRAL DIS-DEL W P/P
Table 7.02 Obstetrics	
Code	Shortened Description
647.63	OTH VIRAL DIS-ANTEPARTUM
647.64	OTH VIRAL DIS-POSTPARTU
647.80	INF DIS IN PREG NEC-UNSP
647.81	INFECT DIS NEC-DELIVERED
647.82	INFECT DIS NEC-DEL W P/P
647.83	INFECT DIS NEC-ANTEPART
647.84	INFECT DIS NEC-POSTPART
647.90	INFECT IN PREG NOS-UNSP
647.91	INFECT NOS-DELIVERED
647.92	INFECT NOS-DELIVER W P/P
647.93	INFECT NOS-ANTEPARTUM
647.94	INFECT NOS-POSTPARTUM
648.00	DIABETES IN PREG-UNSPEC
648.01	DIABETES-DELIVERED
648.02	DIABETES-DELIVERED W P/P
648.10	THYROID DYSFUN PREG-UNSP
648.11	THYROID DYSFUNC-DELIVER
648.12	THYROID DYSFUN-DEL W P/P
648.20	ANEMIA IN PREG-UNSPEC
648.21	ANEMIA-DELIVERED

648.22	ANEMIA-DELIVERED W P/P
648.30	DRUG DEPEND PREG-UNSPEC
648.31	DRUG DEPENDENCE-DELIVER
648.32	DRUG DEPENDEN-DEL W P/P
648.40	MENTAL DIS PREG-UNSPEC
648.41	MENTAL DISORDER-DELIVER
648.42	MENTAL DIS-DELIV W P/P
648.50	CONGEN CV DIS PREG-UNSP
648.51	CONGEN CV DIS-DELIVERED
648.52	CONGEN CV DIS-DEL W P/P
648.60	CV DIS NEC PREG-UNSPEC
648.61	CV DIS NEC PREG-DELIVER
648.62	CV DIS NEC-DELIVER W P/P
648.70	BONE DISORD IN PREG-UNSP
648.71	BONE DISORDER-DELIVERED
648.72	BONE DISORDER-DEL W P/P
648.80	ABN GLUCOSE IN PREG-UNSP
648.81	ABN GLUCOSE TOLER-DELIV
648.82	ABN GLUCOSE-DELIV W P/P
648.90	OTH CURR COND PREG-UNSP
648.91	OTH CURR COND-DELIVERE
648.92	OTH CURR COND-DEL W P/P
649.00	TOBACCO USE DISORD-UNSPEC
649.01	TOBACCO USE DISOR-DELIV
649.02	TOBACCO USE DIS-DEL-P/P
649.10	OBESITY-UNSPECIFIED
649.11	OBESITY-DELIVERED
649.12	OBESITY-DELIVERED W P/P
649.20	BARIATRIC SURG STAT-UNSP
649.21	BARIATRIC SURG STAT-DEL
649.22	BARIATRIC SURG-DEL W P/P
649.30	COAGULATION DEF-UNSPEC
649.31	COAGULATION DEF-DELIV
649.32	COAGULATN DEF-DEL W P/P
649.40	EPILEPSY-UNSPECIFIED
649.41	EPILEPSY-DELIVERED
649.42	EPILEPSY-DELIVERED W P/P
649.50	SPOTTING-UNSPECIFIED
649.51	SPOTTING-DELIVERED
649.53	SPOTTING-ANTEPARTUM
649.60	UTERINE SIZE DESCRP-UNSP
649.61	UTERINE SIZE DESCREP-DEL
649.62	UTERINE SIZE-DEL W P/P
650	NORMAL DELIVERY

651.00	TWIN PREGNANCY-UNSPEC
651.01	TWIN PREGNANCY-DELIVERED
651.03	TWIN PREGNANCY-ANTEPART
651.10	TRIPLET PREGNANCY-UNSPEC
651.11	TRIPLET PREGNANCY-DELIV
651.13	TRIPLET PREG-ANTEPARTUM
651.20	QUADRUPLET PREG-UNSPEC
651.21	QUADRUPLET PREG-DELIVER
651.23	QUADRUPLET PREG-ANTEPART
651.30	TWINS W FETAL LOSS-UNSP
651.31	TWINS W FETAL LOSS-DEL
651.33	TWINS W FETAL LOSS-ANTE
651.40	TRIPLETS W FET LOSS-UNSP
651.41	TRIPLETS W FET LOSS-DEL
651.43	TRIPLETS W FET LOSS-ANTE
651.50	QUADS W FETAL LOSS-UNSP
651.51	QUADS W FETAL LOSS-DEL
651.53	QUADS W FETAL LOSS-ANTE
651.60	MULT GES W FET LOSS-UNSP
651.61	MULT GES W FET LOSS-DEL
651.63	MULT GES W FET LOSS-ANTE
651.70	MUL GEST-FET REDUCT UNSP
651.71	MULT GEST-FET REDUCT DEL
651.73	MUL GEST-FET REDUCT ANTE
Table 7.02 Obstetrics	
Code	Shortened Description
651.80	MULTI GESTAT NEC-UNSPEC
651.81	MULTI GESTAT NEC-DELIVER
651.83	MULTI GEST NEC-ANTEPART
651.90	MULTI GESTAT NOS-UNSPEC
651.91	MULT GESTATION NOS-DELIV
651.93	MULTI GEST NOS-ANTEPART
652.00	UNSTABLE LIE-UNSPECIFIED
652.01	UNSTABLE LIE-DELIVERED
652.03	UNSTABLE LIE-ANTEPARTUM
652.10	CEPHALIC VERS NOS-UNSPEC
652.11	CEPHALIC VERS NOS-DELIV
652.13	CEPHAL VERS NOS-ANTEPART
652.20	BREECH PRESENTAT-UNSPEC
652.21	BREECH PRESENTAT-DELIVER
652.23	BREECH PRESENT-ANTEPART
652.30	TRANSV/OBLIQ LIE-UNSPEC
652.31	TRANSVER/OBLIQ LIE-DELIV
652.33	TRANSV/OBLIQ LIE-ANTEPAR

652.40	FACE/BROW PRESENT-UNSPEC
652.41	FACE/BROW PRESENT-DELIV
652.43	FACE/BROW PRES-ANTEPART
652.50	HIGH HEAD AT TERM-UNSPEC
652.51	HIGH HEAD AT TERM-DELIV
652.53	HIGH HEAD TERM-ANTEPART
652.60	MULT GEST MALPRESEN-UNSP
652.61	MULT GEST MALPRES-DELIV
652.63	MULT GES MALPRES-ANTEPAR
652.70	PROLAPSED ARM-UNSPEC
652.71	PROLAPSED ARM-DELIVERED
652.73	PROLAPSED ARM-ANTEPART
652.80	MALPOSITION NEC-UNSPEC
652.81	MALPOSITION NEC-DELIVER
652.83	MALPOSITION NEC-ANTEPART
652.90	MALPOSITION NOS-UNSPEC
652.91	MALPOSITION NOS-DELIVER
652.93	MALPOSITION NOS-ANTEPART
653.00	PELVIC DEFORM NOS-UNSPEC
653.01	PELVIC DEFORM NOS-DELIV
653.03	PELV DEFORM NOS-ANTEPART
653.10	CONTRACT PELV NOS-UNSPEC
653.11	CONTRACT PELV NOS-DELIV
653.13	CONTRAC PELV NOS-ANTEPAR
653.20	INLET CONTRACTION-UNSPEC
653.21	INLET CONTRACTION-DELIV
653.23	INLET CONTRACT-ANTEPART
653.30	OUTLET CONTRACTION-UNSP
653.31	OUTLET CONTRACTION-DELIV
653.33	OUTLET CONTRACT-ANTEPAR
653.40	FETOPELV DISPROP-UNSPEC
653.41	FETOPELV DISPROPOR-DELIV
653.43	FETOPEL DISPROP-ANTEPART
653.50	FETAL DISPROP NOS-UNSPEC
653.51	FETAL DISPROP NOS-DELIV
653.53	FETAL DISPRO NOS-ANTEPAR
653.60	HYDROCEPHAL FETUS-UNSPEC
653.61	HYDROCEPH FETUS-DELIVER
653.63	HYDROCEPH FETUS-ANTEPART
653.70	OTH ABN FET DISPROP-UNSP
653.71	OTH ABN FET DISPRO-DELIV
653.73	OTH ABN FET DISPRO-ANTEP
653.80	DISPROPORTION NEC-UNSPEC
653.81	DISPROPORTION NEC-DELIV

653.83	DISPROPOR NEC-ANTEPARTUM
653.90	DISPROPORTION NOS-UNSPEC
653.91	DISPROPORTION NOS-DELIV
653.93	DISPROPOR NOS-ANTEPARTUM
654.00	CONG ABN UTER PREG-UNSP
654.01	CONGEN ABN UTERUS-DELIV
654.02	CONG ABN UTER-DEL W P/P
654.03	CONGEN ABN UTER-ANTEPART
654.04	CONGEN ABN UTER-POSTPART
654.10	UTER TUMOR IN PREG-UNSP
654.11	UTERINE TUMOR-DELIVERED
654.12	UTERINE TUMOR-DEL W P/P
654.13	UTERINE TUMOR-ANTEPARTUM
654.14	UTERINE TUMOR-POSTPARTUM
654.20	PREV C-DELIVERY UNSPEC
654.21	PREV C-DELIVERY-DELIVRD
654.23	PREV C-DELIVERY-ANTEPART
654.30	RETROVERT UTERUS-UNSPEC
654.31	RETROVERT UTERUS-DELIVER
654.32	RETROVERT UTER-DEL W P/P
654.33	RETROVERT UTER-ANTEPART
654.34	RETROVERT UTER-POSTPART
654.40	ABN GRAV UTERUS NEC-UNSP
654.41	ABN UTERUS NEC-DELIVERED
654.42	ABN UTERUS NEC-DEL W P/P
654.43	ABN UTERUS NEC-ANTEPART
Table 7.02 Obstetrics	
Code	Shortened Description
654.44	ABN UTERUS NEC-POSTPART
654.50	CERV INCOMPET PREG-UNSP
654.51	CERVICAL INCOMPET-DELIV
654.52	CERV INCOMPET-DEL W P/P
654.53	CERV INCOMPET-ANTEPARTUM
654.54	CERV INCOMPET-POSTPARTUM
654.60	ABN CERVIX NEC PREG-UNSP
654.61	ABN CERVIX NEC-DELIVERED
654.62	ABN CERVIX NEC-DEL W P/P
654.63	ABN CERVIX NEC-ANTEPART
654.64	ABN CERVIX NEC-POSTPART
654.70	ABN VAGINA IN PREG-UNSP
654.71	ABNORM VAGINA-DELIVERED
654.72	ABNORM VAGINA-DEL W P/P
654.73	ABNORM VAGINA-ANTEPARTUM
654.74	ABNORM VAGINA-POSTPARTUM

654.80	ABN VULVA IN PREG-UNSPEC
654.81	ABNORMAL VULVA-DELIVERED
654.82	ABNORMAL VULVA-DEL W P/P
654.83	ABNORMAL VULVA-ANTEPART
654.84	ABNORMAL VULVA-POSTPART
654.90	ABN PEL NEC IN PREG-UNSP
654.91	ABN PELV ORG NEC-DELIVER
654.92	ABN PELV NEC-DELIV W P/P
654.93	ABN PELV ORG NEC-ANTEPAR
654.94	ABN PELV ORG NEC-POSTPAR
655.00	FETAL CNS MALFORM-UNSPEC
655.01	FETAL CNS MALFORM-DELIV
655.03	FETAL CNS MALFOR-ANTEPAR
655.10	FETAL CHROMOS ABN-UNSPEC
655.11	FETAL CHROMOSO ABN-DELIV
655.13	FET CHROMO ABN-ANTEPART
655.20	FAMIL HEREDIT DIS-UNSPEC
655.21	FAMIL HEREDIT DIS-DELIV
655.23	FAMIL HEREDIT DIS-ANTEPART
655.30	FET DAMG D/T VIRUS-UNSP
655.31	FET DAMG D/T VIRUS-DELIV
655.33	FET DAMG D/T VIRUS-ANTEP
655.40	FET DAMG D/T DIS-UNSPEC
655.41	FET DAMG D/T DIS-DELIVER
655.43	FET DAMG D/T DIS-ANTEPAR
655.50	FETAL DAMG D/T DRUG-UNSP
655.51	FET DAMAG D/T DRUG-DELIV
655.53	FET DAMG D/T DRUG-ANTEPA
655.60	RADIAT FETAL DAMAG-UNSP
655.61	RADIAT FETAL DAMAG-DELIV
655.63	RADIAT FET DAMAG-ANTEPAR
655.70	DECREASE FETL MOVMT UNSP
655.71	DECREASE FETAL MOVMT DEL
655.73	DEC FETAL MOVMT ANTEPART
655.80	FETAL ABNORM NEC-UNSPEC
655.81	FETAL ABNORM NEC-DELIVER
655.83	FETAL ABNORM NEC-ANTEPAR
655.90	FETAL ABNORM NOS-UNSPEC
655.91	FETAL ABNORM NOS-DELIV
655.93	FETAL ABNORM NOS-ANTEPAR
656.00	FETAL-MATERNAL HEM-UNSPEC
656.01	FETAL-MATERNAL HEM-DELIV
656.03	FETAL-MATERNAL HEM-ANTEPAR
656.10	RH ISOIMMUNIZAT-UNSPEC

656.11	RH ISOIMMUNIZAT-DELIV
656.13	RH ISOIMMUNIZAT-ANTEPART
656.20	ABO ISOIMMUNIZATION-UNSPEC
656.21	ABO ISOIMMUNIZAT-DELIV
656.23	ABO ISOIMMUNIZAT-ANTEPAR
656.30	FETAL DISTRESS-UNSPEC
656.31	FETAL DISTRESS-DELIV
656.33	FETAL DISTRESS-ANTEPART
656.40	INTRAUTERINE DEATH-UNSPEC
656.41	INTRAUTER DEATH-DELIV
656.43	INTRAUTER DEATH-ANTEPART
656.50	POOR FETAL GROWTH-UNSPEC
656.51	POOR FETAL GROWTH-DELIV
656.53	POOR FETAL GRTH-ANTEPART
656.60	EXCESS FETAL GRTH-UNSPEC
656.61	EXCESS FETAL GRTH-DELIV
656.63	EXCESS FET GRTH-ANTEPART
656.70	OTH PLACENT COND-UNSPEC
656.71	OTH PLACENT COND-DELIV
656.73	OTH PLACENT COND-ANTEPAR
656.80	FET/PLAC PROB NEC-UNSPEC
656.81	FET/PLAC PROB NEC-DELIV
656.83	FET/PLAC PROB NEC-ANTEPA
656.90	FET/PLAC PROB NOS-UNSPEC
656.91	FET/PLAC PROB NOS-DELIV
656.93	FET/PLAC PROB NOS-ANTEPA
657.00	POLYHYDRAMNIOS-UNSPEC
657.01	POLYHYDRAMNIOS-DELIV
Table 7.02 Obstetrics	
Code	Shortened Description
657.03	POLYHYDRAMNIOS-ANTEPART
658.00	OLIGOHYDRAMNIOS-UNSPEC
658.01	OLIGOHYDRAMNIOS-DELIV
658.03	OLIGOHYDRAMNIOS-ANTEPAR
658.10	PREM RUPT MEMBRAN-UNSPEC
658.11	PREM RUPT MEMBRAN-DELIV
658.13	PREM RUPT MEMB-ANTEPART
658.20	PROLONG RUPT MEMB-UNSPEC
658.21	PROLONG RUPT MEMB-DELIV
658.23	PROLONG RUP MEMB-ANTEPAR
658.30	ARTIFIC RUPT MEMBR-UNSP
658.31	ARTIFIC RUPT MEMBR-DELIV
658.33	ARTIF RUPT MEMB-ANTEPART
658.40	AMNIOTIC INFECTION-UNSP

658.41	AMNIOTIC INFECTION-DELIV
658.43	AMNIOTIC INFECT-ANTEPART
658.80	AMNIOTIC PROB NEC-UNSPEC
658.81	AMNIOTIC PROB NEC-DELIV
658.83	AMNION PROB NEC-ANTEPART
658.90	AMNIOTIC PROB NOS-UNSPEC
658.91	AMNIOTIC PROB NOS-DELIV
658.93	AMNION PROB NOS-ANTEPART
659.00	FAIL MECHAN INDUCT-UNSP
659.01	FAIL MECH INDUCT-DELIVER
659.03	FAIL MECH INDUCT-ANTEPAR
659.10	FAIL INDUCTION NOS-UNSP
659.11	FAIL INDUCTION NOS-DELIV
659.13	FAIL INDUCT NOS-ANTEPART
659.20	PYREXIA IN LABOR-UNSPEC
659.21	PYREXIA IN LABOR-DELIVER
659.23	PYREXIA IN LABOR-ANTEPAR
659.30	SEPTICEMIA IN LABOR-UNSP
659.31	SEPTICEM IN LABOR-DELIV
659.33	SEPTICEM IN LABOR-ANTEPA
659.40	GRAND MULTIPARITY-UNSPEC
659.41	GRAND MULTIPARITY-DELIV
659.43	GRAND MULTIPARITY-ANTEPA
659.50	ELDERLY PRIMIGRAVID-UNSP
659.51	ELDERLY PRIMIGRAVIDA-DEL
659.53	ELDER PRIMIGRAVID-ANTEPA
659.60	ELDERLY MULTIGRAVIDA-UNS
659.61	ELDERLY MULTIGRAVIDA-DEL
659.63	ELDERLY MULTIGRAVD-ANTEP
659.70	ABN FTL HRT RATE/RHY-UNS
659.71	ABN FTL HRT RATE/RHY-DEL
659.73	ABN FTL HRT RATE/RHY-ANT
659.80	COMPLIC LABOR NEC-UNSP
659.81	COMPLIC LABOR NEC-DELIV
659.83	COMPL LABOR NEC-ANTEPART
659.90	COMPLIC LABOR NOS-UNSPEC
659.91	COMPLIC LABOR NOS-DELIV
659.93	COMPL LABOR NOS-ANTEPART
660.00	OBSTRUCT/FET MALPOS-UNSPEC
660.01	OBSTRUC/FET MALPOS-DELIV
660.03	OBSTRUC/FET MALPOS-ANTEP
660.10	BONY PELV OBSTRUC-UNSPEC
660.11	BONY PELV OBSTRUCT-DELIV
660.13	BONY PELV OBSTRUC-ANTEPA

660.20	ABN PELV TISS OBSTR-UNSPEC
660.21	ABN PELV TIS OBSTR-DELIV
660.23	ABN PELV TIS OBSTR-ANTEP
660.30	PERSIST OCCIPTPOST-UNSPEC
660.31	PERSIST OCCIPTPOST-DELIV
660.33	PERSIST OCCIPTPOST-ANTEP
660.40	SHOULDER DYSTOCIA-UNSPEC
660.41	SHOULDER DYSTOCIA-DELIV
660.43	SHOULDER DYSTOCIA-ANTEPA
660.50	LOCKED TWINS-UNSPECIFIED
660.51	LOCKED TWINS-DELIVERED
660.53	LOCKED TWINS-ANTEPARTUM
660.60	FAIL TRIAL LAB NOS-UNSP
660.61	FAIL TRIAL LAB NOS-DELIV
660.63	FAIL TRIAL LAB NOS-ANTEP
660.70	FAILED FORCEP NOS-UNSPEC
660.71	FAILED FORCEPS NOS-DELIV
660.73	FAIL FORCEPS NOS-ANTEPAR
660.80	OBSTRUC LABOR NEC-UNSPEC
660.81	OBSTRUCT LABOR NEC-DELIV
660.83	OBSTRUC LABOR NEC-ANTEPA
660.90	OBSTRUC LABOR NOS-UNSPEC
660.91	OBSTRUCT LABOR NOS-DELIV
660.93	OBSTRUC LABOR NOS-ANTEPA
661.00	PRIM UTERINE INERT-UNSP
661.01	PRIM UTERINE INERT-DELIV
661.03	PRIM UTER INERT-ANTEPART
661.10	SEC UTERINE INERT-UNSPEC
661.11	SEC UTERINE INERT-DELIV
661.13	SEC UTERINE INERT-ANTEPA
Table 7.02 Obstetrics	
Code	Shortened Description
661.20	UTERINE INERTIA NEC-UNSP
661.21	UTERINE INERT NEC-DELIV
661.23	UTERINE INERT NEC-ANTEPA
661.30	PRECIPITATE LABOR-UNSPEC
661.31	PRECIPITATE LABOR-DELIV
661.33	PRECIPITATE LABOR-ANTEPA
661.40	UTER DYSTOCIA NOS-UNSPEC
661.41	UTER DYSTOCIA NOS-DELIV
661.43	UTER DYSTOCIA NOS-ANTEPA
661.90	ABNORMAL LABOR NOS-UNSP
661.91	ABNORMAL LABOR NOS-DELIV
661.93	ABNORM LABOR NOS-ANTEPAR

662.00	PROLONGED 1ST STAGE-UNSP
662.01	PROLONG 1ST STAGE-DELIV
662.03	PROLONG 1ST STAGE-ANTEPA
662.10	PROLONGED LABOR NOS-UNSP
662.11	PROLONG LABOR NOS-DELIV
662.13	PROLONG LABOR NOS-ANTEPA
662.20	PROLONGED 2ND STAGE-UNSP
662.21	PROLONG 2ND STAGE-DELIV
662.23	PROLONG 2ND STAGE-ANTEPA
662.30	DELAY DEL 2ND TWIN-UNSP
662.31	DELAY DEL 2ND TWIN-DELIV
662.33	DELAY DEL 2 TWIN-ANTEPAR
663.00	CORD PROLAPSE-UNSPEC
663.01	CORD PROLAPSE-DELIVERED
663.03	CORD PROLAPSE-ANTEPARTUM
663.10	CORD AROUND NECK-UNSP
663.11	CORD AROUND NECK-DELIVER
663.13	CORD AROUND NECK-ANTEPAR
663.20	CORD COMPRESS NEC-UNSPEC
663.21	CORD COMPRESS NEC-DELIV
663.23	CORD COMPRES NEC-ANTEPAR
663.30	CORD ENTANGLE NEC-UNSPEC
663.31	CORD ENTANGLE NEC-DELIV
663.33	CORD ENTANGL NEC-ANTEPAR
663.40	SHORT CORD-UNSPECIFIED
663.41	SHORT CORD-DELIVERED
663.43	SHORT CORD-ANTEPARTUM
663.50	VASA PREVIA-UNSPECIFIED
663.51	VASA PREVIA-DELIVERED
663.53	VASA PREVIA-ANTEPARTUM
663.60	VASC LESION CORD-UNSPEC
663.61	VASC LESION CORD-DELIVER
663.63	VASC LESION CORD-ANTEPAR
663.80	CORD COMPLICAT NEC-UNSP
663.81	CORD COMPLICAT NEC-DELIV
663.83	CORD COMPL NEC-ANTEPART
663.90	CORD COMPLICAT NOS-UNSP
663.91	CORD COMPLICAT NOS-DELIV
663.93	CORD COMPL NOS-ANTEPART
664.00	DEL W 1 DEG LACERAT-UNSP
664.01	DEL W 1 DEG LACERAT-DEL
664.04	DEL W 1 DEG LAC-POSTPART
664.10	DEL W 2 DEG LACERAT-UNSP
664.11	DEL W 2 DEG LACERAT-DEL

664.14	DEL W 2 DEG LAC-POSTPART
664.20	DEL W 3 DEG LACERAT-UNSP
664.21	DEL W 3 DEG LACERAT-DEL
664.24	DEL W 3 DEG LAC-POSTPART
664.30	DEL W 4 DEG LACERAT-UNSP
664.31	DEL W 4 DEG LACERAT-DEL
664.34	DEL W 4 DEG LAC-POSTPART
664.40	OB PERINEAL LAC NOS-UNSP
664.41	OB PERINEAL LAC NOS-DEL
664.44	PERINEAL LAC NOS-POSTPAR
664.50	OB PERINEAL HEMATOM-UNSP
664.51	OB PERINEAL HEMATOMA-DEL
664.54	PERIN HEMATOMA-POSTPART
664.80	OB PERIN TRAUM NEC-UNSP
664.81	OB PERINEAL TRAU NEC-DEL
664.84	PERIN TRAUM NEC-POSTPART
664.90	OB PERIN TRAUM NOS-UNSP
664.91	OB PERINEAL TRAU NOS-DEL
664.94	PERIN TRAUM NOS-POSTPART
665.00	PRELABOR RUPT UTER-UNSP
665.01	PRELABOR RUPT UTERUS-DEL
665.03	PRELAB RUPT UTER-ANTEPAR
665.10	RUPTURE UTERUS NOS-UNSP
665.11	RUPTURE UTERUS NOS-DELIV
665.20	INVERSION OF UTERUS-UNSP
665.22	INVERS UTERUS-DEL W P/P
665.24	INVERS UTERUS-POSTPART
665.30	LACERAT OF CERVIX-UNSPEC
665.31	LACERAT OF CERVIX-DELIV
665.34	LACER OF CERVIX-POSTPART
665.40	HIGH VAGINAL LACER-UNSP
665.41	HIGH VAGINAL LACER-DELIV
Table 7.02 Obstetrics	
Code	Shortened Description
665.44	HIGH VAGINAL LAC-POSTPAR
665.50	OB INJ PELV ORG NEC-UNSP
665.51	OB INJ PELV ORG NEC-DEL
665.54	INJ PELV ORG NEC-POSTPAR
665.60	DAMAGE TO PELVIC JT-UNSP
665.61	DAMAGE TO PELVIC JT-DEL
665.64	DAMAGE PELVIC JT-POSTPAR
665.70	OB PELVIC HEMATOMA-UNSP
665.71	OB PELVIC HEMATOMA-DELIV
665.72	PELVIC HEMATOM-DEL W PP

665.74	PELVIC HEMATOMA-POSTPART
665.80	OB TRAUMA NEC-UNSPEC
665.81	OB TRAUMA NEC-DELIVERED
665.82	OB TRAUMA NEC-DEL W P/P
665.83	OB TRAUMA NEC-ANTEPARTUM
665.84	OB TRAUMA NEC-POSTPARTUM
665.90	OB TRAUMA NOS-UNSPEC
665.91	OB TRAUMA NOS-DELIVERED
665.92	OB TRAUMA NOS-DEL W P/P
665.93	OB TRAUMA NOS-ANTEPARTUM
665.94	OB TRAUMA NOS-POSTPARTUM
666.00	THIRD-STAGE HEM-UNSPEC
666.02	THRD-STAGE HEM-DEL W P/P
666.04	THIRD-STAGE HEM-POSTPART
666.10	POSTPARTUM HEM NEC-UNSP
666.12	POSTPA HEM NEC-DEL W P/P
666.14	POSTPART HEM NEC-POSTPAR
666.20	DELAY P/PART HEM-UNSPEC
666.22	DELAY P/P HEM-DEL W P/P
666.24	DELAY P/PART HEM-POSTPAR
666.30	POSTPART COAGUL DEF-UNSP
666.32	P/P COAG DEF-DEL W P/P
666.34	POSTPART COAG DEF-POSTPA
667.00	RETAIN PLACENTA NOS-UNSP
667.02	RETND PLAC NOS-DEL W P/P
667.04	RETAIN PLAC NOS-POSTPART
667.10	RETAIN PROD CONCEPT-UNSP
667.12	RET PROD CONC-DEL W P/P
667.14	RET PROD CONCEPT-POSTPAR
668.00	PULM COMPL IN DEL-UNSPEC
668.01	PULM COMPL IN DEL-DELIV
668.02	PULM COMPLIC-DEL W P/P
668.10	HEART COMPL IN DEL-UNSP
668.11	HEART COMPL IN DEL-DELIV
668.12	HEART COMPL-DEL W P/P
668.20	CNS COMPL LABOR/DEL-UNSP
668.21	CNS COMPL LAB/DEL-DELIV
668.22	CNS COMPLIC-DEL W P/P
668.80	ANESTH COMP DEL NEC-UNSP
668.81	ANESTH COMPL NEC-DELIVER
668.82	ANESTH COMPL NEC-DEL P/P
668.83	ANESTH COMPL ANTEPARTUM
668.84	ANESTH COMPL-POSTPARTUM
668.90	ANESTH COMP DEL NOS-UNSP

668.91	ANESTH COMPL NOS-DELIVER
668.92	ANESTH COMPL NOS-DEL P/P
668.93	ANESTH COMPL-ANTEPARTUM
668.94	ANESTH COMPL-POSTPARTUM
669.00	MATERNAL DISTRESS-UNSPEC
669.01	MATERNAL DISTRESS-DELIV
669.02	MATERN DISTRES-DEL W P/P
669.03	MATERN DISTRESS-ANTEPAR
669.04	MATERN DISTRESS-POSTPART
669.10	OBSTETRIC SHOCK-UNSPEC
669.11	OBSTETRIC SHOCK-DELIVER
669.12	OBSTET SHOCK-DELIV W P/P
669.20	MATERN HYPOTENS SYN-UNSP
669.21	MATERN HYPOTEN SYN-DELIV
669.22	MATERN HYPOTEN-DEL W P/P
669.23	MATERN HYPOTENS-ANTEPAR
669.24	MATERN HYPOTENS-POSTPART
669.30	AC KIDNY FAIL W DEL-UNSP
669.32	AC KIDNEY FAIL-DEL W P/P
669.40	OTH OB SURG COMPL-UNSPEC
669.41	OTH OB COMPL-DELIVERED
669.42	OTH OB COMPL-DELIV W P/P
669.43	COMPLC OB SURG ANTEPRTM
669.44	OTH OB SURG COMPL-POSTPA
669.50	FORCEP DELIV NOS-UNSPEC
669.51	FORCEP DELIV NOS-DELIVER
669.60	BREECH EXTR NOS-UNSPEC
669.61	BREECH EXTR NOS-DELIVER
669.70	CESAREAN DELIV NOS-UNSP
669.71	CESAREAN DELIVERY NOS
669.80	COMPL LAB/DELIV NEC-UNSP
669.81	COMP LAB/DELIV NEC-DELIV
669.82	COMPL DEL NEC-DEL W P/P
669.83	COMPL DELIV NEC-ANTEPAR
Table 7.02 Obstetrics	
Code	Shortened Description
669.84	COMPL DELIV NEC-POSTPART
669.90	COMPL LAB/DELIV NOS-UNSP
669.91	COMP LAB/DELIV NOS-DELIV
669.92	COMPL DEL NOS-DEL W P/P
669.93	COMPL DELIV NOS-ANTEPAR
669.94	COMPL DELIV NOS-POSTPART
670.00	MAJ PUERP INF NOS-UNSP
670.02	MAJ PUER INF NOS-DEL P/P

670.04	MAJOR PUERP INF NOS-P/P
671.00	VARIC VEIN LEG PREG-UNSP
671.01	VARICOSE VEIN LEG-DELIV
671.02	VARIC VEIN LEG-DEL W P/P
671.10	VARIC VULVA PREG-UNSPEC
671.11	VARICOSE VULVA-DELIVERED
671.12	VARICOSE VULVA-DEL W P/P
671.20	THROMBOPHLEB PREG-UNSPEC
671.21	THROMBOPHLEBITIS-DELIVER
671.22	THROMBOPHLEB-DELIV W P/P
671.80	VENOUS COMPL NEC-UNSPEC
671.81	VENOUS COMPL NEC-DELIVER
671.82	VEN COMP NEC-DELIV W P/P
672.00	PUERPERAL PYREXIA-UNSPEC
672.02	PUERP PYREXIA-DEL W P/P
673.00	OB AIR EMBOLISM-UNSPEC
673.01	OB AIR EMBOLISM-DELIVER
673.02	OB AIR EMBOL-DELIV W P/P
673.10	AMNIOTIC EMBOLISM-UNSPEC
673.11	AMNIOTIC EMBOLISM-DELIV
673.12	AMNIOT EMBOL-DELIV W P/P
673.30	OB PYEMIC EMBOL-UNSPEC
673.31	OB PYEMIC EMBOL-DELIVER
673.32	OB PYEM EMBOL-DEL W P/P
673.33	OB PYEMIC EMBOL-ANTEPART
673.34	OB PYEMIC EMBOL-POSTPART
673.80	PULMON EMBOL NEC-UNSP
673.81	PULMON EMBOL NEC-DELIVER
673.82	PULM EMBOL NEC-DEL W P/P
674.00	PUERP CEREBVASC DIS-UNSP
674.01	PUERP CEREBVAS DIS-DELIV
674.02	CEREBVAS DIS-DELIV W P/P
674.10	DISRUPT C-SECT WND-UNSP
674.12	DISRUPT C-SECT-DEL W P/P
674.20	DISRUPT PERINEUM-UNSPEC
674.22	DISRUPT PERIN-DEL W P/P
674.30	OB SURG COMPL NEC-UNSPEC
674.32	OB SURG COMPL-DEL W P/P
674.40	PLACENTAL POLYP-UNSPEC
674.42	PLACENT POLYP-DEL W P/P
674.50	PERIPART CARDIOMY-UNSPEC
674.51	PERIPARTUM CARDIOMY-DEL
674.52	PERIPART CARD DEL W P/P
674.80	PUERP COMPL NEC-UNSPEC

674.82	PUERP COMP NEC-DEL W P/P
674.90	PUERP COMPL NOS-UNSPEC
674.92	PUERP COMP NOS-DEL W P/P
675.00	INFECT NIPPLE PREG-UNSP
675.01	INFECT NIPPLE-DELIVERED
675.02	INFECT NIPPLE-DEL W P/P
675.10	BREAST ABSCESS PREG-UNSPEC
675.11	BREAST ABSCESS-DELIVERED
675.12	BREAST ABSCESS-DEL W P/P
675.20	MASTITIS IN PREG-UNSPEC
675.21	MASTITIS-DELIVERED
675.22	MASTITIS-DELIV W P/P
675.80	BREAST INF PREG NEC-UNSPEC
675.81	BREAST INFECT NEC-DELIV
675.82	BREAST INF NEC-DEL W P/P
675.90	BREAST INF PREG NOS-UNSP
675.91	BREAST INFECT NOS-DELIV
675.92	BREAST INF NOS-DEL W P/P
676.00	RETRACT NIPPLE PREG-UNSP
676.01	RETRACTED NIPPLE-DELIV
676.02	RETRACT NIPPLE-DEL W P/P
676.03	RETRACT NIPPLE-ANTEPART
676.04	RETRACT NIPPLE-POSTPART
676.10	CRACKED NIPPLE PREG-UNSP
676.11	CRACKED NIPPLE-DELIV
676.12	CRACKED NIPPLE-DEL W P/P
676.13	CRACKED NIPPLE-ANTEPART
676.14	CRACKED NIPPLE-POSTPART
676.20	BREAST ENGORGE-UNSPEC
676.21	BREAST ENGORGE-DELIV
676.22	BREAST ENGORGE-DEL W P/P
676.23	BREAST ENGORGE-ANTEPART
676.24	BREAST ENGORGE-POSTPART
676.30	BREAST DIS PREG NEC-UNSP
676.31	BREAST DIS NEC-DELIV
676.32	BREAST DIS NEC-DEL W P/P
Table 7.02 Obstetrics	
Code	Shortened Description
676.33	BREAST DIS NEC-ANTEPART
676.34	BREAST DIS NEC-POSTPART
676.40	LACTATION FAIL-UNSPEC
676.41	LACTATION FAIL-DELIVERED
676.42	LACTATION FAIL-DEL W P/P
676.43	LACTATION FAILURE-ANTEPART

676.44	LACTATION FAILURE-POSTPART
676.50	SUPPR LACTATION-UNSPEC
676.51	SUPPR LACTATION-DELIVER
676.52	SUPPR LACTAT-DEL W P/P
676.53	SUPPR LACTATION-ANTEPAR
676.54	SUPPR LACTATION-POSTPART
676.60	GALACTORRHEA PREG-UNSPEC
676.61	GALACTORRHEA-DELIVERED
676.62	GALACTORRHEA-DEL W P/P
676.63	GALACTORRHEA-ANTEPARTUM
676.64	GALACTORRHEA-POSTPARTUM
676.80	LACTATION DIS NEC-UNSPEC
676.81	LACTATION DIS NEC-DELIV
676.82	LACTAT DIS NEC-DEL W P/P
676.83	LACTAT DIS NEC-ANTEPART
676.84	LACTAT DIS NEC-POSTPART
676.90	LACTATION DIS NOS-UNSPEC
676.91	LACTATION DIS NOS-DELIV
676.92	LACTAT DIS NOS-DEL W P/P
676.93	LACTAT DIS NOS-ANTEPART
676.94	LACTAT DIS NOS-POSTPART
677	LATE EFFECT CMPLCATN PREG

Table 7.03 Venous Thromboembolism (VTE)

Code	Shortened Description
415.11	IATROGEN PULM EMB/INFARC
415.19	PULM EMBOL/INFARCT NEC
451.11	FEMORAL VEIN PHLEBITIS
451.19	DEEP PHLEBITIS-LEG NEC
451.2	THROMBOPHLEBITIS LEG NOS
451.81	ILIAC THROMBOPHLEBITIS
451.9	THROMBOPHLEBITIS NOS
453.40	DVT/EMBLSM LOWER EXT NOS
453.41	DVT/EMB PROX LOWER EXT
453.87	AC EMBL THORAC VEIN NEC
453.89	AC EMBOLISM VEINS NEC
453.9	VENOUS THROMBOSIS NOS

Table 7.04 Obstetrics – VTE	
Code	Shortened Description
634.60	SPON ABORT W EMBOL-UNSPEC
634.61	SPON ABORT W EMBOL-INC
634.62	SPON ABORT W EMBOL-COMP
635.60	LEGAL ABORT W EMBOL-UNSPEC
635.61	LEGAL ABORT W EMBOL-INC
635.62	LEGAL ABORT W EMBOL-COMP
636.60	ILLEG AB W EMBOLISM-UNSPEC
636.61	ILLEG AB W EMBOLISM-INC
636.62	ILLEG AB W EMBOLISM-COMP
637.60	AB NOS W EMBOLISM-UNSP
637.61	AB NOS W EMBOLISM-INC
637.62	AB NOS W EMBOLISM-COMP
638.6	ATTEMP ABORT W EMBOLISM
639.6	POSTABORTION EMBOLISM
671.30	DEEP THROMB ANTEPAR-UNSPEC
671.31	DEEP THROM ANTEPAR-DELIV
671.33	DEEP VEIN THROMB-ANTEPAR
671.40	DEEP THROMB POSTPAR-UNSPEC
671.42	THROMB POSTPAR-DEL W P/P
671.44	DEEP VEIN THROMB-POSTPAR
671.50	THROMBOSIS NEC PREG-UNSPEC
671.51	THROMBOSIS NEC-DELIV
671.52	THROMB NEC-DELIV W P/P
671.53	THROMBOSIS NEC-ANTEPART
671.54	THROMBOSIS NEC-POSTPART
671.90	VEN COMPL PREG NOS-UNSPEC
671.91	VENOUS COMPL NOS-DELIVER
671.92	VEN COMP NOS-DELIV W P/P
671.93	VENOUS COMPL NOS-ANTEPAR
671.94	VENOUS COMPL NOS-POSTPAR
673.20	OB PULM EMBOL NOS-UNSPEC
673.21	PULM EMBOL NOS-DELIV
673.22	PULM EMBOL NOS-DELIV W P/P
673.23	PULM EMBOL NOS-ANTEPART
673.24	PULM EMBOL NOS-POSTPART

Table 1.4 Warfarin
Coumadin

Jantoven
Warfarin
Warfarin Sodium

Table 2.1 VTE Prophylaxis Inclusion Table

VTE Prophylaxis	Inclusion/Synonyms
Coumadin/ Warfarin	Coumadin Jantoven Warfarin Warfarin Sodium
Graduated Compression Stockings (GCS) -Knee or thigh high	Anti-Embolism stockings Anti-thrombosis stockings Elastic support hose Graduated compression elastic stockings Jobst stockings Surgical hose TED hose (TEDs) White hose Thrombosis stockings
Factor Xa Inhibitor	Arixtra Founda parinux sodium
Low Dose Unfractionated Heparin (LDUH) -Include only Heparin given by the subcutaneous (SQ, Subcu, SC, SubQ) route	HEP Heparin Heparin Na Heparin Sod Heparin Sodium Heparin Sodium Inj. Heparin Sodium Inj. Pork Heparin Subcu/SQ/SC/SubQ
Low Molecular Weight Heparin (LMWH)	Dalteparin Enoxaparin Fragmin Innohep Lovenox Tinzaparin
Intermittent Pneumatic Compression Device (IPC)	AE pumps (anti-embolic pumps)-calf/thigh Alternating Leg Pressure (ALP) Athrombic pumps-calf/thigh Continuous Enhanced Circulation Therapy (CECT) DVT boots-calf/thigh EPC cuffs/ stockings-External pneumatic compression-calf/thigh Flotron/Flotron DVT system-thigh Impulse pump-thigh Intermittent pneumatic compression stockings

	Intermittent compression device (ICD) KCI stockings Leg pumpers PAS (Pulsatile anti-embolic stockings) Plexipulse-calf/thigh Pneumatic intermittent impulse compression device Rapid inflation asymmetrical compression (RIAC) devices Sequential compression device Sequential pneumatic hose Thromboguard Thrombus pumps-calf/thigh Vascutherm VasoPress DVT System Venodyne boots-calf/thigh
Venous Foot Pump (VFP)	AE pumps-foot only A-V impulse system Foot pump Kendall AV impulse (foot) Kendall boots Plantar venous plexus pump-foot only Plexiboots-foot only SC boots-foot only SCD boots-foot only Venous foot pump

Note: This table is not meant to be an inclusive list of all available mechanical prophylaxis; rather it represents current information available at the time of publication.

Table 2.3 VTE Parenteral Therapy Table

VTE Prophylaxis	Inclusion/Synonyms
Direct Thrombin Inhibitors argatroban bivalirudin lepirudin	Argatroban (Acova) Bivalirudin (Angiomax) Lepirudin (recombinant hirudin)(Refludan)
Factor Xa Inhibitor	Arixtra Fondaparinux sodium
Unfractionated Heparin (UFH) - intravenous (IV) - subcutaneous (fixed dose or monitored)	HEP Heparin Heparin Na Heparin Sod Heparin Sodium Heparin Sodium Inj. Heparin Sodium Inj. Pork Heparin Subcu/SQ/SC

Low Molecular Weight Heparin (LMWH)	Dalteparin Enoxaparin Fragmin Innohep Lovenox Tinzaparin