

## Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate Patient Safety Indicator 12

### Description

Perioperative pulmonary embolism or deep vein thrombosis (secondary diagnosis) per 1,000 surgical discharges for patients ages 18 years and older. Excludes cases with principal diagnosis for pulmonary embolism or deep vein thrombosis; cases with secondary diagnosis for pulmonary embolism or deep vein thrombosis present on admission; cases in which interruption of vena cava occurs before or on the same day as the first operating room procedure; and obstetric discharges.

### Numerator

Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with a secondary ICD-9-CM diagnosis code for deep vein thrombosis or a secondary ICD-9-CM diagnosis code for pulmonary embolism.

#### ICD-9-CM Deep vein thrombosis diagnosis codes (“DEEPVIB”):

- 451.11 PHLEBITIS AND THROMBOSIS OF FEMORAL VEIN (DEEP) (SUPERFICIAL)
- 451.19 PHLEBITIS AND THROMBOPHLEBITIS OF DEEP VESSEL OF LOWER EXTREMITIES - OTHER
- 451.2 PHLEBITIS AND THROMBOPHLEBITIS OF LOWER EXTREMITIES, UNSPECIFIED
- 451.81 PHLEBITIS AND THROMBOPHLEBITIS OF ILIAC VEIN
- 453.40 ACUTE VENOUS EMBOLISM AND THROMBOSIS OF UNSPECIFIED DEEP VESSELS OF LOWER EXTREMITY
- 453.41 ACUTE VENOUS EMBOLISM AND THROMBOSIS OF DEEP VESSELS OF PROXIMAL LOWER EXTREMITY
- 453.42 ACUTE VENOUS EMBOLISM AND THROMBOSIS OF DEEP VESSELS OF DISTAL LOWER EXTREMITY

#### ICD-9-CM Pulmonary embolism diagnosis codes (“PULMOID”):

- 415.11 IATROGENIC PULMONARY EMBOLISM AND INFARCTION
- 415.13 SADDLE EMBOLUS OF PULMONARY ARTERY
- 415.19 OTHER PULMONARY EMBOLISM

### Denominator

Surgical discharges, for patients ages 18 years and older, with any-listed ICD-9-CM procedure codes for an operating room procedure. Surgical discharges are defined by specific DRG or MS-DRG codes.

See *Patient Safety Indicators Appendices*:

Appendix A – Operating Room Procedure Codes

([https://www.cms.gov/icd10manual/fullcode\\_cms/P0033.html](https://www.cms.gov/icd10manual/fullcode_cms/P0033.html))

Appendix D – Surgical Discharge DRGs

Appendix E – Surgical Discharge MS-DRGs

Exclude cases:

with a principal ICD-9-CM diagnosis code (or secondary diagnosis present on admission) for deep vein thrombosis (see above)

with a principal ICD-9-CM diagnosis code (or secondary diagnosis present on admission) for pulmonary embolism (see above)

where a procedure for interruption of vena cava occurs before or on the same day as the first operating room procedure

any procedure code for extracorporeal membrane oxygenation (ECMO)

MDC 14 (pregnancy, childbirth, and puerperium)

with missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing), or

principal diagnosis (DX1=missing)

#### ICD-9-CM Interruption of vena cava procedure code (“VENACIP”):

- 38.7 INTERRUPTION OF VENA CAVA

#### ICD-9-CM ECMO procedure code (“ECMOP”):

- 39.65 EXTRACORPOREAL MEMBRANE OXYGENATION